DEPARTMENT OF THE NAVY
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR HI 96860-3131

IN REPLY REFER TO:
5090
Ser N46/0271
May 7, 2026

Ms. Agnes "Sam" M. Sablan
Director, Division of Coastal Resources Management (DCRM)
Bureau of Environmental and Coastal Quality (BECQ)
P.O. Box 501304
Saipan, MP 96950

Dear Ms. Sablan:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY READINESS ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

In accordance with 15 C.F.R. § 930, Commander, U.S. Pacific Fleet submits the enclosed Federal Consistency Determination (CD) for proposed military readiness activities within the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable effects to coastal resources within the Commonwealth of the Northern Mariana Islands (CNMI).

The enclosed CD documents the military's consistency with the applicable enforceable policies of CNMI's Coastal Resource Management Program, to the maximum extent practicable consistent with Federal law. The MITT Draft SEIS/OEIS and other supporting documents are available at https://nepa.navy.mil/mitteis/.

Pursuant to 15 CFR § 930.41, DCRM has 60 days from the receipt of this letter in which to concur with or object to this CD, or to request an extension. DCRM concurrence will be presumed if a response is not received by the Navy on the 60th day from receipt of this determination.

DCRM response should be sent to: Captain J. H. Beatie, Deputy Fleet Civil Engineer, Commander, Pacific Fleet (N46), 250 Makalapa Drive, Pearl Harbor, HI, 96860-3131.

If you have any questions, please contact Mr. Brian Whitehouse. He may be reached via phone at (808) 471-4696 or via email at brian.p.whitehouse.civ@us.navy.mil.

Sincerely,

J. H. BEATTIE, CAPT, USN
Deputy Fleet Civil Engineer
By direction

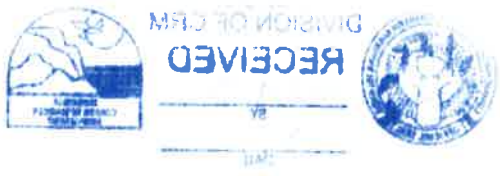
BECQ
DIVISION OF CRM
RECEIVED
Lorenza D.
BY
5/15/26
DATE

Copy to: (see next page)

5090
Ser N46/0271
May 7, 2026

Enclosure: CD for the CNMI Study Area

Copy to: (w/o encl)
Chief of Naval Operations (N4I)
Commander, Navy Region Marianas
Edward Camacho, Director, Bureau of Military Affairs (CNMI)



# COASTAL ZONE MANAGEMENT ACT
# CONSISTENCY DETERMINATION
# FOR
# COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

Submitted to:

Commonwealth of the Northern Mariana Islands
Bureau of Environmental and Coastal Quality
Division of Coastal Resources Management
P.O. Box 501304
Saipan, MP 96950

Submitted by:

Commander, United States Pacific Fleet
Department of the Navy
250 Makalapa Drive
Pearl Harbor, Hawaii 96860-3131

**May 2026**

**Coastal Zone Management Act**
**Consistency Determination for the**
**Commonwealth of the Northern Mariana Islands**

**Draft Consistency Determination V3**
**Military Training and Testing within the Coastal Zone of the Commonwealth of the Northern Mariana Islands**

**Document Notes:**

1. Scientific names are listed at first appearance; the common names are used thereafter.

2. Units are provided as English units followed by metric units parenthetically.

3. Suggested Citation: U.S. Department of the Navy. (2026). Coastal Zone Management Act Consistency Determination for the Commonwealth of the Northern Mariana Islands: CD for Military Training and Testing Activities within the CNMI Coastal Zone. Prepared for Commander, U.S. Pacific Fleet and Naval Facilities Command Pacific by ManTech. Contract Number N6247321D2212, N6274223F0189. December 2023.

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# Acronyms and Abbreviations

| | |
|---|---|
| °C | degrees Celsius |
| APC | Area of Particular Concern |
| ATSDR | Agency for Toxic Substances and Disease Registry |
| BNM | Broadcast Notice to Mariners |
| CD | Consistency Determination |
| CFR | Code of Federal Regulations |
| CFU | coliform forming units |
| CNMI | Commonwealth of Northern Mariana Islands |
| CRM | Coastal Resources Management |
| CZMA | Coastal Zone Management Act |
| dB | Decibel(s) |
| DCAST | Data Collection and Scheduling Tool |
| DCRM | Division of Coastal Resources Management |
| DEQ | Department of Environmental Quality |
| DO | Dissolved Oxygen |
| DoD | Department of Defense |
| DODM | DoD Manual |
| EIS | Environmental Impact Statement |
| ESA | Endangered Species Act |
| FDM | Farallon de Medinilla |
| FR | Federal Register |
| kHz | kilohertz |
| L | Liter(s) |
| MCM | Mine Countermeasure |
| mg | milligram(s) |
| MIRC | Mariana Islands Range Complex |
| MITT | Mariana Islands Training and Testing |
| MMPA | Marine Mammal Protection Act |
| Navy | U.S. Department of the Navy |
| NEPA | National Environmental Policy Act |
| NM | Nautical Mile(s) |
| NMFS | National Marine Fisheries Service |
| NMIAC | Northern Mariana Islands Administrative Code |
| NTU | nephelometric turbidity unit |
| OEIS | Overseas Environmental Impact Statement |
| OPNAV M | Chief of Naval Operations Manual |
| $PM_{2.5}$ | particulate matter with an aerodynamic size less than or equal to 2.5 microns |
| SEIS | Supplemental Environmental Impact Statement |
| $SO_2$ | Sulfur dioxide |
| SOP | Standard Operating Procedure |
| SPORTS | Sonar Positional Reporting System |
| SWM | Solid Waste Management |
| TCP | Traditional Cultural Place |
| U.S. | United States |
| U.S.C. | United States Code |
| UNDS | Uniform National Discharge Standards |
| USCG | U.S. Coast Guard |
| USEPA | U.S. Environmental Protection Agency |
| USV | Unmanned Surface Vehicle |

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# 1 INTRODUCTION

This document is the Action Proponents' Consistency Determination (CD) under the Coastal Zone Management Act (CZMA) for the Study Area described in the 2026 Mariana Islands Training and Testing (MITT) Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (SEIS/OEIS). The MITT Study Area is shown in Figure 1-1. This document is submitted in accordance with the CZMA (16 United States Code [U.S.C.] section 1456 (c)) and 15 Code of Federal Regulations (CFR) Part 930 Subpart C, with information provided pursuant to 15 CFR section 930.39. The Action Proponents have determined that the Proposed Action would have reasonably foreseeable effects on coastal uses or resources in the Commonwealth of the Northern Mariana Islands (CNMI). The United States (U.S.) Department of the Navy (Navy) has prepared this CD to provide the CNMI Division of Coastal Resources Management (DCRM) with an assessment of activities that may have reasonably foreseeable effects on the CNMI's coastal uses or resources.

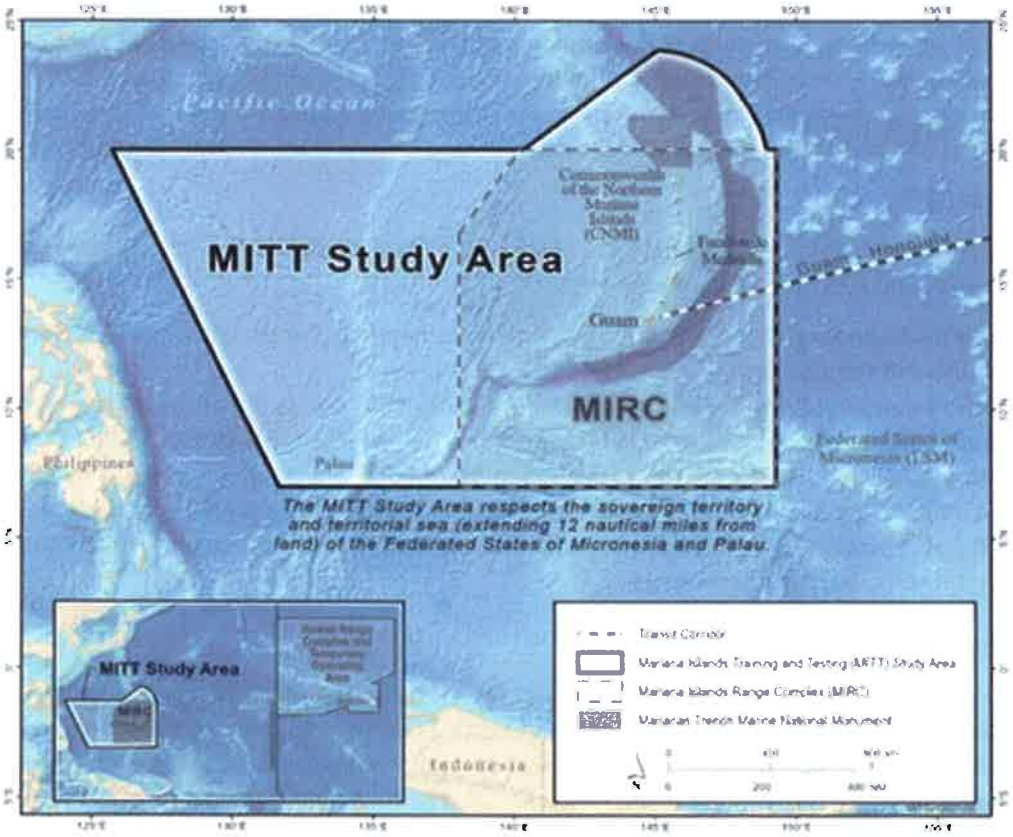


**Figure 1-1: Mariana Islands Training and Testing Study Area**

Building upon the history of coordination with CNMI DCRM, the Navy has developed this Phase IV MITT SEIS/OEIS CD to assess new activities proposed in Phase IV, as well as to proactively address the concerns identified during the Phase III review. This submittal incorporates the latest environmental data and refined mitigation measures designed to resolve previous concerns regarding marine resource impacts and resource management. By integrating the best available science and updated military readiness requirements, the Navy intends for this document to provide a comprehensive basis for

DCRM's concurrence, ensuring that military readiness activities continue to be conducted in a manner consistent with the enforceable policies of the CNMI Coastal Management Program.

Although federal lands and federal submerged lands in the CNMI are excluded from the "coastal zone" definition, the Navy complies with the consistency provisions of Section 307 of the Act when federal actions on these excluded lands have reasonably foreseeable effects (or "spillover impacts") on the uses or resources of the CNMI coastal zone.

### 1.1 CNMI's Coastal Zone

Based on Section 304 of the CZMA, the "coastal zone" of the CNMI includes all non-federal land and water areas, including submerged lands and waters extending seaward to a distance of 3 nautical miles (NM). The CNMI is an island chain consisting of more than 13 islands. Each island, in its entirety, is designated a "coastal zone" in the context of the CZMA, under 15 CFR Part 923.31(a)(7). CNMI's coastal zone does not include federal lands, which under Section 304 of the CZMA are excluded from a coastal state's coastal zone. Submerged lands in the CNMI were conveyed back to the Commonwealth on January 16, 2014, with the exception of the submerged lands adjacent to the islands of Farallon de Pajaros (Uracas), Maug, Asuncion, and the submerged lands adjacent to federally leased lands on Tinian and Farallon de Medinilla (FDM) (Presidential Proclamation 9077). Figure 1-2 depicts areas of the CNMI coastal zone as conceptualized by applicable proclamations, federal laws, and real property agreements.

### 1.2 Spatial Boundaries

The following spatial boundaries delineate the reach of the CNMI coastal zone, including seaward limits, inland coverage, and specific federal exclusions:

- **Seaward Boundary**: Extends 3 NM from the shoreline of all islands, encompassing the water column and the seafloor.
- **Inland Boundary**: Encompasses all non-federal land areas across the entire archipelago.
- **Federal Exclusions**: Statutory "coastal zone" does not include federal lands, such as the federally leased northern two-thirds of Tinian, all of FDM, and approximately 72 hectares at Tanapag Harbor in Saipan. Despite these exclusions, any federal action occurring on federal land that has reasonably foreseeable effects on CNMI coastal resources remains subject to CZMA federal consistency requirements.

### 1.3 Previous Consistency Determinations

The Navy has engaged in regular federal consistency reviews with the CNMI DCRM since 2009 to ensure military readiness activities align with the Commonwealth's coastal zone management policies. This CD is submitted as part of Phase IV of the Navy's environmental compliance for training and testing activities and supplements the Phase II and Phase III CDs. The following represent previous CDs submitted:

- Phase I: 2009 Mariana Islands Range Complex EIS/OEIS
- Phase II: 2015 Mariana Islands Training and Testing EIS/OEIS
- Phase III: 2020 Mariana Islands Training and Testing SEIS/OEIS

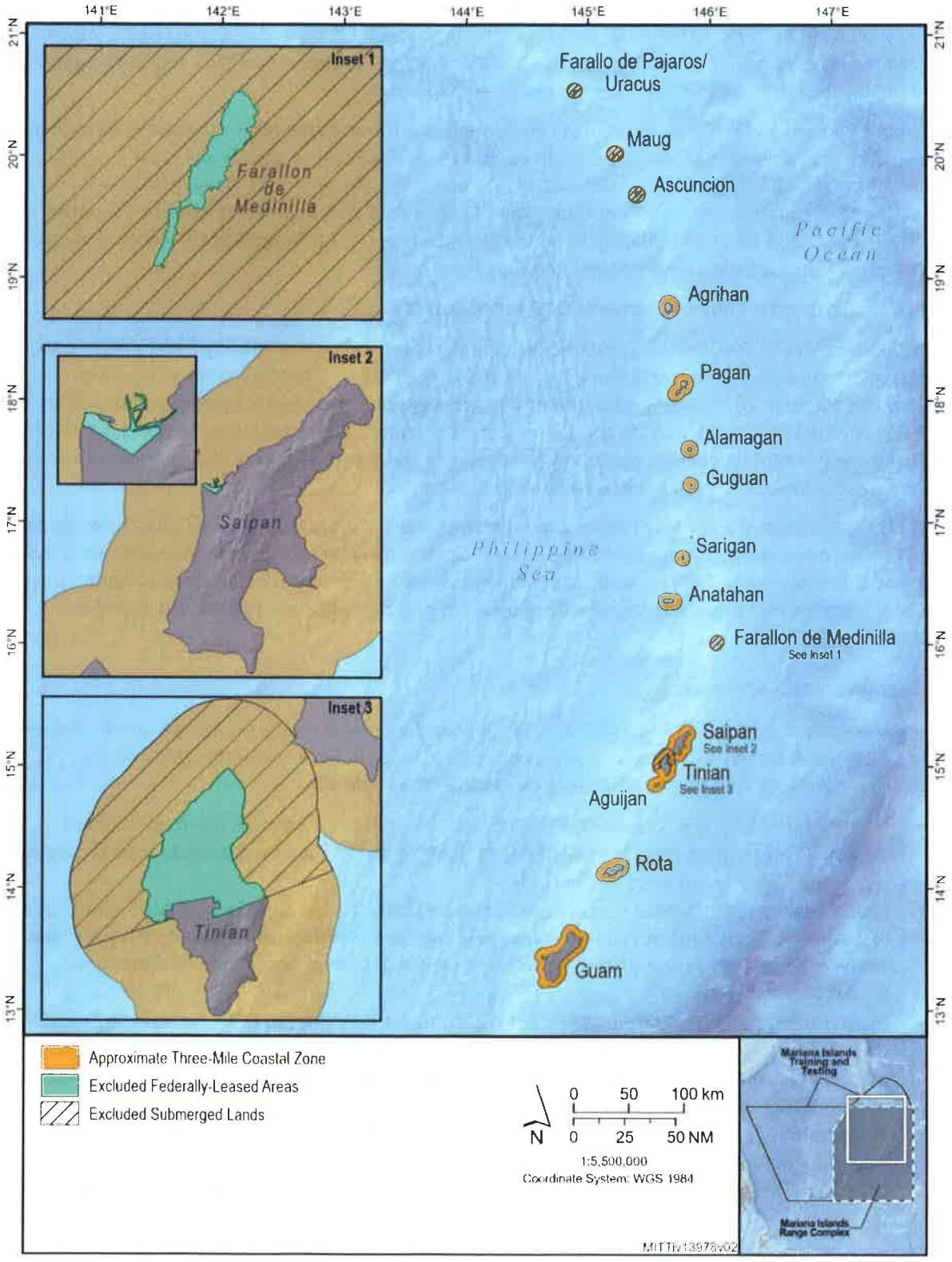


**Figure 1-2: Commonwealth of the Northern Mariana Islands Coastal Zone**

For Phase I in 2009, the Navy submitted a Negative Determination to which the DCRM did not object. This was followed by iterative technical exchanges during Phase II (2015) and Phase III (2020), which involved the Navy providing supplemental data and clarifications to address DCRM's requests regarding water quality, resource surveys, and specific enforceable policies.

While both Phase II and Phase III resulted in conditional concurrences, the Navy maintained its original CD to ensure the fulfillment of mission-critical requirements. For Phase III specifically (2020), coordination was notably prolonged by the COVID-19 pandemic; however, the Navy remained committed to the process, eventually notifying the DCRM of its intent to proceed with the Proposed Action pursuant to 15 CFR Part 930.4(b). Refer to Appendix D of this CD for additional information on CZMA Agency Correspondence for Phases I through III.

### 1.4 Updated Coastal Zone and Enforceable Policy Changes

Since the Phase III CD, the CNMI has updated its federally approved coastal management program to incorporate changes in environmental and infrastructure regulations. These updates, which were officially integrated in 2023, include comprehensive oversight of air and water quality, public utilities, and hazardous risk reduction. Specifically, the enforceable policies now encompass detailed standards for drinking water protection, well operations, and wastewater treatment, as well as refined protocols for solid waste management and underground injection control.

The Navy has conducted a review of these administrative and statutory changes, including amendments to the Commonwealth Environmental Protection Act, Commonwealth Solid Waste Management Act of 1989, and Commonwealth Environmental Amendments Act of 1999 to ensure continued alignment with the CNMI's coastal management program. Consideration of these relevant updates is included in Section 3 of this CD.

### 1.5 Other Compliance Processes

The Navy prepared the 2026 MITT Draft SEIS/OEIS in accordance with National Environmental Policy Act (NEPA), 42 U.S.C. Sections 4321 et seq, and Executive Order 12114, *Environmental Effects Abroad of Major Federal Actions*. Additional compliance processes are as follows:

- In accordance with the Endangered Species Act (ESA) (50 CFR Part 402), the Navy initiated section 7 consultation on potential effects of the Proposed Action on marine species protected under the ESA and managed by the NMFS.
- In accordance with the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (16 U.S.C. sections 1801 et seq.), the Navy prepared an Essential Fish Habitat Assessment that analyzes potential adverse effects from the Proposed Action on designated (or identified) Essential Fish Habitat.
- In accordance with the Marine Mammal Protection Act (MMPA) (16 U.S.C. section 1371(a)(5)), the Navy has submitted a request a Letter of Authorization to NMFS for the incidental taking of marine mammals, including those also covered by the ESA, resulting from the Proposed Action.
- In accordance with 36 CFR Part 800, on January 7, 2026, the Navy initiated National Historic Preservation Act (NHPA) Section 106 consultation with the State Historic Preservation Officer regarding potential effects on historic properties resulting from the Proposed Action. On February 6, 2026, the SHPO concurred with the finding of no adverse effect for the undertaking.

# 2 PROPOSED FEDERAL AGENCY ACTION

## 2.1 PROPOSED ACTION

The Proposed Action is to continue military readiness activities at sea and on FDM within the MITT Study Area (see Figure 1-1). Proposed training and testing activities are similar to those previously analyzed and are representative of activities occurring around the Mariana Islands for decades, with some updates to the type, frequency, duration, intensity, and location. In addition, the Navy identified 10 military readiness activities to be analyzed as "new" for the purposes of consolidating existing environmental analyses, reclassifying ongoing activities, or refining testing factors to ensure a comprehensive and consistent analysis. These military readiness activities are generally consistent with those analyzed in the 2020 SEIS/OEIS and are representative of the military readiness activities that the Action Proponents have been conducting in the MITT Study Area for decades. The Proposed Action does not propose any changes in land-based activities on Saipan, Tinian, or Rota (as previously analyzed in the Phase II 2015 MITT EIS/OEIS).

The purpose of the Proposed Action is to ensure the United States (U.S.) military services are able to organize, train, and equip service members and personnel, needed to meet their respective national defense missions in accordance with their Congressionally mandated requirements under Title 10. Only a small portion of the proposed military readiness activities would take place within the CNMI coastal zone.

## 2.2 ACTIVITIES THAT MAY AFFECT CNMI'S COASTAL ZONE OR COASTAL RESOURCES

### 2.2.1 Proposed Training and Testing Activities

The airspace, sea space, and undersea space within the MITT Study Area encompasses the area covered in this CD and includes the waters within CNMI's coastal zone. Military readiness activities have been conducted in the MITT Study Area for decades and this is the same area analyzed in the 2020 CD. Only a small number of military readiness activities would occur within 3 NM of the CNMI, including the CNMI coastal zone. Appendix A of this CD lists the military readiness activities that occur in the MITT Study Area under the Proposed Action, including a short description of each activity, proposed representative locations of activities, whether the activity would occur within 3 NM of the CNMI, including the coastal zone, and proposed changes in tempo where applicable.

### 2.2.2 Proposed New Activities

The 2026 MITT Draft SEIS/OEIS Proposed Action incorporates activities previously analyzed in the 2015 and 2020 MITT environmental documents, supplemented by 10 "new" activities. Most of these additional activities are not new to the region; rather, they have been renamed, reclassified as standalone events, or consolidated from other NEPA documents to streamline the MITT environmental review process. These additional activities largely represent the consolidation of military readiness activities or reclassification of ongoing activities into standalone categories. Certain new activities, specifically Dive and Salvage Operations, Underwater Construction Team training, and Port Damage repair, include, for example, opportunistic training conducted in response to local government requests for Navy assistance, such as the removal of derelict vessels. Descriptions of new training activities are provided in Table 2-1.This CD focuses exclusively on the new activities, as well as existing training and testing activities involving a tempo increase compared to Phase III; those that would occur within the coastal zone are detailed in Appendix A of this CD.

**Table 2-1: 2026 MITT Draft SEIS/OEIS Proposed New Military Readiness Activity Descriptions**

| Activity Name | Activity Description | Representative Location | In the CZ/ Coastal Resource Affected? |
|---|---|---|---|
| **Dive and Salvage Operations** | Navy divers perform dive operations and salvage training. Divers conduct a variety of salvage training to include debeaching operations[1], underwater repairs to ships, underwater survey operations, and other underwater training as required. As part of activities, a practice salvage platform can be sunk and then refloated and removed. No explosives are used. | CNMI Nearshore; Guam Nearshore; MIRC | Yes |
| **Underwater Construction Team Training** | Navy and U.S. Coast Guard (USCG) divers conduct underwater repair and construction. This consists of cutting, welding, assembly, and installation of deep-water structures, mooring systems, underwater instrumentation, clearing of hazards, and other training as needed. Platforms can include small boats and unmanned bottom crawlers. No explosives are used. | CNMI Nearshore; Guam Nearshore; MIRC | Yes |
| **Port Damage Repair** | Navy Expeditionary forces train to repair critical port facilities. Training includes diving operations, salvage operations, and repairs to piers, quay walls, and other waterfront infrastructure. Platforms can include Small Boat, Support Craft, Fixed Structures, Unmanned Bottom Crawlers. No dredging, no pile driving, and no explosives are used. | CNMI Nearshore; Guam Nearshore | Yes |
| **Maritime Environmental Response** | USCG conducts training on spill and hazmat response for oil or hazardous waste response identified in navigable waters. Training practices agency response to simulated scenarios such as oil sheens are identified near ported vessels during fueling activities and/or that occur after ships run aground. Training includes deployment of oil booms using small boats. No explosives are used. | MITT Study Area; MIRC; CNMI Nearshore; Guam Nearshore | Yes |
| **Waterborne Training** | Personnel launch, operate, and recover a variety of small boats to achieve certifications such as coxswain, crewman, and safety observer. No explosives are used. | MITT Study Area; MIRC; CNMI Nearshore; Guam Nearshore | Yes |
| **Unmanned Aerial Systems Testing** | Unmanned aerial systems are launched from a platform (e.g., fixed platform or submerged submarine) to test the capability to extend the surveillance and communications range of unmanned underwater vehicles, manned and unmanned surface vehicles, and submarines. No explosives are used. | MITT Study Area; MIRC | Yes |
| **Unmanned Surface Vehicle (USV) Testing** | Testing involves the production or upgrade of unmanned surface vehicles. USVs can include remotely operated craft (e.g., semi-submersible, plane hull, semi-plane hull) and test vehicles. During testing, they can operate autonomously, semi-autonomously, or non-autonomously. Non- | MITT Study Area; MIRC; activities involving explosives > 12 NM from land | Yes |

| Activity Name | Activity Description | Representative Location | In the CZ/ Coastal Resource Affected? |
|---|---|---|---|
| | autonomous or remotely controlled vehicles may be tethered like remotely operated vehicles (ROVs) or remotely controlled. USVs may have multiple test objectives or payloads (such as cameras, sonar, or explosives). USVs may be used in conjunction with unmanned underwater vehicles and unmanned aerial systems. USV launch and retrieval methods are highly variable. USV test vehicle launch methods include lowering onto the water from a support craft or pier, deploying from another craft, or launching from a boat ramp. The vehicle propels itself through the water to complete the test objectives, which could include deployment or recovery of a payload, sonar or other sensor use, or completion of a propulsion test. Occurs year-round. | | |
| **In-Port Maintenance Testing** | Each system is tested to ensure it is functioning in a technically acceptable manner and is operationally ready to support in-port and at-sea maintenance capabilities, including Combat Systems testing. Testing includes general system maintenance capabilities (e.g., verifying that submarine tenders can perform resupply and replenishment capabilities). For Combat Systems, the ship's test plans and procedures, Maintenance Repair/Requirement Cards, and computerized planned maintenance system are used in establishing testing standards. No explosives or sonar are used. | Guam Nearshore | Yes |
| **Range Modernization and Sustainment** | Support crews place, move, and remove mine countermeasures (MCM) targets. MCM targets could be inserted on the seafloor or tethered to anchors that are moored on the seafloor. Other temporary training areas can be established by installing instrumentation that could include hydrophones anchored to the seafloor similarly to anchored mine training shapes. Once training is completed, the temporary instrumentation is recovered and utilized elsewhere. No explosives are used. | MITT Study Area | Yes |

[1]Debeaching operations that are not part of opportunistic training requested in support to community response initiatives by local governments would only occur at Reserve Craft Beach in Apra Harbor. All opportunistic debeaching activities will comply with NWP 22.

Notes: CNMI = Commonwealth of Northern Mariana Islands, MIRC = Mariana Islands Range Complex, MITT = Mariana Islands Training and Testing, SEIS/OEIS = Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement, CZMA = Coastal Zone Management Act, MFH = Medium Frequency, HFM = High Frequency Marine, HFH = High Frequency, ISR = Intelligence Surveillance Reconnaissance, UAS = Unmanned Aircraft System, NM = Nautical Mile(s), SOP = Standard Operating Procedure, ESA = Endangered Species Act, MMPA = Marine Mammal Protection Act

## 2.3 THE MITT STUDY AREA

The 2026 MITT Draft SEIS/OEIS Study Area, as shown on Figure 1-1, includes the at-sea areas of the MIRC (which include waters within the CNMI coastal zone), additional areas on the high seas to the north and west of the MIRC, the transit corridor between the MIRC and the Hawaii Range Complex, pierside locations on Guam in Apra Harbor, nearshore areas of Guam and the CNMI, and the land-based training area on FDM.

For purposes of analyzing effects under CZMA, this analysis considers activities conducted within the CNMI Coastal Zone (see Figure 1-2). Activities conducted within the Federal Waters excluded from the CNMI Coastal Zone and seaward of the coastal zone are also considered if there is a potential for a "spill over" effect to the CNMI's coastal resources. For the purposes of this CD, the Navy categorized the analysis into three distinct geographic zones (Table 2-2).

**Table 2-2: CNMI Location Descriptions**

| Location | Description |
|---|---|
| MITT Study Area | At-sea areas of the MIRC and the additional areas on the high seas to the north and west of the MIRC, the transit corridor between the MIRC and the Hawaii Range Complex, and the land-based training area on FDM. |
| MIRC | The complex is comprised of air, land, and sea space within and adjacent to Guam and CNMI and includes ranges and operating areas on and around the islands of Guam, Rota, Saipan, Tinian, and FDM. It extends from the waters south of Guam to north of Pagan, and from an area east of the Mariana Islands west to the middle of the Philippine Sea. |
| CNMI Nearshore | 3 NM seaward from the high tide line (CNMI Coastal Zone and Federal waters). |

## 2.4 DIFFERENCES FROM PREVIOUS CONSISTENCY DETERMINATIONS

As described earlier, the proposed military readiness activities are generally consistent with those analyzed in the 2020 CD and are representative of military readiness activities that the Action Proponents have been conducting in the MITT Study Area for decades. While the proposed activities are generally consistent with activities conducted in the MITT Study Area for decades, changes in military readiness activities and new activities are analyzed in the 2026 MITT Draft SEIS/OEIS. The 2026 MITT Draft SEIS/OEIS also includes updated science and analysis, specifically, revised acoustic effects model, updated marine mammal criteria, updated marine mammal density data, review of research published since the previous analysis, and updated benthic habitat database.

## 2.5 STANDARD OPERATING PROCEDURES AND MITIGATION MEASURES

Standard Operating Procedures (SOPs) and mitigation measures currently being implemented as a result of the 2020 SEIS/OEIS, and that will continue to be implemented, as described in Appendix C of this CD, are considered as part of the Proposed Action. SOPs applicable to training and testing have been developed through years of experience, and their primary purpose is to provide for safety (including public [and environmental] health and safety) and mission success. SOPs differ from mitigation measures because mitigation is designed specifically for the purpose of avoiding or reducing environmental impacts, whereas SOPs are designed to provide for safety and mission success. All SOPs and mitigation measures in the MITT Study Area that are currently being implemented as a result of the 2020 SEIS/OEIS, and that will continue to be implemented, are described in Appendix C of this CD and Chapter 4 of the 2026 MITT Draft SEIS/OEIS. Many of these SOPs and mitigation measures may have benefits that mitigate, avoid, or reduce adverse effects on multiple resources; for example, measures designed to protect Essential Fish Habitat could also protect nearby species.

The Navy uses several SOPs that additionally have a benefit to prevent and/or minimize the risk of the introduction and spread of invasive species (as well as manage pollutant discharges incidental to the normal operation of a vessel [e.g., elevator pit effluent, seawater cooling overboard discharge, graywater]). These include the following:

- Ballast water exchange (typically beyond 12 NM or further) during military readiness activities will comply with the Navy's Environmental Readiness Program Manual (Chief of Naval Operations Manual [OPNAV M]-5090.1), Department of Defense (DoD) Manual (DODM) 4715.06 Volume 4 (2022), and DODM 4715.06 Volume 3 (2024).
- Military Readiness activities will be consistent with Joint Region Marianas Integrated Natural Resources Management Plans designed to ensure, to the maximum extent possible, aquatic invasive species are not introduced into nearshore environments or bodies of water on or adjacent to the installation (OPNAV M-5090.1).
- The U.S. Environmental Protection Agency (USEPA) Uniform National Discharge Standards (UNDS) for Armed Forces Vessels is a set of national performance standards under the Clean Water Act that regulate 25 incidental discharges of U.S. Armed Forces vessels with performance standards developed jointly by USEPA and DoD, including for ballast water and underwater ship husbandry discharges (also known as hull husbandry or vessel in-water cleaning or biofouling management). UNDS require the use of marine pollution control devices, which can be equipment or Best Management Practices designed to treat, retain, or control discharges of a vessel to reduce/minimize pollution impacts to surrounding waters including reducing the transfer of invasive species. UNDS regulations apply to all vessels operating in the navigable waters of the United States or waters of the contiguous zone (85 Federal Register [FR] 43465).
- All training in the MIRC will comply with the Marianas Training Manual, Commander, U.S. Naval Forces Marianas Instruction 3500.4 series.
- MITT at-sea and FDM training requests must be submitted to MIRC Operations using the Navy Data Collection and Scheduling Tool (DCAST) for scheduling.
- Reporting requirements and procedures are tracked within an internal web-based reporting tool, called Sonar Positional Reporting System (SPORTS) and data is classified.
- Cultural Resources Awareness Training Video must be viewed by participants.

To ensure the protection of marine and coastal resources, the Navy has developed a comprehensive mitigation framework that balances operational readiness with environmental stewardship. Appendix C of this CD details the activity-based and geographic protections the Action Proponents propose to implement under the Proposed Action to avoid or reduce potential impacts marine species and cultural resources. Table 2-3 includes a summary of the new mitigation measures and substantive modifications to existing measures proposed under the 2026 MITT Draft SEIS/OEIS. The Navy continues to work collaboratively with regulatory agencies to refine these measures, which will be finalized through the ongoing consultation and permitting processes.

**Table 2-3: Summary of New or Modified Mitigation Requirements**

| Category | Changes in Mitigation Requirements for the 2026 MITT Draft SEIS/OEIS |
|---|---|
| **Activity-Based Mitigation** | |
| Lookout Teams | Mitigation includes a requirement for additional personnel on the platform conducting the event, or on additional participating platforms, to serve as part of the Lookout Team for all acoustic, explosive, and physical disturbances and strike stressor mitigation categories. In the 2020 MITT SEIS/OEIS, additional personnel were required to assist Lookouts for |

| Category | Changes in Mitigation Requirements for the 2026 MITT Draft SEIS/OEIS |
|---|---|
| | explosive events only. The Action Proponents have also been, in practice, implementing this for active sonar and non-explosive events, and are now formalizing their current practice as a requirement. Additionally, the *U.S. Navy Lookout Training Handbook* was updated in 2022 to include a more robust chapter on environmental compliance, mitigation, and marine species observation tools and techniques (NAVEDTRA 12968-E). These changes are collectively designed to improve the effectiveness of activity-based mitigation. |
| Broadband and Other Active Acoustic Sources | A 200 yd. shut down mitigation zone would apply broadband and other active acoustic sources less than 200 decibels (dB), while the tiered 1,000 yd. power down/500 yd. power down/200 yd. shut down mitigation zones would apply to those sources greater than or equal to 200 dB. This requirement is meant to encompass new acoustic sources (e.g., sources used for oceanographic and acoustic research) that use a range of frequencies. Broadband source mitigation zones were not specified in the 2020 MITT SEIS/OEIS. |
| High-Altitude Aircraft | Change clarifies that aircraft operating at high altitudes (e.g., Maritime Patrol Aircraft) are exempt from requirements to conduct activity-based mitigation. When operating at high altitudes, observations for marine mammals or sea turtles would not be effective. |
| Vessel Movements | Change clarifies that one or more Lookouts will be posted in accordance with the most recent navigation guidance, which is subject to change over time. The 2020 MITT SEIS/OEIS required one Lookout on underway vessels. |
| Unmanned Vehicles | Includes new requirements for applicable events that involve Unmanned Surface Vehicles and Unmanned Underwater Vehicles (and the sources they use, tow, or deploy) that are already being escorted and operated under positive control by a manned surface vessel. In the 2020 MITT SEIS/OEIS, activity-based mitigations were not required for unmanned vehicles or sources they used, towed, or deployed. |
| Research-Based Sub-Surface Explosives | Includes new requirements for "research-based sub-surface explosives" to account for new explosive events with research applications (e.g., oceanographic and acoustic research) that would use 0.1–5 lb. NEW. |
| **Geographic Mitigation** | |
| Artificial Reef, Hard Bottom Substrate, and Shipwreck Mitigation Areas | Includes new mitigation for precisely placed seafloor devices developed for hard bottom substrate during the 2022 HSTT Study Area's Essential Fish Habitat Assessment consultation (U.S. Department of the Navy, 2022). For the 2026 MITT Draft SEIS/OEIS, this mitigation is being applied to the whole mitigation area category of hard bottom substrate as well as artificial reefs and shipwrecks[1] for consistency and practicality of implementation. |
| Agat Bay Nearshore Mitigation Area | Adds MF1C mid-frequency hull-mounted sonar, in addition to MF1 mid-frequency hull-mounted sonar, to the seasonal 20 hour cap for the Chalan Kanoa Mitigation Area, and to the year round restriction for the Agat Bay Nearshore Mitigation Area. |

[1] For purposes of this document, this mitigation includes aircraft, and other submerged resources.
Notes: MITT = Mariana Islands Training and Testing, SEIS/OEIS = Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement, NAVEDTRA = Naval Education and Training Command, lb. = pound(s), NEW = net explosive weight, yd. = yard(s), HSTT = Hawaii-Southern California Training and Testing

## 2.6 EFFECTS TEST

The Navy evaluated the 2026 MITT Draft SEIS/OEIS Proposed Action to determine if new or modified activities are reasonably likely to affect land use, water use, or natural and cultural resources within CMNI's coastal zone. Per 15 CFR part 930.33, the Navy utilizes an "effects test" to decide if military activities—including those occurring far out in federal waters, have a "reasonably foreseeable" impact on CNMI's shorelines, water, or resources. Coastal zone resources include both permanent features

(e.g., benthic organisms, coral reefs) and mobile species (e.g., marine mammals and sea turtles) that move in and out of the coastal zone as part of a natural cycle.

To conduct this test, the Navy identifies specific stressors—physical impacts or stimuli such as underwater sonar or high-explosive pressure—and maps them against affected resources. Per 65 FR 77130, the Navy distinguishes between temporary impacts to a resource while it is outside the coastal zone and "coastal effects" felt within the zone itself. If an activity is found to have such an effect, it triggers a formal consistency determination to ensure the activity aligns with the enforceable policies of the CNMI Coastal Zone Management Program.

The effects test for the Proposed Action is based on the locations of military readiness activities relative to the coastal zone and the potential effects of stressors on coastal uses (e.g., recreational, economic, and historic resources) and physical or biological resources. While most Phase IV activities occur in areas outside the coastal zone, certain military readiness activities, specifically those within the nearshore environments, warrant this consistency review. Appendix A of this CD further details these activities, their locations, and their frequency. Based on this analysis, the Action Proponents determined that the following elements, which typically occur outside the coastal zone, may affect coastal zone uses and resources:

- Activities using sonar (e.g., anti-submarine warfare tracking exercises and tests)
- Activities using high-explosive ordnance (e.g., air-to-surface missile exercises and tests)
- Mine warfare activities using high explosives (e.g., mine neutralization tests)
- Torpedo training events and tests
- Unmanned vehicle training events and tests

The Navy identified and evaluated aspects of its Proposed Action that could stress (i.e., stimuli that affect part of the environment) environmental resources. To evaluate potential impacts to the coastal zone, the Navy identified and analyzed the specific stressors associated with each newly proposed military readiness activity. Table 2-4 lists these activities and the corresponding stressors that have been determined to have reasonably foreseeable effects on CNMI's coastal resources. For the general framework and supporting analysis used to determine which stressors have reasonably foreseeable effects on environmental resources, refer to the 2026 MITT Draft SEIS/OEIS and Appendix B of this CD.

**Table 2-4: Stressors Determined to Have Reasonably Foreseeable Effects on Coastal Zone Uses or Resources for New Military Readiness Activities**

| Activity Name | Affected Resources and Associated Stressors |
|---|---|
| **Dive and Salvage Operations** | Biological Resources<br>• Acoustic (Vessel Noise)<br>• Physical Disturbance and Strike (Vessels and in-water device strike)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **Underwater Construction Team Training** | Biological Resources<br>• Acoustic (Vessel Noise)<br>• Physical Disturbance and Strike (Vessels and in-water device strike, seafloor |

| Activity Name | Affected Resources and Associated Stressors |
|---|---|
| | devices)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **Port Damage Repair** | Biological Resources<br>• Acoustic (Vessel Noise)<br>• Physical Disturbance and Strike (Vessels and in-water device strike, seafloor devices)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **Maritime Environmental Response** | Biological Resources<br>• Acoustic (Vessel Noise)<br>• Physical Disturbance and Strike (Vessels and in-water device strike)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **Waterborne Training** | Biological Resources<br>• Acoustic (Vessel Noise)<br>• Physical Disturbance and Strike (Vessels and in-water device strike)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **Unmanned Aerial Systems Testing** | Biological Resources<br>• Acoustic (Vessel noise)<br>• Physical Disturbance and Strike (Vessels and in-water devices)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |

| Activity Name | Affected Resources and Associated Stressors |
|---|---|
| **Unmanned Surface Vehicle (USV) Testing** | Biological Resources<br>• Acoustic (Vessel noise)<br>• Explosives (Explosions in-water)[1]<br>• Physical Disturbance and Strike (Vessels and in-water device strike, MEM)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **In-Port Maintenance Testing** | Biological Resources<br>• Physical Disturbance and Strike (Vessels and in-water device strike)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |
| **Range Modernization and Sustainment** (Installation and Maintenance of Subsurface Targets and Instrumentation) | Biological Resources<br>• Acoustic (Vessel noise)<br>• Physical Disturbance and Strike (Vessels and in-water device strike, MEM, seafloor devices)<br>Air Quality<br>• Criteria Air Pollutants<br>• Hazardous Air Pollutants<br>Cultural Resources<br>• Physical Disturbance and Strike<br>Socioeconomic Resources<br>• Accessibility |

[1] High Explosives only used > 12 nautical miles

# 3 ENFORCEABLE POLICIES OF THE CNMI COASTAL MANAGEMENT PROGRAM

## 3.1 APPLICABILITY OF ENFORCEABLE POLICIES

The Navy conducted a consistency review of CNMI's coastal resources management policies. While the March 2025 DCRM Procedures Guide served as a primary reference, the Navy specifically evaluated those enforceable policies formally approved by the National Oceanic and Atmospheric Administration's Office for Coastal Management, to determine those applicable to the Phase IV MITT training and testing. This updated analysis builds upon the collaboration and information exchanged during the 2020 SEIS/OEIS consistency determination coordination process. Table 3-1 addresses the applicability of these policies. Enforceable policies of the CNMI Coastal Management Program are categorized as defined by the Bureau of Environmental and Coastal Quality. Policies determined to be applicable are bold-faced and analyzed in further detail in the following sections. For policies excluded from detailed analysis, a specific rationale is provided based on the scope of military readiness activities.

**Table 3-1: Enforceable Policies[1] and Applicability to the Proposed Action**

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| **Description** | **Legal Citation** | | |
| **Part 001 – General Provisions** | | | |
| Definitions | 15-10-020 | Not applicable. Definitions provided for context of Title 15 Coastal Resources Management, Northern Mariana Islands Administrative Code (NMIAC). | No |
| **Part 100 - CRM Permit Requirement** | | | |
| APC Permits for Minor and Other Developments | 15-10-105 | Not applicable. Federal agencies are not subject to local permit processes; no minor developments in APCs are proposed. | No |
| **Part 300 – Standards for CRM Permit Issuance** | | | |
| General Standards for all CRM Permits | 15-10-301 | Not applicable. The Navy is not seeking local permits nor conducting activities to which standards under those types of permits would apply. | No |
| **Standards to Avoid Adverse Impacts** | 15-10-303 | **Applicable**. Federal actions must be consistent to the maximum extent practicable with avoiding or minimizing adverse impacts on coastal resources.<br>The Navy ensures activities are consistent to the maximum extent practicable with the policy of avoiding/minimizing impacts, primarily through SOPs and activity-based and geographic mitigations. | **Yes** |
| General Criteria for CRM Permits | 15-10-305 | Not applicable. The Navy is not applying for permits nor conducting activities to which standards under those types of permits would apply. | No |
| **Specific Criteria; Areas of Particular Concern; Impact Avoidance, Minimization, and Mitigation Required** | 15-10-311 | **Applicable**. This policy articulates the mandatory mitigation hierarchy (Avoidance > Minimization > Mitigation) for impacts within Areas of Particular Concern (APCs).<br>The Navy follows a stepped approach (Avoidance > Minimization > Mitigation) as detailed in the 2026 MITT Draft SEIS/OEIS (Chapter 2 and Chapter 4) and summarized below. | Yes |
| Specific Criteria; Areas of Particular Concern; Lagoon and Reefs | 15-10-315 | Not applicable. The majority of training and testing activities are conducted in open ocean areas, well outside the defined boundaries of the Lagoon and Reefs APC. No structures are proposed for construction within the Lagoon and Reefs APC, and the Navy does not conduct activities that involve dredging, filling, or the intentional discharge of materials that would alter the physical integrity of these protected areas. The Navy does not conduct activities involving bottom-trawling, dredging, or the construction of permanent seafloor structures that would cause direct physical destruction of coral colonies. Precision anchoring and vessel transit protocols are strictly followed to prevent accidental grounding or reef damage. | No |

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| Description | Legal Citation | | |
| Specific Criteria; Areas of Particular Concern; Managaha and Anjota Islands | 15-10-320 | Not applicable. No activities are proposed on or within the immediate vicinity of these islands. | No |
| Specific Criteria; Areas of Particular Concern; Coral Reefs | 15-10-325 | Not applicable. Stressors associated with activities that occur in areas around Tinian would not have reasonably foreseeable effects within the CNMI coastal zone or spillover effects. Other activities occurring within the coastal zone of Tinian (including Tinian Harbor) and Rota would have no effect on coral reefs. | No |
| Specific Criteria; Areas of Particular Concern; Wetlands and Mangroves | 15-10-330 | Not applicable. The Navy's Proposed Action does not include activities in wetlands or mangroves nor would any effects from training and testing outside the vicinity of these areas reasonably affect these coastal resources. | No |
| Specific Criteria; Areas of Particular Concern; Shorelines | 15-10-335 | Not applicable. The Navy's Proposed Action does not include the use of the area defined as shoreline: "the area between the high tide line or the edge of a shoreline cliff and 150 feet inland on the islands of the Northern Mariana Islands chain." The activities described in the Navy's Proposed Action do not restrict access or use of areas outside of locations excluded from the CNMI coastal zone. While the Navy's Proposed Action occurs within areas excluded from the CNMI coastal zone, specifically FDM, the Navy continues to implement measures that ensure the integrity of the shoreline is maintained. In addition, the Navy has conducted geophysical monitoring that shows concentrated training on FDMs stable limestone area avoids shoreline impacts. Proposed activities would not cause coastal erosion or change the physical characteristics of the FDM coastline. | No |
| Specific Criteria; Areas of Particular Concern; Ports and Industrial Areas | 15-10-340 | Not applicable. No construction or development within ports is proposed. In the event water-dependent activities are conducted in a port, the activity would be consistent to the maximum extent practicable with the use priorities of ports and industrial areas. The Proposed Action would not interfere with the water-dependent activities or uses of the ports or industrial areas. | No |
| Specific Criteria; Areas of Particular Concern; Coastal Hazards | 15-10-345 | Not applicable. Proposed activities occur at-sea or on FDM and do not involve land-based development or permanent structures sensitive to storm intensity or sea-level rise. | No |
| Height Density, Setback, Coverage, and Parking Guidelines | 15-10-350 | Not applicable. The Navy's Proposed Action does not include construction or development on land. | No |

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| **Description** | **Legal Citation** | | |
| **Part 500 – Standards for Determining Major Siting** | | | |
| Specific Criteria for Major Sitings | 15-10-505 | Not applicable. The Navy maintains that the Proposed Action does not meet major siting criteria. The Navy's Proposed Action does not include applying for permits with the CNMI. The Navy's Proposed Action do not have the potential to significantly impact CNMI Coastal Resources as the definition of major siting requires and is not a type of project listed in the definition found at NMIAC 15-10-020(uu). This is supported by the Navy's evaluation of criteria as specified in Part 500, Section 15-10-505 Specific Criteria for Major Sitings.<br>Using the evaluation criteria specified in Part 500, Section 15-10-505 of the NMIAC, none of the activities described in the Proposed Action would conflict with the specifications provided in the evaluation criteria. Implementation of standard operating procedures and mitigation measures as part of the Proposed Action (detailed in Chapter 2 and Chapter 4 of the 2026 MITT Draft SEIS/OEIS, and the 2015 U.S. Fish and Wildlife Service Biological Opinion provides protection to coastal resources within the waters of the CNMI and minimizes adverse impacts on these resources. Therefore, the Proposed Action is fully consistent with this enforceable policy cited at Part 500, Chapter 15-10-505 of the NMIAC. | No |
| **Part 600 – CRM Permit Conditions** | | | |
| Mandatory Conditions | 15-10-610 | Not applicable. The Navy is not applying for permits with the CNMI. | No |
| **Air and Water Quality Standards, and Regulations of the NMIAC** | | | |
| DEQ Drinking Water Regulations | 65-20 | Not applicable. The Navy's Proposed Action does not include land-based activities and would not impact drinking water. | No |
| DEQ Solid Waste Management (SWM) Regulations | 65-80-102 and 65-80-108 | Not applicable. The Navy's Proposed Action does not involve SWM facilities, and the Navy is not seeking a CNMI permit or exemption. | No |
| DEQ Underground Injection Control Regulations | 65-90 | Not applicable. The Navy's Proposed Action does not include land-based activities or underground injection controls. | No |
| DEQ Wastewater Treatment and Disposal Rules and Regulations: Definitions | 65-120-010 and 65-120 Part 1700 | Not applicable. The Navy's Proposed Action does not include the construction or operation of water wells and would not impact groundwater. | No |
| DEQ Well Drilling and Well Operations | 65-140-005 through 65-140-010 | | |

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| **Description** | **Legal Citation** | | |
| **DEQ Water Quality Standards: Classification and Establishment of Water Use Areas[3]** | **65-130 Part 200** | **Applicable**. Revised 2024 standards are applied. No exceedances of toxic pollutants or turbidity criteria are anticipated. | **Yes** |
| **DEQ Water Quality Standards: Specific Water Quality Criteria[3]** | **65-130 Part 400** | | **Yes** |
| DEQ Water Quality Standards: Mixing Zone in Receiving Waters | Part 500 | Not applicable. No permanent point-source discharges requiring mixing zones are proposed. | No |
| Department of Public Works (DPW) Flood Damage Prevention Regulations | 155-10.2 | Not applicable. The Navy's Proposed Action does not involve land-base development. | No |
| **Public Law No. 3-47** | | | |
| Policy Element 1. Encourage land-use master planning, floodplain management, and the development of zoning and building code legislation. | | Not applicable. This policy pertains to the government of CNMI. | No |
| Policy Element 2. Promote, through a program of public education and public participation, concepts of resource management, conservation and wise development of coastal resources. | | Not applicable. This policy pertains to the government of CNMI. | No |
| Policy Element 3. Promote more efficient resources management through the following:<br>A. Coordination and development of resource management laws and regulations into a readily identifiable program;<br>B. Revision of existing unclear laws and regulations;<br>C. Improvement of coordination among Commonwealth agencies;<br>D. Improvement of coordination between Commonwealth and federal agencies;<br>E. Establishment of educational and training programs for Commonwealth government personnel and refinement of supporting technical data. | | Not applicable. This policy pertains to the government of CNMI. | No |

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| **Description** | **Legal Citation** | | |
| **Policy Element 4. Plan for and manage any use or activity with the potential for causing a direct and significant impact on coastal resources. Significant adverse impacts shall be mitigated to the extent practicable.** | | **Applicable**. The CD includes an updated analysis of the Proposed Action and potential for impacts on coastal resources, including discussion of mitigation measures. | **Yes** |
| Policy Element 5. Give priority for water-dependent development and consider the need for water-related and water-oriented locations in its siting decisions. | | Not applicable. The Navy's Proposed Action does not involve development or siting decisions of any kind. | No |
| Policy Element 6. Provide for adequate consideration of the national interest, including that involved in planning for, and in the siting of, facilities (including energy facilities in, or which significantly affect, the Commonwealth's coastal zone) which are necessary to meet requirements which are other than local in nature. | | Not applicable. The Proposed Action does not involve development of any kind, including facilities. | No |
| Policy Element 7. Not to permit, to the extent practicable, development of identifiable hazardous lands, including floodplain, erosion-prone areas, storm wave inundation areas, air installation crash and sound zones and major fault lines, unless it can be demonstrated that such development does not pose unreasonable risks to the health, safety or welfare of the people of the commonwealth, and complies with applicable laws. | | Not applicable. The Navy's Proposed Action does not involve development of identifiable hazardous lands, including floodplain, erosion-prone areas, storm-wave inundation areas, air installation crash and sound zones, and major fault lines. | No |
| Policy Element 8. Mitigate, to the extent practicable adverse environmental impacts, including those aquifers, beaches, estuaries and other coastal resources while developing an efficient and safe transportation system. | | Not applicable. The Navy's Proposed Action does not involve the development of a transportation system. | No |
| Policy Element 9. Require any development to strictly comply with erosion, sedimentation, and related land and water use districting guidelines, as well other related land and water use policies for such areas. | | Not applicable. The Navy's Proposed Action does not involve development of any kind. | No |
| **Policy Element 10. Maintain or improve coastal water quality through control of erosion, sedimentation, runoff, siltation, sewage, and other discharges.** | | **Applicable**. The CD includes an updated analysis of the Proposed Action and coastal water quality. Addresses erosion and siltation, specifically monitoring for "geophysical change" at FDM. | **Yes** |

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| **Description** | **Legal Citation** | | |
| **Policy Element 11. Recognize and respect locations and properties of historical significance throughout the Commonwealth, and ensure that development which would disrupt, alter, or destroy these, is subject to Commonwealth laws and regulations.[4]** | | **Applicable**. As detailed in the 2026 MITT Draft SEIS/OEIS, the Navy has initiated Section 106 consultation to evaluate updates to training types and intensities as well as new activities. | **Yes** |
| **Policy Element 12. Recognize areas of cultural significance, the development of which would disrupt the cultural practices associated with such areas, which shall be subject to a consultation process with concerned ethnic groups and any applicable laws and regulations.[4]** | | | **Yes** |
| **Policy Element 13. Require compliance with all local air and water quality laws and regulations and any applicable federal air and water quality standards.** | | **Applicable**. The CD includes an updated analysis of the Proposed Action and compliance with local air and water quality laws and regulations. Updated modeling ensures no violation of National Ambient Air Quality Standards in Saipan, Tinian, or Rota coastal zones. A Record of Non-Applicability is included in the 2026 MITT Draft SEIS/OEIS. | **Yes** |
| Policy Element 14. Not permit, to the extent practicable, development with the potential for causing significant adverse impact in fragile areas such as designated and potential historic and archaeological sites, critical wildlife habitats, beaches, designated and potential pristine marine and terrestrial communities, limestone and volcanic forests, designated and potential mangrove stands, and other wetlands. | | Not applicable. The Navy's Proposed Action does not involve development of any kind. | No |
| **Policy Element 15. Manage ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats; and preserve the functions and integrity of reefs, marine meadows, salt ponds, mangroves, and other significant natural areas.[5]** | | **Applicable**. The CD includes an updated analysis of the Proposed Action and ecological resources. The Proposed Action is consistent with the management and development of reefs and wildlife habitats. | **Yes** |
| **Policy Element 16. Manage the development of the local subsistence, sport, and commercial fisheries, consistent with other policies.[5]** | | **Applicable**. The CD includes an updated analysis of the Proposed Action and local subsistence, sport, and commercial fisheries. Addresses management of local subsistence, sport, and commercial fisheries | **Yes** |
| **Policy Element 17. Protect all coastal resources, particularly sand, coral, and fish from taking beyond sustainable** | | **Applicable**. The CD includes an updated analysis of the Proposed Action and coastal resources. Addresses "taking" of marine mammals; The Proposed Action is | **Yes** |

| Enforceable Policy[2] | | Applicability to the Proposed Action (Rationale for Inclusion/Exclusion) | Inclusion for Analysis |
|---|---|---|---|
| Description | Legal Citation | | |
| **levels; and in the case of marine mammals and any species on the Commonwealth endangered species list, from any taking whatsoever.** | | consistent to the maximum extent practicable for sonar/explosives. | |
| Policy Element 18. Encourage preservation and enhancement of and respect for the Commonwealth's scenic resources through the development of, increased enforcement of, and compliance with, sign, litter, zoning, building codes, and related land use laws. | | Not applicable. This policy pertains to the government of the CNMI. | No |
| Policy Element 19. Discourage, to the maximum extent practicable, visually objectionable uses so as not to significantly degrade scenic views. | | Not applicable. The majority of the military readiness activities within the CNMI would be conducted within the boundaries of federally leased land at FDM, within 3 NM of federally leased land on Tinian, or in areas greater than 3 NM from shore and would have no impact on the aesthetic quality of CNMI's scenic views. There are no reasonably foreseeable direct or indirect effects on the uses and resources of the CNMI coastal zone from impacts on visual quality from military training and testing activities. | No |
| Policy Element 20. Encourage the development of recreation facilities which are compatible with the surrounding environment and land uses. | | Not applicable. The Navy's Proposed Action does not involve development of recreation facilities. | No |
| **Policy Element 21. Encourage the preservation of traditional rights of public access to and along the shorelines consistent with the rights of private property owners.** | | **Applicable**. The Navy finds no change to access to public or federally leased lands. | **Yes** |
| Policy Element 22. Pursue agreements for the acquisition of use of any lands necessary to guarantee traditional public access to and along the shorelines. | | Not applicable. This policy element pertains to the government of CNMI. | No |
| Policy Element 23. Encourage agricultural development and the preservation and maintenance of critical agricultural lands for agricultural uses. | | Not applicable. The Navy's Proposed Action does not involve any agricultural development or critical agricultural lands. | No |

[1] Enforceable Policies as defined in Appendix A of the *Procedures Guide for Achieving Federal Consistency with the CNMI Coastal Management Program, Bureau of Coastal and Environmental Quality Division of Coastal Resources Management, March 2025*

[2] Activities highlighted in **bold** text are considered applicable and are discussed in more detail in the CD.

[3, 4, 5] Enforceable policies are analyzed together in this consistency determination.

Notes: APC = Area of Particular Concern, CNMI = Commonwealth of the Northern Mariana Islands, CRM = Coastal Resources Management, DEQ = Department of Environmental Quality

## 3.1 Northern Mariana Islands Administrative Code Title 65, Chapter 130 ( Water Quality Standards) Parts 200 (Classification) and 400 (Criteria)

The Navy has re-evaluated military training and testing activities against the water classifications and revised 2024 water quality standards established in the Northern Mariana Islands Administrative Code (NMIAC) (Chapter 65-130 Water Quality Standards). An updated analysis of water quality impacts is provided in Section 3.1 (Sediments and Water Quality) of the Phase IV MITT SEIS/OEIS and the Phase II MITT EIS/OEIS.

**Analysis Update**: Since Phase III MITT SEIS/OEIS, the Navy has conducted extensive reviews of new literature regarding potential impacts on sediments and water quality. The Phase IV MITT SEIS/OEIS utilizes data from heavily used military ordnance sites in Hawaii, Vieques (Puerto Rico), the Potomac River (Maryland), and Pamlico Sound (North Carolina) as proxies to assess impacts in the Study Area.

> The Navy analyzed water quality standards and water use areas specified in Chapter 65–130 Parts 200 and 400 of the NMIAC.
>
> Based on the activities that would occur within the coastal zone, and in consideration of reasonably foreseeable effects, it is unlikely that the Proposed Action would exceed water quality standards established in Chapter 65–130 Part 400.
>
> The Proposed Action is fully consistent with this enforceable policy.

### 3.1.1 Baseline Data and Bioaccumulation Analysis

- **Bioaccumulation Risk**: Concerns regarding bioaccumulation are primarily associated with urban coastal environments with significant point and non-point source contributors. Studies at military sites indicate that metals exposed to seawater are of lower concern due to decreased bioavailability.
- **Reef Fish and Human Health**: A 2023 literature review of reef fish bioaccumulation and munitions constituents concluded there are no potentially unacceptable risks to ecological or human health from military readiness activities in the MITT Study Area. This supports findings from the Agency for Toxic Substances and Disease Registry (ATSDR) that pelagic fish caught in open waters near the FDM bombing range do not contain levels of explosive residues that would pose a hazard to human health.

### 3.1.2 Water Use Areas and Classifications (NMIAC Chapter 65-130 Part 200)

NMIAC Part 200 defines the following water use areas within the CNMI coastal zone:

- **Class "AA" Waters**: All coastal waters surrounding the 14 islands of the archipelago, including Saipan, Tinian, Rota, and the northern islands (including FDM), except for those specifically designated as Class "A."
- **Class "A" Waters**: Specific coastal areas off Saipan (e.g., Smiling Cove Marina to Saddok As Agatan), San Jose Harbor on Tinian, and East/West Harbors on Rota.
- **Class "1" and "2" Waters**: Freshwater features. No military training activities are conducted in these waters.

### 3.1.3 Consistency with Specific Criteria (NMIAC Chapter 65-130 Part 400)

The military readiness activities that generate potential stressors to water quality (e.g., seafloor detonations) do not occur within these designated water use areas; rather, they occur outside the CNMI coastal zone and are analyzed for foreseeable "spillover" effects into Class "AA" or "A" waters (Table 3-2).

- **Explosives and Byproducts**: Most explosives are consumed during detonation. Residual constituents are subject to physical, chemical, and biological processes that render them harmless or disperse them to undetectable levels.
- **Turbidity and Suspended Matter**: While explosions can resuspend sediments, these plumes dissipate quickly as particles settle or disperse. Concentrations are not expected to increase beyond ambient in the immediate area of the event and thus would not cause extended effects into these Class AA or A waters in a manner that would violate criteria (0.5 nephelometric turbidity unit [NTU] for Class AA; 1.0 NTU for Class A).
- **Metals**: The vast majority of metal expenditure occurs outside the CNMI coastal zone. Corrosion is a slow process that allows for significant dilution, and leached metals tend to bind to sediments immediately adjacent to the expended material, localizing the concentration.
- **Other Materials (Chaff and Flares)**: Chaff fibers are nonreactive and quickly disperse, resulting in only temporary, minor increases in surface turbidity that return to normal as they sink. Flares are composed of magnesium/teflon/viton (MTV). As noted in the 2026 MITT Draft SEIS/OEIS, 95 to 100 percent of the flare material is consumed during combustion. Residual flare components, such as plastic end caps and spacers, are chemically stable and do not leach hazardous concentrations into the water column.

**Conclusion**: Based on minimalactivities occurring within the coastal zone and the lack of reasonably foreseeable spillover effects from activities outside the coastal zone, implementation of the Proposed Action is unlikely to exceed the water quality standards established in NMIAC Chapter 65-130 Part 400. The Proposed Action is fully consistent with this enforceable policy.

**Table 3-2: CNMI Water Quality Standard, Criteria, and Applicable Water Use Areas**

| Water Quality Standard[1] | | Criteria/Threshold[2] | Water Use Area[3] |
|---|---|---|---|
| Microbiological Requirements | Enterococci | Geometric mean ≤ 35/100 mL (30_day interval). Single sample maximum 130/100 mL. | All Waters |
| | *E. coli* | Geometric mean ≤ 126/100 mL (30-day interval). Statistical Threshold Value (STV) 410/100\mL. | All Waters |
| pH | | pH shall not deviate > 0.5 units from a value of 8.1; no lower than 7.6 or higher than 8.6. | A, AA |
| | | pH shall not deviate > 0.5 from ambient conditions range 6.5 to 8.5, no worsening is permitted. | 1, 2 |
| Nutrients | Nitrate-Nitrogen | Not to exceed 0.20 mg/L | AA |
| | | Not to exceed 0.50 mg/L | A |
| | Total Nitrogen | Not to exceed 0.40 mg/L | AA |
| | | Not to exceed 0.75 mg/L | A, 1 |
| | | Not to exceed 1.50 mg/L | 2 |
| | Ortho-phosphate | Not to exceed 0.025 mg/L | AA |
| | | Not to exceed 0.05 mg/L | A |
| | | Not to exceed 0.10 mg/L | 1, 2 |
| | Total Phosphorus | Not to exceed 0.025 mg/L | AA |
| | | Not to exceed 0.05 mg/L | A |
| | | Not to exceed 0.10 mg/L | 1, 2 |
| | Ammonia (un-ionized) | Not to exceed 0.02 mg/L | All Waters |
| Dissolved Oxygen | | Not less than 75% saturation | All Waters |
| Total filterable suspended solids | | Concentrations shall not be increased from ambient conditions at any time, and should not exceed 5 mg/l. | AA, 1 |

| Water Quality Standard[1] | | Criteria/Threshold[2] | Water Use Area[3] |
|---|---|---|---|
| | | Concentrations shall not be increased from ambient conditions at any time, and should not exceed 40 mg/l. | A, 2 |
| Salinity | Marine waters | No alterations of the marine environment shall occur that would alter the salinity of marine or estuarine waters more than 10% from ambient conditions or which would otherwise adversely affect the indigenous biota and sedimentary patterns, except when due to natural causes. | AA, A |
| | Fresh waters | The maximum allowable amount of chlorides and sulfates shall be 250 mg/l, and the total dissolved solids shall not exceed 500 mg/l or 133% of the ambient condition. The salinity of fresh water sources and wetlands shall not be increased more than 20% from ambient conditions. | 1,2 |
| Temperature | | Water temperature shall not vary by more than 1.0°C from the ambient conditions. | All Waters |
| Turbidity | | Shall not exceed 0.5 NTU over ambient conditions. | AA, 1 |
| | | Shall not exceed 1.0 NTU over ambient conditions. | A |
| Radioactive Materials | | Concentrations shall not exceed values in 10 CFR Part 20, App. B, Table 2. | All Waters |
| Oil and Petroleum Products | | No visible film, sheen, or discoloration; no tainting of aquatic life. | All Waters |
| Toxic Pollutants – (General)/(PFAS) | | Free from concentrations lethal to or producing detrimental physiological responses in human, plant, or animal life.<br><br>PFOA: Acute Saltwater Benchmark = 7.0 mg/L.<br>PFOS: Acute Saltwater Benchmark = 0.55 mg/L<br>Drinking Water (MCL) = 0.000004 mg/L (4 ppt). | All Waters |

[1] Water Quality Standards are provided in section 65-130 Part 400 of the CNMI Administrative Code.
[2] The Proposed Action would not exceed criteria/thresholds within the CNMI coastal zone.
[3] Water use areas are specified in section 65-130 Part 200 of the CNMI Administrative Code.
Notes: °C = degrees Celsius, CFU = coliform forming units, DO = dissolved oxygen, L = Liters, mg = milligrams, NTU = nephelometric turbidity unit.

### 3.2 PUBLIC LAW NO. 3-47

Public Law 3-47 includes 23 policy elements; as summarized in Table 3-1, 9 of these policy elements are applicable to the Proposed Action as detailed in the 2026 MITT Draft SEIS/OEIS.

#### 3.2.1 Policy Element 4

*Plan for and manage any use or activity with the potential for causing a direct and significant impact on coastal resources. Significant adverse impacts shall be mitigated to the extent practicable.*

Analysis Update: The Phase IV MITT SEIS/OEIS updates the previous Phase III analysis by incorporating new scientific data, updated density modeling for marine species, and expanded geographic mitigation areas.

- **Impact Avoidance, Minimization, and Mitigation Required (2025 Standard)**: In accordance with NMIAC Chapter 15-10-311, the Navy has prioritized the avoidance of APCs where

operationally feasible. Where avoidance is not possible, the Navy has implemented Activity-Based Mitigations and Geographic Mitigation Areas (refer to Chapter 4 of the 2026 MITT Draft SEIS/OEIS) to minimize impacts to the maximum extent practicable.

The Navy analyzed the Proposed Action in reference to the Policy Elements contained within Public Law No. 3-47.

The Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

- **Marine Mammals and Sea Turtles (Acoustic, Explosive, and Strike Stressors)**: The Phase IV MITT SEIS/OEIS utilizes the updated Navy Acoustic Effects Model to predict potential incidental take of marine mammals and sea turtles. This includes MMPA Level A and Level B harassment for marine mammals, as well as potential effects to ESA-listed marine mammals and sea turtles to support consultations with NMFS and U.S. Fish and Wildlife Service, respectively by incorporating the latest marine species density data and refined analytical methods. The Navy has formalized power-down and shut-down zones for sonar and explosive activities when marine mammals or sea turtles are sighted within defined mitigation zones. Updated protocols require Lookouts to be positioned on all manned underway surface vessels (refer to Chapter 4 of the 2026 MITT Draft SEIS/OEIS). While no Navy or USCG strikes have been recorded in the Study Area, these protocols include maneuvering to maintain specified distances (e.g., 500 yards from whales) to further reduce collision risk.
- **Corals and Benthic Habitats: (Expanded Protections)**: Phase IV MITT SEIS/OEIS includes enhanced protections for ESA-listed corals (including *Acropora globiceps*). Mitigation includes utilizes 350-yard horizontal buffers and anchoring restrictions to prevent physical disturbance and strike to shallow-water coral reefs (refer to Chapter 4 of the 2026 MITT Draft SEIS/OEIS). As documented, the Navy has expanded its mitigation definitions from 'live hard bottom" to "hard bottom." This change ensures that all significant geological seafloor features, which serve as the foundation for coral and invertebrate communities, are included in the Navy's protective training buffers. By broadening this scope, the Navy provides a more comprehensive safeguard against physical disturbance to potential habitat across the CNMI coastal zone.
- **Birds and Avian Habitat:** As a key coastal resource, migratory and coastal birds are protected through training constraints at FDM. This includes strict no-fire areas for the northern portion of the island and the land bridge, as well as a requirement for ship-based bombardment to occur only from the west to protect major seabird rookeries on the eastern cliffs from direct munitions effects and acoustic disruption.
- **Fishes and Essential Fish Habitat**: Analysis confirms that while individual fish may be impacted by underwater sound or explosives, population-level effects are avoided.
- **Recreational Use of the Coastal Zone:** The Navy minimizes impacts on the recreational use of coastal resources by issuing Broadcast Notices to Mariners (BNMs) well in advance of activities. Training is scheduled to minimize disruptions to popular recreational diving, fishing, and boating areas, ensuring that the public retains safe access to the coastal zone outside of active, temporary exclusion windows.

**Conclusion**: The Navy's Proposed Action is fully consistent to the maximum extent practicable with the enforceable policies of the CNMI Coastal Management Program. The Navy conducts military readiness activities within a framework of comprehensive environmental planning, utilizing the best available science to assess and minimize potential impacts. Through the rigorous implementation of SOPs, Activity-Based Mitigation and Geographic Mitigation Areas, the Navy ensures that adverse effects on

coastal resources are avoided or mitigated to the extent practicable. This proactive approach to resource protection remains consistent with the requirements of CZMA and the broader objectives of the CNMI Enforceable Policies.

### 3.2.2 Policy Element 10

*Maintain or improve coastal water quality through control of erosion, sedimentation, runoff, siltation, sewage, and other discharges.*

Analysis Update: The Proposed Action does not involve activities that would degrade the CNMI coastal zone water quality through erosion, sedimentation, runoff, siltation, sewage, or other discharges. This determination is based on the following factors:

- **Absence of On-Shore Impacts**: No land-based training or construction activities are proposed as part of the Proposed Action on the islands of Saipan, Tinian, or Rota; therefore, there are no associated risks of terrestrial runoff or sedimentation into state coastal waters from these islands.
- **Localized Marine Effects**: While military readiness activities involve the use of explosives and metals, extensive analysis and previous monitoring indicate that chemical, physical, or biological changes to water quality are not detectable beyond a small zone immediately adjacent to expended materials. Concentrations remain below federal and local screening levels.
- **Munitions Constituents**: Studies on military ranges in similar environments (e.g., Vieques, Puerto Rico) and legacy sites off Oahu, Hawaii, demonstrate that most munitions constituents have low solubility in seawater, degrade naturally, and are rapidly diluted to non-harmful concentrations.
- **Bioaccumulation and Human Health**: A comprehensive 2023 literature review and a previous ATSDR assessment concluded that there are no unacceptable risks from munitions constituents to sediments, water quality, or ecological and human health within the Study Area. Pelagic fish caught in open waters near training ranges are not likely to contain residues that pose a public health hazard.
- **Farallon de Medinilla**: Although military readiness activities occur on FDM, the Navy continues to implement previously established SOPs and maintains a baseline of geophysical conditions to monitor potential geophysical changes. Proposed activities on FDM reflect a significant reduction in cumulative Net Explosive Weight compared to previous phases, further lessening potential impacts.

**Conclusion**: By adhering to established SOPs and conducting hazardous activities in areas outside the CNMI coastal zone or designated training sites, the Proposed Action would not violate water quality standards. Therefore, the Proposed Action is fully consistent with the enforceable policy element on water quality of the CNMI Coastal Management Program.

### 3.2.3 Policy Element 11

*Recognize and respect locations and properties of historical significance throughout the Commonwealth, and ensure that development which would disrupt, alter, or destroy these, is subject to Commonwealth laws and regulations.*

The coastal consistency analyses for Policy Element 11 are discussed below with Policy Element 12.

### 3.2.4 Policy Element 12

*Recognize areas of cultural significance, the development of which would disrupt the cultural practices associated with such areas, which shall be subject to a consultation process with concerned ethnic groups and any applicable laws and regulations.*

Analysis Update: Impacts on submerged and terrestrial historical and cultural resources from military readiness activities are discussed in Section 3.11 (Cultural Resources) and Section 3.12 (Socioeconomic Resources) of the Phase IV MITT SEIS/OEIS. The Navy has fulfilled its responsibilities pursuant to Section 106 of the National Historic Preservation Act by conducting ongoing consultations to identify and evaluate potential effects. While the 2022 CNMI Programmatic Agreement for Training and Testing provides the framework for this coordination, the Navy completed specific Section 106 requirements for the Proposed Action. On February 6, 2026, the Navy received a formal letter from the CNMI State Historic Preservation Officer that they concurred with the determination of no adverse effects for the MITT undertaking.

- **Resource Identification**: In response to requests from MITT stakeholders, the Navy conducted extensive background research and updated its geospatial data to identify known wrecks and obstructions around Saipan, Tinian, and Rota. This research supports the ongoing Section 106 process and ensures that military activities avoid identified historic properties.
- **Survey Commitments**: To address previous CNMI concerns and fulfill specific CZMA coordination requirements, the Navy has conducted extensive aerial and submerged surveys at FDM to identify properties eligible for the National Register of Historic Places.
- **Mitigation and Best Management Practices**: The Navy implements strict horizontal buffers (typically 350 yards) for explosives and vessel anchoring near known shipwrecks and precisely placed seafloor devices. Additionally, the Navy provides Cultural Resources Awareness Training and distributes Field Guides (updated May 2021) to personnel prior to training in the CNMI to ensure the protection of sensitive sites.


- **Access to Traditional Places**: While access to certain beach areas and roads may be temporarily restricted during amphibious activities on Tinian (e.g., Unai Chulu and Unai Dankulo), these closures are "limited to the minimum duration necessary to ensure public safety and the security of the training event." The Navy coordinates with local offices to minimize disruptions to holidays, festivals, or culturally important days.
- **Consultation**: The Navy maintains an active Integrated Cultural Resources Management Plan and is currently engaged in formal Section 106 consultation with the CNMI State Historic Preservation Officer and other consulting parties to ensure the continued protection of cultural and historical resources.

**Conclusion**: The Proposed Action does not involve development that would disrupt, alter, or destroy historical properties or traditional cultural places. Therefore, the Proposed Action is fully consistent with the enforceable policy elements on cultural and historical significance.

### 3.2.5 Policy Element 13

*Require compliance with all local air and water quality laws and regulations and any applicable federal air and water quality standards.*

Analysis Update: The Proposed Action is analyzed for compliance with local and federal standards in Section 3.1 (Sediments and Water Quality) and Section 3.2 (Air Resources) of the Phase IV MITT SEIS/OEIS.

#### 3.2.5.1 Compliance with Water Quality Standards (NMIAC Chapter 65)

The Navy ensures consistency to the maximum extent practicable with the following specific local regulations:

- **Drinking Water and Well Operations (NMIAC Chapters 65–20 and 65–140)**: Because the Proposed Action is limited to at-sea and FDM activities and does not include land-based construction on Saipan, Tinian, or Rota, there are no reasonably foreseeable effects on public water systems or groundwater aquifers.
- **Wastewater and Solid Waste (NMIAC Chapters 65–120 and 65–80)**: The Action Proponents adhere to the UNDS and the Navy's Hull Cleaning Program to manage incidental discharges and biofouling, preventing the introduction of pollutants into CNMI waters.
- **Marine Water Quality (NMIAC Chapters 65–130)**: Updated 2024 standards for toxic pollutants and turbidity are applied. Analysis confirms that any munitions constituents released are rapidly diluted and do not reach levels lethal to marine life.

#### 3.2.5.2 Compliance with Air Quality Standards (NMIAC Chapters 65–10)

Military readiness activities comply with the Clean Air Act and local air pollution control regulations:

- **Attainment Status**: The CNMI remains in attainment for all National Ambient Air Quality Standards.
- **Localized Impacts**: Analysis for Phase IV MITT SEIS/OEIS indicates that emissions from vessels and aircraft transiting near Saipan, Tinian, and Rota are intermittent and short term. Wakes from assets in motion promote rapid plume dispersion, ensuring that ambient air quality remains well within established safety limits.
- **Regulatory Updates**: The analysis incorporates the lowered 2024 particulate matter with an aerodynamic size less than or equal to 2.5 microns ($PM_{2.5}$) annual standard (9 micrograms per cubic meter) and the 2025 sulfur dioxide ($SO_2$) secondary standard.

**Conclusion**: Based on the detailed stressor analysis, the incremental contribution of the Proposed Action would not result in a violation of local or federal air and water quality laws. Therefore, the Navy finds the Proposed Action fully consistent with the enforceable policy on air and water quality.

### 3.2.6 Policy Element 15

*Manage ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats; and preserve the functions and integrity of reefs, marine meadows, salt ponds, mangroves, and other significant natural areas.*

Discussion of Policy Element 15 is presented below under Policy Element 16.

### 3.2.7 Policy Element 16

*Manage the development of the local subsistence, sport, and commercial fisheries, consistent with other policies.*

Analysis Update: The Proposed Action is consistent with the management and development of local fisheries in the CNMI. This determination is based on the analysis presented the Phase IV MITT SEIS/OEIS as follows:

- **Population Stability**: Analysis of fish and invertebrate populations concludes that military readiness activities would not result in population-level effects or long-term impacts on the availability of fishery resources.
- **Continued Access**: The Navy is not proposing changes to ocean areas currently co-used by the military and the public. Access to the majority of the CNMI coastal zone remains open for commercial and subsistence fishing.
- **Ecological Integrity**: Mitigation measures for explosives and physical disturbance stressors, such as 350-yard horizontal buffers from shallow-water coral reefs, protect the essential habitats and "live bottom" areas that support key fishery species.
- **Traditional Practices**: The Navy recognizes the importance of traditional and subsistence fishing in the CNMI. While portions of Warning Area W-517 overlap with the coastal zone, training-related restrictions are infrequent, short-term, and typically occur well beyond the 3-NM nearshore area where the majority of traditional fishing takes place. To mitigate access issues, the Navy continues to issue BNMs and is actively evaluating additional notification options, such as social media updates or direct community outreach, to improve real-time awareness of training schedules and ensure safe, predictable access for local fishers.

**Conclusion**: Because the Proposed Action avoids long-term impacts on fish populations and maintains current levels of access to fishing grounds, it is fully consistent with the enforceable policy on the development of local fisheries. Further analysis regarding the stability of fish stocks and the continued accessibility of traditional and commercial fishing grounds can be found in Section 3.9 (Fishes) and Section 3.12 (Socioeconomic Resources) of the Phase IV MITT SEIS/OEIS.

### 3.2.8 Policy Element 17

*Protect all coastal resources, particularly sand, coral, and fish from taking beyond sustainable levels; and in the case of marine mammals and any species on the Commonwealth endangered species list, from any taking whatsoever.*

Analysis Update: The Navy acknowledges that activities involving sonar and explosives have the potential to incidentally take marine mammals and species on the endangered species list, but these activities are subject to authorization by the NMFS under federal law. The Navy finds the Proposed Action consistent with the sustainability goals of this policy based on the following.

- **Protection of Corals and Sand**: The Navy implements strict seafloor protection measures to prevent the "taking" or degradation of physical habitats. This includes prohibiting the anchoring of vessels on coral reefs and maintaining 350-yard horizontal buffers for explosive activities around all shallow-water coral reefs. No explosive activities are proposed for the CNMI near shore except FDM. Furthermore, no activities involve the removal or mining of coastal sand, ensuring the geological integrity of the coastal zone is maintained.
- **Sustainable Fishery Levels**: While military readiness activities may result in the incidental take of individual fish, the analysis in Section 3.9 (Fishes) of the Phase IV MITT SEIS/OEIS concludes that these impacts do not result in population-level effects. The level of incidental take remains well within the reproductive and recruitment capacities of the species, ensuring that local fish stocks are maintained at sustainable levels for the CNMI.
- **Marine Mammals and Endangered Species**: For species where the policy suggests "no taking whatsoever," the Navy operates under the federal framework of the ESA and MMPA. The Navy is currently consulting with NMFS to ensure that any incidental take does not jeopardize the continued existence of these species.

- **Statutory Mandate and Preemption**: Training and testing using sonar and explosives are integral to meeting Title 10 U.S.C. Section 8062 obligations. While the Navy strives for full consistency with CNMI policies, federal law and national security mandates provide the legal framework for the incidental take authorizations necessary to maintain military readiness.
- **Protective Measures**: The Navy implements an extensive suite of activity-based mitigations, including specialized Lookout Teams and power-down/shut-down procedures, alongside geographic mitigation areas (e.g., Marpi Reef and Chalan Kanoa Reef) to minimize potential impacts.

**Conclusion**: Strict adherence to a "zero-take" policy for marine mammals or endangered species would undermine national security mandates and is inconsistent with the federal authorizations under which the Navy operates. However, by protecting the structural integrity of coral reefs, ensuring fish populations remain at sustainable levels, and implementing all practicable mitigation measures required by federal protective statutes, the Navy finds the Proposed Action consistent to the maximum extent practicable with Policy Element 17.

### 3.2.9 Policy Element 21

*Encourage the preservation of traditional rights of public access to and along the shorelines consistent with the rights of private property owners.*

Analysis Update: The Phase IV MITT SEIS/OEIS maintains existing public access protocols without proposing new permanent restrictions within the CNMI coastal zone.

- **Federally Leased Lands and FDM**: Access to FDM and its nearshore waters (0–3 NM) remains restricted due to the established risk of unexploded ordnance, in accordance with the 1983 Lease Agreement. Since the 2020 SEIS/OEIS was completed, the Navy has been working with the CNMI government to consider whether access/non-access interests for various reasons (sustainable resources, fishing interests, science projects) outweigh the safety need that led to the full closure of the 3-NM area around FDM due to potential unexploded ordnance from historical misfires. While the Navy will continue this dialogue in parallel to this Proposed Action, at present the area remains restricted from access.
- **Traditional Cultural Place (TCP) Access on Tinian**: The Navy recognizes Unai Chulu and Unai Dankulo on Tinian as TCPs eligible for listing on the National Register. While amphibious training may require temporary beach closures and the issuance of BNMs for public safety, these restrictions are infrequent.
- **Coordination**: The Navy receives information from CNMI government on important holidays, festivals and culturally significant dates and coordinates with units through Navy scheduling channels to minimize disruption to traditional and recreational uses.
- **Public Notification**: The Navy has updated notification methods to include email distribution to local stakeholders (mayors, fishers, and resource agencies) in addition to standard BNMs and Notices to Airmen. Notification methods are sent out at least 72 hours in advance.

**Conclusion**: The Proposed Action does not change public access rights in the coastal zone or alter private property rights. Therefore, the Proposed Action is fully consistent with the enforceable policy on public access.

# 4 COASTAL ZONE CONSISTENCY CONCLUDING STATEMENT

The Navy has analyzed continued training and testing in reference to the applicable enforceable policies of the CNMI Coastal Management Program, including those related to water quality, cultural and historical resources, air quality, fisheries management, and public access. The analysis presented in the Phase IV MITT SEIS/OEIS and summarized in this consistency determination incorporates the latest scientific data, updated acoustic effects modeling, and localized environmental reviews conducted since the previous 2020 CD.

While the Navy acknowledges that specific activities involving sonar and explosives may result in incidental take of certain protected species, military readiness activities are essential to meeting statutory national security mandates. By employing all practicable geographic and activity-based mitigations, the Navy ensures that these activities do not jeopardize the long-term viability of the CNMI's coastal resources. Consequently, the Navy concludes that the Proposed Action is consistent, to the maximum extent practicable, with the enforceable policies of the CNMI Coastal Management Program.

The CNMI Coastal Management Program response should be sent to:

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# Appendix A

# Military Readiness Activities in the Mariana Islands Training and Testing Study Area

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# APPENDIX A MILITARY READINESS ACTIVITIES IN THE MARIANA ISLANDS TRAINING AND TESTING STUDY AREA

Table A-1 through Table A-3 list the military readiness activities conducted within the Mariana Islands Training and Testing (MITT) Study Area that could affect Guam and the Commonwealth of the Northern Mariana Islands (CNMI) coastal zone uses or resources. These tables provide a brief description of each activity; indicate where the activity would take place in relation to the coastal zone; and, where applicable, compare the annual number of events of each proposed activity with the number of ongoing activities (described in the 2020 Consistency Determination).

## Table A-1: Ongoing and Proposed Training Activities

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| **Major Training Exercises – Large Integrated Anti-Submarine Warfare Training** | | | | | | |
| Joint Multi-Strike Group Exercise | Typically, a 10-day joint exercise, in which up to three carrier strike groups would conduct training exercises simultaneously. | MITT Study Area | No | > 3 NM from land | 1 | 1 |
| **Small Integrated Anti-Submarine Warfare** | | | | | | |
| Surface Warfare Advanced Tactical Training (SWATT)[2] | Multiple ships and aircraft coordinate the use of sensors, including sonobuoys, to search, detect, and track a threat submarine. SWATT exercises are not dedicated anti-submarine warfare exercises and involve multiple warfare areas. | MIRC; MITT Study Area | No | > 3 NM from land | 3 | 1 |
| Small Integrated Anti-Submarine Warfare Training – Navy Undersea Warfare Training Assessment Course/Multi-Sail | Multiple ships, aircraft, and submarines integrate the use of their sensors, including sonobuoys, to search for, detect, classify, localize, and track a threat submarine. | MIRC; MITT Study Area | No | > 3 NM from land | 3 | 7 |
| **Medium Coordinated Anti-Submarine Warfare Training** | | | | | | |
| Medium Coordinated Anti-Submarine Warfare Training[3] | Typically, a 3–10-day exercise with multiple ships, aircraft, and submarines integrating the use of their sensors, including sonobuoys, to search, detect, and track threat submarines. | MIRC; MITT Study Area | No | > 3 NM from land | 3 | 5 |
| **Small Coordinated Anti-Submarine Warfare Training** | | | | | | |
| Independent Deployer Certification Exercise/Tailored Surface Warfare Training[2] | Multiple ships, aircraft, and submarines conduct integrated multi-warfare training with a surface warfare emphasis for a duration of 14 days. Serves as a ready-to-deploy certification for individual surface ships tasked with surface warfare missions. | MIRC; MITT Study Area | No | > 3 NM from land | 3 | 5 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| **Air Warfare** | | | | | | |
| Air Combat Maneuvers[2] | Fixed-wing aircrews aggressively maneuver against threat aircraft to gain tactical advantage. Includes Air Intercept Control operations. | MITT Study Area; Special Use Airspace (SUA) | No | > 12 NM from land | 8,900 | 7,280–7,760 |
| Air Defense Exercise | Aircrew and ship crews conduct defensive measures against threat aircraft or simulated missiles. | MITT Study Area; SUA | No | > 12 NM from land | 100 | 642–1,122 |
| Gunnery Exercise Air-to-Air Medium Caliber | Fixed-wing aircrews fire medium-caliber guns at air targets. | MITT Study Area; SUA | No | > 12 NM from land | 36 | 32–48 |
| Gunnery Exercise Surface-to-Air Large Caliber | Surface ship crews fire large-caliber guns at air targets. | MITT Study Area; SUA | No | > 12 NM from land | 9 | 14 |
| Gunnery Exercise Surface-to-Air Medium Caliber | Surface ship crews fire medium-caliber guns at air targets. | MITT Study Area; SUA | No | > 12 NM from land | 19 | 23 |
| Missile Exercise Air-to-Air | Fixed-wing aircrews fire air-to-air missiles at air targets | MITT Study Area; SUA | No | >12 NM from land | 18 | 16–18 |
| Missile Exercise Surface-to-Air | Surface ship crews defend against threat missiles and aircraft with missiles. | MITT Study Area; SUA | No | 12 NM from land | 27 | 6–8 |
| **Amphibious Warfare** | | | | | | |
| Amphibious Assault | Large unit forces move ashore from amphibious ships at sea for the immediate execution of inland objectives. | CNMI Nearshore; Guam Nearshore* | Yes | Nearshore | 6 | 12–24 |
| Amphibious Raid | Small unit forces move swiftly from ships at sea for a specific short-term mission. These are quick operations with as few personnel as possible. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 6 | 10–20 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Amphibious Vehicle Maneuvers/Rehearsals | Amphibious vehicles conduct in-water training, maintenance and repairs including rehearsal of amphibious landings from ship-borne locations and designated splash down points within Inner Apra Harbor. | MITT Study Area; Guam Nearshore; CNMI Nearshore; Apra Harbor | Yes | Pierside, nearshore, and open ocean | 12 | 13–28 |
| Naval Surface Fire Support Exercise – Land Based Target | Surface ship crews fire large-caliber guns at land-based targets in support of forces ashore. | FDM | No | FDM Danger Zone and land-based targets | 10 | 5–15 |
| Non-Combatant Amphibious Operation[4] | Military units evacuate noncombatants from hostile or unsafe areas or provide Humanitarian Assistance in times of disaster. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 10 | 5–15 |
| Unmanned Aerial Vehicle – Intelligence, Surveillance, and Reconnaissance | Military and Coast Guard units employ unmanned aerial vehicles to launch, operate, and gather intelligence for specified amphibious missions. | MIRC; MITT Study Area; SUA | Yes | Occurs throughout the Study Area | 100 | 232–432 |
| **Anti-Submarine Warfare** | | | | | | |
| Anti-Submarine Warfare Torpedo Exercise – Helicopter | Helicopter crews search for, track, and detect submarines. Recoverable air launched torpedoes are employed against submarine targets. | MITT Study Area | No | > 3 NM from land | 6 | 1 |
| Anti-Submarine Warfare Torpedo Exercise – Maritime Patrol Aircraft | Maritime patrol aircraft crews search for, track, and detect submarines. Recoverable air launched torpedoes are employed against submarine targets. | MITT Study Area | No | > 3 NM from land | 6 | 1–2 |
| Anti-Submarine Warfare Torpedo Exercise – Ship | Surface ship crews search for, track, and detect submarines. Exercise torpedoes are used during this exercise. | MITT Study Area | No | > 3 NM from land | 6 | 6–8 |
| Anti-Submarine Warfare Torpedo Exercise – Submarine | Submarine crews search for, track, and detect submarines. Exercise torpedoes are used during this exercise. | MITT Study Area | No | > 3 NM from land | 4 | 1–2 |
| Anti-Submarine Warfare Tracking Exercise – Helicopter | Helicopter crews search for, track, and detect submarines. | MITT Study Area; Transit Corridor | No | > 3 NM from land | 10 | 16 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Anti-Submarine Warfare Tracking Exercise – Maritime Patrol Aircraft | Maritime patrol aircraft crews search for, track, and detect submarines. | MITT Study Area | No | > 3 NM from land | 36 | 45–60 |
| Anti-Submarine Warfare Tracking Exercise – Ship | Surface ship crews search for, track, and detect submarines. Exercise torpedoes may be used during this event. | MITT Study Area | No | > 3 NM from land | 91 | 90 |
| Anti-Submarine Warfare Tracking Exercise – Submarine | Submarine crews search for, track, and detect submarines. | MITT Study Area; Transit Corridor | No | > 3 NM from land | 4 | 14 |
| **Electronic Warfare** | | | | | | |
| Counter Targeting Chaff Exercise – Ship | Surface ship crews deploy chaff to disrupt threat targeting and missile guidance radars. | MITT Study Area | No | > 12 NM from land | 60 | 10 |
| Counter Targeting Chaff Exercise – Aircraft | Fixed-winged aircraft and helicopter aircrews deploy chaff to disrupt threat targeting and missile guidance radars. | MITT Study Area | No | > 12 NM from land | 2,200 | 1,720–1,730 |
| Counter Targeting Flare Exercise | Fixed-winged aircraft and helicopter aircrews deploy flares to disrupt threat infrared missile guidance systems. | MITT Study Area | No | > 12 NM from land | 2,200 | 1,720–1,730 |
| Electronic Warfare Operations | Aircraft and surface ship crews control portions of the electromagnetic spectrum used by enemy systems to degrade or deny the enemy's ability to take defensive actions. | MITT Study Area | No | >3 NM from land | 522 | 655–1,160 |
| **Expeditionary Warfare** | | | | | | |
| ***Dive and Salvage Operations*** | Navy divers perform dive operations and salvage training. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 0 | 250 |
| Personnel Insertion/Extraction – Air[5] | Personnel are inserted into and extracted from an objective area by fixed-wing aircraft or helicopters. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 58 | 95 |
| Personnel Insertion/Extraction – Surface and Subsurface[5] | Personnel are inserted into and extracted from an objective area by small boats or subsurface platforms. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 136 | 208–213 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Personnel Insertion/Extraction – Swimmer/Diver[5] | Divers and swimmer infiltrate harbors, beaches, or moored vessels and conduct a variety of tasks. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 106 | 52 |
| ***Underwater Construction Team Training*** | Navy and U.S. Coast Guard (USCG) divers conduct underwater repair and construction. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 0 | 50 |
| ***Port Damage Repair (No Dredging/No Pile Driving)*** | Navy Expeditionary forces train to repair critical port facilities. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 0 | 50 |
| **Mine Warfare** | | | | | | |
| Mine Countermeasures –Mine Detection | Helicopter aircrews and Unmanned Surface Vehicles (USVs) detect mines using towed or laser mine detection systems. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 4 | 8 |
| Mine Countermeasures – Towed Mine Neutralization | USVs and Unmanned Underwater Vehicles (UUVs) tow systems through the water that are designed to disable or trigger mines. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 4 | 8 |
| Airborne Mine Laying | Fixed-wing aircraft drop non-explosive mine shapes. | MIRC Warning Areas; MITT Study Area | Yes | Nearshore and open ocean | 4 | 4 |
| Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises | Maritime security personnel train to protect civilian ports and harbors against enemy efforts to interfere with access to those ports. | CNMI Nearshore; Guam Nearshore | Yes | Nearshore | 1 | 1 |
| Limpet Mine Neutralization System | Navy Explosive Ordnance Disposal divers place a small charge on a simulated underwater mine. | Apra Harbor; Agat Bay Mine Neutralization Site | Yes | Pierside and nearshore | 60 | 60 |
| Mine Neutralization Explosive Ordnance Disposal | Personnel disable threat mines using explosive charges. | Agat Bay Mine Neutralization Site; Outer Apra Harbor UNDET Site; Piti UNDET Site | Yes | Pierside and nearshore | 20 | 20 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Surface Ship Object Detection | Ship crews detect and avoid mines while navigating restricted areas or channels using active sonar. | CNMI nearshore; Guam Nearshore | Yes | Nearshore | 6 | 20–30 |
| Underwater Demolition Qualification and Certification | Navy divers conduct various levels of training and certification in placing underwater demolition charges. | Agat Bay Mine Neutralization Site; Outer Apra Harbor UNDET Site; Piti UNDET Site | Yes | Pierside and nearshore | 45 | 45 |
| Underwater Mine Countermeasure – Raise, Tow, Beach, and Exploitation Operations | Personnel locate mines, perform mine neutralization, raise, and tow mines to the beach, and conduct exploitation operations for intelligence gathering. | Apra Harbor | Yes | Pierside | 4 | 24 |
| **Strike Warfare** | | | | | | |
| Bombing Exercise Air-to-Ground | Bombing exercise involves training of aircraft delivery of ordnance against land targets in day or night conditions. | FDM | No | FDM SUA and land-based targets | 2,300 | 1,910–1,990 |
| Gunnery Exercise Air-to-Ground | Fixed-wing aircraft and helicopter crews use guns to attack ground targets, day or night, with the goal of destroying or disabling enemy vehicles, structures, or personnel. | FDM | No | FDM SUA and land-based targets | 96 | 175–180 |
| Missile Exercise Air-to-Ground | Missiles or rockets are launched against a land target. | FDM | No | FDM SUA and land-based targets | 115 | 125–145 |
| **Surface Warfare** | | | | | | |
| Bombing Exercise Air-to-Surface | Fixed-wing aircrews deliver bombs against surface targets. | MITT Study Area | No | >50 NM from land | 37 | 39 |
| Fast Attack Craft and Fast Inshore Attack Craft[6] | Navy and USCG ships, helicopters, and Unmanned Systems defend against small boat attacks. | MITT Study Area | No | >3 NM from land | 27 | 22–33 |
| Gunnery Exercise Air-to-Surface Medium Caliber | Fixed-wing and helicopter aircrews fire medium-caliber guns at surface targets. | MITT Study Area SUA | No | >12 NM from land | 120 | 130 |
| Gunnery Exercise Air-to-Surface Small Caliber | Helicopter and tiltrotor aircrews use small-caliber guns to engage surface targets. | MITT Study Area SUA | No | >3 NM from land | 321 | 349–418 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Gunnery Exercise Surface-to-Surface Boat Medium Caliber | Small boat crews fire medium-caliber guns at surface targets. | MITT Study Area SUA | No | >12 NM from land | 20 | 9–24 |
| Gunnery Exercise Surface-to-Surface Boat Small Caliber | Small boat crews fire small-caliber guns at surface targets | MITT Study Area SUA; Transit Corridor | No | > 3 NM from land | 43 | 20–44 |
| Gunnery Exercise Surface-to-Surface Ship Large Caliber | Surface ship crews fire large-caliber guns at surface targets. | MITT Study Area SUA | No | > 12 NM from land | 255 | 180–257 |
| Gunnery Exercise Surface-to-Surface Ship Medium Caliber[7] | Surface ship crews fire medium-caliber guns at surface targets. | MITT Study Area SUA | No | > 12 NM from land | 117 | 104–150 |
| Gunnery Exercise Surface-to-Surface Ship Small Caliber[7] | Surface ship crews fire small-caliber guns at surface targets. | MITT Study Area SUA | No | > 12 NM from land | 117 | 173–230 |
| Laser Targeting – Aircraft[8] | Fixed-wing and helicopter aircrews illuminate enemy targets with lasers. | MITT Study Area SUA | No | > 3 NM from land | 600 | 310 |
| Laser Targeting – Ship[8] | Surface ship crews illuminate air and surface targets with high-energy laser systems. | MITT Study Area SUA | No | > 3 NM from land | 600 | 1–5 |
| Maritime Security Operations | Helicopter, surface ship, and small boat crews conduct a suite of maritime security operations at sea, to include visit, board, search, and seizure; maritime interdiction operations; maritime infrastructure protection and harbor defense; ship force protection; anti-piracy operations; and drug interdiction by the USCG. | MITT Study Area; MIRC | No | > 12 NM from land | 40 | 117–139 |
| Missile Exercise Air-to-Surface | Fixed-wing and helicopter aircrews fire air-to-surface missiles at surface targets. | MITT Study Area SUA | No | > 12 NM from land | 10 | 38–50 |
| Missile Exercise Air-to-Surface – Rocket | Helicopter aircrews fire both precision-guided and unguided rockets at surface targets. | MITT Study Area SUA | No | > 12 NM from land | 111 | 35–47 |
| Missile Exercise Surface-to-Surface | Surface ship crews defend against surface threats (ships or small boats) and engage them with missiles. | MITT Study Area | No | > 50 NM from land | 28 | 8–9 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Sinking Exercise | Aircraft, ship, and submarine crews deliberately sink a seaborne target, usually a decommissioned ship made environmentally safe for sinking according to U.S. Environmental Protection Agency standards, with a variety of ordnance. | MITT Study Area | No | > 50 NM from land | 1 | 1–2 |
| Small Boat Attack | Afloat units defend against small boat or personal watercraft attack. | MITT Study Area | No | > 3 NM from land | 27 | 6–8 |
| Torpedo Exercise (Submarine-to-Surface) | Submarine crews search for, detect, and track a surface ship simulating a threat surface ship with the goal of determining a firing solution that could be used to launch a torpedo with the intent to simulate destroying the targets. | MITT Study Area | No | > 3 NM from land | 0 | 1–5 |
| **Other Training Activities** | | | | | | |
| Direct Action (Tactical Air Control Party) | Military personnel train for controlling of combat support aircraft; providing airspace de-confliction and terminal control for close air support. They may also employ small arms, grenades, mortars, and crew served weapons in direct action against targets. | FDM | No | FDM SUA and land-based targets | 18 | 18 |
| Precision Anchoring | Releasing of anchors in designated locations. | Apra Harbor; Mariana Islands anchorages | Yes | Pierside | 18 | 20 |
| Search and Rescue at Sea | Helicopter and ship crews train for the rescue of military personnel at sea. | MITT Study Area | Yes | Nearshore and open ocean | 45 | 50–52 |
| Submarine Navigation | Submarine crews operate sonar for navigation and detection while transiting into and out of port during reduced visibility. | MITT Study Area; MIRC | Yes | Nearshore | 8 | 50 |
| Submarine Sonar Maintenance | Maintenance of submarine sonar and other system checks are conducted pierside or at sea. | MITT Study Area; Inner Apra Harbor; Transit Corridor | Yes | Pierside and open ocean > 3 NM from land | 86 | 92 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| Surface Ship Sonar Maintenance | Maintenance of surface ship sonar and other system checks are conducted pierside or at sea. | MITT Study Area; Inner Apra Harbor; Transit Corridor | Yes | Pierside and open ocean > 3 NM from land | 44 | 51 |
| Underwater Survey | Military divers train in survey of underwater conditions and features in preparation for insertion, extraction, or intelligence, surveillance, and reconnaissance activities. | MITT Study Area; Marianas Nearshore | Yes | Nearshore and open ocean | 32 | 76 |
| Unmanned Aerial Vehicle Training and Certification | Surface ships and submarines launch unmanned aerial systems to conduct training and certification. | MITT Study Area; Marianas Nearshore; MIRC SUA | Yes | Nearshore and open ocean | 951 | 541–556 |
| Unmanned Underwater Vehicle Training | UUV certification involves training with unmanned platforms to ensure crew proficiency. Tactical development involves training with various payloads, for multiple purposes to ensure that the systems can be employed effectively in an operational environment. | MIRC; Marianas Nearshore, MITT Study Area | Yes | Nearshore and open ocean | 64 | 65–70 |
| ***Maritime Environmental Response*** | USCG conducts training on spill and hazmat response that occur after ships run aground or oil wells are compromised. Training may include deployment of oil booms. | MITT Study Area | Yes | Nearshore and open ocean | 0 | 1–2 |
| ***Waterborne Training*** | Personnel launch, operate, and recover a variety of small boats to achieve certifications such as coxswain, crewman, and safety observer. | MIRC; MITT Study Area; Marianas Nearshore | Yes | Nearshore and open ocean | 0 | 50–75 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |

*The nearshore environment is defined for the Proposed Action as the area extending from the mean high-water mark seaward to the 3-nautical mile (NM) limit of the territorial sea.
[1]Activities described in the 2020 Consistency Determination.
[2]Includes Air Intercept Control activities from 2020 SEIS/OEIS.
[3]Surface Warfare Advanced Tactical Training, Small Integrated Anti-Submarine Warfare Training, Medium Coordinated Anti-Submarine Training, and Independent Deployer Certification Exercise/Tailored Surface Warfare Training were not called out in the 2020 SEIS/OEIS, but the components of the exercises were covered under Combined Small Coordinated ASW Exercise (e.g., Multi-Sail/GUAMEX/SWATT).
[4]Includes Humanitarian Assistance Operations.
[5]Personnel Insertion/Extraction – Air, Surface and Subsurface, and Swimmer/Diver were not called out in the 2020 SEIS/OEIS, but the components of the activities were covered under Personnel Insertion/Extraction.
[6]Fast Attack Craft and Fast Inshore Attack Craft was not called out in the 2020 SEIS/OEIS, but the components of the activity were covered under Small Boat Attack.
[7]Gunnery Exercise Surface-to-Surface Ship Medium Caliber and Gunnery Exercise Surface-to-Surface Ship Small Caliber were not called out in the 2020 SEIS/OEIS, but the components of the activities were covered under Gunnery Exercise Surface-to-Surface Ship Small and Medium Caliber.
[8]Laser Targeting – Aircraft and Laser Targeting – Ship was not called out in the 2020 SEIS/OEIS, but the components of the activities were covered under Laser Targeting at Sea.
Notes: ***Bold Italicized*** = New Activity; SEIS/OEIS = Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement, MIRC = Mariana Islands Range Complex, FDM = Farallon de Medinilla, NM = nautical mile(s), SUA = Special Use Airspace, UNDET = Underwater Detonation, W = Warning Area

## Table A-2: Proposed and Ongoing Testing Activities

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| **Naval Air Systems Command** | | | | | | |
| **Air Warfare** | | | | | | |
| Air Combat Maneuver Test[2] | Aircrews engage in flight maneuvers designed to gain a tactical advantage during combat. | MIRC; MITT Study Area | No | > 12 NM from land | See Footnote 2 | 7–8 |
| Intelligence, Surveillance, and Reconnaissance Test | Aircrews use all available sensors to collect data on threat vehicles. | MIRC; MITT Study Area | No | > 3 NM from land | 20 | 20 |
| **Anti-Submarine Warfare** | | | | | | |
| Anti-Submarine Warfare Torpedo Test (Aircraft) | Evaluates anti-submarine warfare systems onboard rotary-wing and fixed-wing aircraft and the ability to search for, detect, classify, localize, track, and attack a submarine or similar target. | MIRC; MITT Study Area | No | > 3 NM from land | 20 | 10 |
| Anti-Submarine Warfare Tracking Test (Fixed-Wing)[3] | The test evaluates the sensors and systems used by fixed-wing aircraft to detect and track submarines and to ensure that aircraft systems used to deploy the tracking systems perform to specifications and meet operational requirements. | MIRC; MITT Study Area | No | > 3 NM from land | 26 | 3 |
| Anti-Submarine Warfare Tracking Test (Rotary-Wing)[5] | The test evaluates the sensors and systems used to detect and track submarines and to ensure that rotary-wing systems used to deploy the tracking systems perform to specifications and meet operational requirements. | MIRC; MITT Study Area | No | > 3 NM from land | See Footnote 3 | 5 |
| **Surface Warfare** | | | | | | |
| Air-to-Surface Missile Test | | | No | > 12 NM from land | 4 | 6–7 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| **Naval Sea Systems Command** | | | | | | |
| **Anti-Submarine Warfare** | | | | | | |
| ***Pierside Sonar Testing*** | Pierside testing to ensure systems are fully functional in a controlled pierside environment prior to at-sea test activities and complete any required troubleshooting. | Inner Apra Harbor | Yes | Pierside | 0 | 6–12 |
| At-Sea Sonar Testing | At-sea testing to ensure systems are fully functional in an open ocean environment. | MIRC; MITT Study Area | No | > 3 NM from land | 7 | 6–12 |
| **Mine Warfare** | | | | | | |
| Mine Countermeasure and Neutralization Testing | Air, surface, and subsurface vessels neutralize threat mines and mine-like objects. | Agat Bay Mine Neutralization; Piti Floating Mine Neutralization; Helicopter Laser Hazard Area | Yes | Nearshore | 3 | 3 |
| **Unmanned Systems** | | | | | | |
| ***Unmanned Aerial System Testing*** | Unmanned aerial systems are launched from a platform (e.g., fixed platform or submerged submarine) to test the capability to extend the surveillance and communications range of unmanned underwater vehicles, manned and unmanned surface vehicles, and submarines. | MITT Study Area | Yes | Nearshore and open ocean | 0 | 2–4 |
| ***Unmanned Surface Vehicle System Testing*** | Testing involves the production or upgrade of unmanned surface vehicles. This may include testing mine detection capabilities, evaluating the basic functions of individual platforms, or conducting complex events with multiple vehicles. | MITT Study Area | No | >12 NM from land | 0 | 1 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |
| **Vessel Evaluation** | | | | | | |
| Undersea Warfare Testing | Ships demonstrate capability of countermeasure systems and underwater surveillance, weapons engagement, and communications systems. This tests ships' ability to detect, track, and engage undersea targets. | MITT Study Area | No | >3 NM from land | 1 | 6–21 |
| ***In-Port Maintenance Testing*** | Each system is tested to ensure it is functioning in a technically acceptable manner and is operationally ready to support in-port and at-sea maintenance capabilities, including Combat Systems testing. | MITT Study Area | Yes | Nearshore and >3 NM from land | 0 | 0–12 |
| Submarine Sea Trials – Weapons System Testing | Submarine weapons and sonar systems are tested at-sea to meet the integrated combat system certification requirements. | MITT Study Area | No | >50 NM from land | 1 | 0–1 |
| Vessel Signature Evaluation | Surface ship, submarine, and auxiliary system signature assessments. This may include electronic, radar, acoustic, infrared, and magnetic signatures. | MITT Study Area | No | >3 NM from land | 0 | 8–12 |
| **Office of Naval Research** | | | | | | |
| **Acoustic and Oceanographic Science and Technology** | | | | | | |
| Acoustic and Oceanographic Research | Research using active transmissions from sources deployed from ships, aircraft, and unmanned underwater vehicles. Research sources can be used as proxies for current and future Navy systems. | MITT Study Area | No | >3 NM from land | 1 | 2–3 |

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events | |
|---|---|---|---|---|---|---|
| | | Representative Location | In CZ? | Discussion | Ongoing Activities[1] | Proposed Activities |

[1] Activities described in the 2020 Consistency Determination

[2] Air Combat Maneuver Test was not called out in the previous MITT analyses, but the components of the testing were aligned with the training activity "Air Combat Maneuvers."

[3] Anti-Submarine Warfare Tracking Test (Fixed-Wing) was called Anti-Submarine Warfare Tracking Test – Maritime Patrol Aircraft (Sonobuoys) in the previous MITT analyses. Anti-Submarine Warfare Tracking Test (Rotary-Wing) was not previously identified as an activity, but the components of the activity (e.g., sound sources and platform) were analyzed in the previous MITT analyses as part of other similar activities (e.g., Anti-Submarine Warfare Tracking Exercise – Helicopter) and are not new to the Study Area.

Notes: ***Bold Italicized*** = New Activity; SEIS/OEIS = Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement, MIRC = Mariana Islands Range Complex; MITT = Mariana Islands Training and Testing; NM = Nautical Miles

## Table A-3: Proposed Modernization and Sustainment of Ranges Activities

| Range Activity | Description of Activity | Distribution | | | Annual Number of Events |
|---|---|---|---|---|---|
| | | Location | In CZ? | Discussion | Proposed Activities |
| Deployment of Seafloor Cables and Instrumentation | Support crews place, move, and remove mine countermeasures (MCM) targets. MCM targets could be inserted on the seafloor or tethered to anchors that are moored on the seafloor. Other temporary training areas can be established by installing instrumentation that could include hydrophones anchored to the seafloor similarly to anchored mine training shapes. Once training is completed, the temporary instrumentation is recovered and utilized elsewhere. No explosives are used. | MITT Study Area | Yes | Nearshore and open ocean | 1–2 |

Notes: CZ = Coastal Zone

# Appendix B
# Activity Stressor Matrices

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# APPENDIX B ACTIVITY STRESSOR MATRICES

This appendix contains four matrices. The first two matrices in this appendix (Tables B-1 and B-2) list the training and testing activities that occur in the Mariana Islands Training and Testing (MITT) Study Area and their associated stressors. The third matrix (Table B-3) shows the stressors associated with the range modernization and sustainment activity. The fourth matrix (Table B-4) lists the resources analyzed in the 2026 MITT Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (SEIS/OEIS) and the stressors they are potentially affected by.

Tables B-1 through B-3 list all stressors evaluated for reasonably foreseeable environmental effects. The 2026 MITT Draft SEIS/OEIS provides the evaluation framework and supporting analysis in which stressors with reasonably foreseeable effects were determined; only stressors with reasonably foreseeable effects were carried forward for detailed analysis in the 2026 MITT Draft SEIS/OEIS. The new activities and their associated stressors that have been introduced in the 2026 MITT Draft SEIS/OEIS are listed in blue in the tables below.

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Table B-1: Stressors by Training Activity

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources | | | | | | | | |
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| | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors[1] | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions In Water | Explosions In Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants Hazardous Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| **Major Training Exercise – Large Integrated Anti-Submarine Warfare Training** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Joint Multi-Strike Group Exercise | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| **Small Integrated Anti-Submarine Warfare Training** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Small Integrated Anti-Submarine Warfare – NUWTAC/Multi-Sail | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Surface Warfare Advanced Tactical Training | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| **Medium Coordinated Anti-Submarine Warfare Training** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium Coordinated Anti-Submarine Warfare Training | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Small Coordinated Anti-Submarine Warfare Training** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Independent Deployer Certification Exercise/Tailored Surface Warfare Training | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| **Air Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Combat Maneuvers | | | ✓ | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| Air Defense Exercise | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| Gunnery Exercise Air-to-Air – Medium Caliber | | | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | | | | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | |
| Gunnery Exercise Surface-to-Air – Large Caliber | | ✓ | | ✓ | | | | ✓ | | ✓ | | ✓ | | | | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | |
| Gunnery Exercise Surface-to-Air – Medium Caliber | | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | | | | | | | | |
| Missile Exercise Air-to-Air | | | ✓ | ✓ | | ✓ | | ✓ | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Missile Exercise Surface-to-Air | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| **Amphibious Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amphibious Assault | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | ✓ | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Amphibious Raid | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | ✓ | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Amphibious Vehicle Maneuvers/Rehearsals | | ✓ | | | | | | ✓ | | ✓ | | | ✓ | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Naval Surface Fire Support Exercise – Land-Based Target | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Non-Combatant Amphibious Operation | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | ✓ | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Unmanned Aerial Veh cle – Intelligence, Surveillance, and Reconnaissance | | | ✓ | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources | | | | | | | | |
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| | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors[1] | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions in Water | Explosions in Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants Hazardous Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| **Anti-Submarine Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anti-Submarine Warfare Torpedo Exercise – Helicopter | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Torpedo Exercise – Maritime Patrol Aircraft | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Torpedo Exercise – Ship | ✓ | ✓ | | | | | | ✓ | | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Torpedo Exercise – Submarine | ✓ | ✓ | | | | | | ✓ | | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Tracking Exercise – Helicopter | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Tracking Exercise – Maritime Patrol Aircraft | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Tracking Exercise – Ship | ✓ | ✓ | | | | | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Anti-Submarine Warfare Tracking Exercise – Submarine | ✓ | ✓ | | | | | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| **Electronic Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Counter Targeting Chaff Exercise – Aircraft | | | ✓ | | | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Counter Targeting Chaff Exercise – Ship | | ✓ | | | | | | ✓ | | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Counter Targeting Flare Exercise | | | ✓ | | | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Electronic Warfare Operations | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| **Expeditionary Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Dive and Salvage Operations* | | ✓ | | | | | | ✓ | | ✓ | | | | ✓ | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Personnel Insertion/Extraction – Air | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | ✓ | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Personnel Insertion/Extraction – Surface and Subsurface | | ✓ | | | | | | | | ✓ | | | | ✓ | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Personnel Insertion/Extraction – Swimmer/Diver | | ✓ | | | | | | | | ✓ | | | | ✓ | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| *Underwater Construction Team Training* | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| *Port Damage Repair (No Dredging/No Pile Driving)* | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| **Mine Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Airborne Mine Laying | | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources | | | | | | | | |
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| | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors[1] | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions in Water | Explosions in Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants Hazardous Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| Limpet Mine Neutralization System | | | | | ✓ | | | ✓ | | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Mine Countermeasures – Mine Detection | | ✓ | | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mine Countermeasures – Towed Mine Neutralization | | ✓ | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mine Neutralization – Explosive Ordnance Disposal | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Surface Ship Object Detection | ✓ | ✓ | | | | | | ✓ | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Underwater Demolition Qualification and Certification | | ✓ | | | ✓ | | | ✓ | | ✓ | | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Underwater Mine Countermeasure – Raise, Tow, Beach, and Exploitation Operations | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Strike Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bombing Exercise Air-to-Ground | | | ✓ | | ✓ | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Gunnery exercise Air-to-Ground | | | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Missile Exercise Air-to-Ground | | | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Surface Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bombing Exercise | | ✓ | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Fast Attack Craft and Fast Inshore Attack Craft | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | |
| Gunnery Exercise Air-to-Surface Medium-Caliber | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Gunnery Exercise Air-to-Surface Small-Caliber | | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Gunnery Exercise Surface-to-Surface Boat Medium-Caliber | | ✓ | | ✓ | ✓ | | | | | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Gunnery Exercise Surface-to-Surface Boat Small-Caliber | | ✓ | | ✓ | | | | | | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Gunnery Exercise Surface-to-Surface Ship Large-Caliber | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | | | | | | | | |
| Gunnery Exercise Surface-to-Surface Ship Medium-Caliber | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Gunnery Exercise Surface-to-Surface Ship Small-Caliber | | ✓ | | ✓ | | | | ✓ | | ✓ | | ✓ | | | | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | | | |
| Laser Targeting – Aircraft | | | ✓ | | | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| Laser Targeting – Ship | | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| Maritime Security Operations | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Missile Exercise – Surface-to-Surface | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources | | | | | | | | |
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| | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors[1] | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions in Water | Explosions in Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants Hazardous Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| Missile Exercise Air-to-Surface – Rocket | | | ✓ | | ✓ | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Missile Exercise Air-to-Surface | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Sinking Exercise | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Small Boat Attack | | ✓ | | ✓ | | | | ✓ | | ✓ | | ✓ | | | | | ✓ | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Torpedo Exercise (Submarine-to-Surface) | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | |
| **Other Training Activities** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Direct Action (Tactical Air Control Party) | | | ✓ | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | ✓ | | | | | | |
| *Maritime Environmental Response* | | ✓ | | | | | | | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Precision Anchoring | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Search and Rescue | | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Submarine Navigation | ✓ | | | | | | | | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Submarine Sonar Maintenance and Systems Checks | ✓ | | | | | | | | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Surface Ship Sonar Maintenance and Systems Checks | ✓ | ✓ | | | | | | ✓ | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Underwater Survey | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Unmanned Aerial System Training | | | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| Unmanned Underwater Vehicle Training – Certification and Development Exercises | ✓ | ✓ | | | | | | | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| *Waterborne Training* | | ✓ | | | | | | | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |

[1] Cultural Resources include the following Sub-Stressors: Accessibility, Cables & Wires, Pile Driving, Seafloor Devices, and Personnel Disturbance

**Table B-2: Stressors by Testing Activity**

| Mariana Islands Testing Activity | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources | | | | | | | | |
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| | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors[1] | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions in Water | Explosions in Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials - Munitions | Military Expe4ndedExpe4ndedExpe4nded Materials – Other than Munitions | Criteria Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| **Naval Air Systems Command** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Air Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Combat Maneuver Test | | | ✓ | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | | | | | | | |
| Intelligence, Surveillance, and Reconnaissance Test | | | ✓ | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Anti-Submarine Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anti-Submarine Warfare Torpedo Test | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Anti-Submarine Warfare Tracking Test (Fixed-Wing) | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Anti-Submarine Warfare Tracking Test (Rotary-Wing) | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Surface Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air-to-Surface Missile Test | | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| **Naval Sea Systems Command** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Anti-Submarine Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Pierside Sonar Testing* | ✓ | ✓ | | | | | | ✓ | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| At-Sea Sonar Testing | ✓ | ✓ | | | | | | ✓ | | ✓ | | | | | | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| **Mine Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mine Countermeasure and Neutralization Testing | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Unmanned Systems** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Unmanned Aerial System Testing* | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Unmanned Surface Vehicle System Testing* | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| **Vessel Evaluation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Undersea Warfare Testing | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| *In-Port Maintenance Testing* | | ✓ | | | | | | ✓ | | ✓ | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Submarine Sea Trials – Weapons System Testing | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Vessel Signature Evaluation | | ✓ | | | | | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| **Office of Naval Research** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Acoustic and Oceanographic Science and Technology** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acoustic and Oceanographic Research | | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

[1] Cultural Resources include the following Sub-Stressors: Accessibility, Cables & Wires, Pile Driving, Seafloor Devices, and Personnel Disturbance

**Table B-3: Stressors by Range Modernization and Sustainment Activity**

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions in Water | Explosions in Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials - Munitions | Military Exp4nded Materials – Other than Munitions | Criteria Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| **Range Modernization and Sustainment** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Installation and Maintenance of Subsurface Targets and Instrumentation* | | ✓ | | | | | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

[1] Cultural Resources include the following Sub-Stressors: Accessibility, Cables & Wires, Pile Driving, Seafloor Devices, and Personnel Disturbance.

**Table B-4: Stressors by Resource**

| Stressors vs. Resources | | Biological Resources | | | | | | | | | | | | | | | | | | Physical Resources* | | | | | Human Resources* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acoustic Stressors | | | | Explosive Stressors | | Energy Stressors | | | Physical Disturbance and Strike Stressors[1] | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressors | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Resource Stressors | | | Public Health & Safety Stressors | | |
| | | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | Explosions in Water | Explosions in Air | In-Water Electromagnetic Devices | In-Air Electromagnetic Devices | High-Energy Lasers | Vessels & In-Water Device Strike | Aircraft & Aerial Target Strike | Military Expended Material | Seafloor Device | Personnel Disturbance | Wires & Cables | Decelerators/Parachutes | Military Expended Materials - Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants Hazardous Air Pollutants | Explosives and explosive by-products | Metals | Chemicals other than explosives | Other Materials | Explosives | Physical Disturbance and Strike | Accessibility | Airborne Acoustics | Physical Disturbance and Strike | In-Water Energy | In-Air Energy | Physical Interactions |
| Physical | Sediments and Water Quality | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Air Resources | | | | | | | | | | | | | | | | | | | ✓ | | | | | | | | | | | | |
| Biological | Vegetation | | | | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | |
| | Invertebrates | ✓ | | | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | Marine Habitats | | | | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | |
| | Fishes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | Marine Mammals | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | |
| | Sea Turtles | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | Seabirds | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | Terrestrial Species and Habitats | | | | ✓ | | ✓ | | | | | | ✓ | | | | | | | | | | | | | | | | | | | |
| Human | Cultural Resources | | | | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | | | | |
| | Socioeconomic Resources | | | | | | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | | | |
| | Public Health and Safety | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ |

*Substressors related to Physical Resources and Human Resources are addressed within their respective resource sections.

[1] Wildfires and Ground Disturbance stressors are not considered in the 2026 MITT Draft SEIS/OEIS because proposed activities at FDM are reduced from what was analyzed in the 2020 SEIS/OEIS. The change in tempo of these activities on FDM would not change the analysis conclusions reached in the 2020 SEIS/OEIS.

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# Appendix C
# Standard Operating Procedures and Mitigation Measures

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# APPENDIX C STANDARD OPERATING PROCEDURES AND MITIGATION MEASURES

## C.1 STANDARD OPERATING PROCEDURES

### C.1.1 INTRODUCTION

For training and testing to be effective, units must be able to safely use their sensors and weapon systems as they are intended to be used in military missions and combat operations and to their optimum capabilities. Standard operating procedures applicable to training and testing have been developed through years of experience, and their primary purpose is to provide for safety (including public health and safety) and mission success.

Standard operating procedures that apply to the Proposed Action are described in the sections below. In addition, the Navy uses several standard operating procedures that additionally have a benefit to prevent and/or minimize the risk of the introduction and spread of invasive species (as well as manage pollutant discharges incidental to the normal operation of a vessel [e.g., elevator pit effluent, seawater cooling overboard discharge, graywater]). These include the following:

- Ballast water exchange (typically beyond 12 NM or further) during military readiness activities will comply with the Navy's Environmental Readiness Program Manual (Chief of Naval Operations Manual [OPNAV M]-5090.1), Department of Defense (DoD) Manual (DODM) 4715.06 Volume 4 (2022), and DODM 4715.06 Volume 3 (2024).
- Military Readiness activities will be consistent with Joint Region Marianas (JRM) Integrated Natural Resources Management Plans designed to ensure, to the maximum extent possible, aquatic invasive species are not introduced into nearshore environments or bodies of water on or adjacent to the installation (OPNAV M-5090.1).
- The U.S. Environmental Protection Agency (USEPA) Uniform National Discharge Standards (UNDS) for Armed Forces Vessels is a set of national performance standards that regulate 25 incidental discharges of U.S. Armed Forces vessels with performance standards developed jointly by USEPA and DoD, including for ballast water and underwater ship husbandry discharges (also known as hull husbandry or vessel in-water cleaning or biofouling management). UNDS require the use of marine pollution control devices, which can be equipment or Best Management Practices designed to treat, retain, or control discharges of a vessel to reduce/minimize pollution impacts to surrounding waters including reducing the transfer of invasive species. UNDS regulations apply to all vessels operating in the navigable waters of the United States or waters of the contiguous zone (85 Federal Register [FR] 43465).
- All training in the MIRC will comply with the Marianas Training Manual, Commander, U.S. Naval Forces Marianas Instruction 3500.4 series.
- Training requests must be submitted to MIRC Operations using the Navy Data Collection and Scheduling Tool (DCAST) for scheduling. An After Action Report must be completed in DCAST within five days after the training event to maintain environmental permits. Regular hull cleaning under the Navy's Hull Cleaning Program can help reduce the potential for invasive species being established, as well as prevent calcareous fouling from progressing to a point where fouling damages underlying anticorrosive paint coatings (U.S. Department of the Navy, 2022).

  - The Navy has established criteria for clean hull surface, propulsor surface, propulsion shaft surface, sonar dome, masker air systems, sea check, prairie find stabilizer system, bow thrusters.
  - The Navy has regular intervals of hull inspections (although cleaning varies from ship to ship due to operational profile, geographic area, time since last coat, etc.), with vessels typically being inspected shortly before deployment (within 30 days), as well as interim inspection and cleaning if necessary mid-way through deployment.
  - The Navy cleans fouled hulls prior to an extended underway period and prior to an extended pierside availability, especially in warm water. Diver inspections of hulls is also done.
- A Protective Measures Assessment Protocol (PMAP) report is required for at-sea training, to include activities that introduce sound in the water. Mitigation measures to protect critical habitats, conservation areas, or coral reefs for training activities in the MITT Study Area may be found at https://eims.dc3n.navy.mil/PMAP.
- Observation of Geographic Mitigation Areas is required for turtles year-round in Agat Bay, Guam and for humpback whales in Chalan Kanoa and Marpi Reef, Saipan from Dec. 1 to April 30 (Ref: DTG: R 251955Z OCT 22-2022 SEASONAL MARINE MAMMAL AWARENESS IN THE MARIANA ISLANDS RANGE COMPLEX).
- Reporting requirements and procedures for both the Sonar Positional Reporting System (SPORTS) and marine mammal incidents can be found in the SPORTS WebForm Reporting Tool via the SIPRNET website at https://sports.navy.smil.mil
- Cultural Resources Awareness Training Video must be viewed by participants. Access the video at https://www.dvidshub.net/video/867177 /jrm-guam-cultural-resources-awarenesstraining-video or via the Video QR code (source https://dcast.csd.disa.mil/rip/getFile.php?id=41806982)

### C.1.2 VESSEL SAFETY

For the purposes of this chapter, the term "ship" is inclusive of surface ships and surfaced submarines. The term "vessel" is inclusive of ships and small boats (e.g., rigid hull inflatable boats [RHIBs]). Ships operated by or for the Navy, have personnel assigned to stand watch at all times, day and night, when moving through the water (underway). Watch personnel undertake extensive training in accordance with the U.S. Navy Lookout Training Handbook or civilian equivalent, including on-the-job instruction and a formal Personal Qualification Standard Program (or equivalent program for supporting contractors or civilians), to certify that they have demonstrated all necessary skills (such as detection and reporting of floating or partially submerged objects). Watch personnel are composed of officers and enlisted men and women, and civilian equivalents. Their duties may be performed in conjunction with other job responsibilities, such as navigating the ship or supervising other personnel. While on watch, personnel employ visual search techniques, including the use of binoculars, using a scanning method in accordance with the U.S. Navy Lookout Training Handbook, or civilian equivalent. After sunset and prior to sunrise, watch personnel employ night visual search techniques, which could include the use of night vision devices. A primary duty of watch personnel is to detect and report all objects and disturbances sighted in the water that may be indicative of a threat to the ship and its crew, such as debris, a periscope, surfaced submarine, or surface disturbance. Per safety requirements, watch personnel also report any marine mammals sighted that have the potential to be in the direct path of the ship, as a standard collision avoidance procedure. Because watch personnel are primarily posted for safety of navigation, range clearance, and man-overboard precautions, they are not normally posted while ships are moored to a pier. When anchored or moored to a buoy, a watch team is still maintained but with fewer personnel than when underway. When moored or at anchor, watch personnel may maintain security and safety of the ship by scanning the water for any indications of a threat (as described above). While

underway, Navy ships (with the exception of submarines) greater than 65 feet (ft.) (20 meters [m]) in length have at least two watch personnel; Navy ships less than 65 ft. (20 m) in length, surfaced submarines, and contractor ships, have at least one watch person. While underway, watch personnel are alert at all times and have access to binoculars. Due to limited manning and space limitations, small boats do not have dedicated watch personnel, and the boat crew is responsible for maintaining the safety of the boat and surrounding environment. All vessels use extreme caution and proceed at a "safe speed" so they can take proper and effective action to avoid a collision with any sighted object or disturbance, and can be stopped within a distance appropriate to the prevailing circumstances and conditions.

### C.1.3 AIRCRAFT SAFETY

Pilots of military aircraft make every attempt to avoid large flocks of birds in order to reduce the safety risk involved with a potential bird strike.

### C.1.4 LASER PROCEDURES

The following procedures are applicable to lasers of sufficient intensity to cause human eye damage.

#### C.1.4.1 Laser Operators

Only properly trained and authorized personnel operate lasers.

#### C.1.4.2 Laser Activity Clearance

Prior to commencing activities involving lasers, the operator ensures that the area is clear of unprotected or unauthorized personnel in the laser impact area by performing a personnel inspection or a flyover. The operator also ensures that any personnel within the area are aware of laser activities and are properly protected.

### C.1.5 HIGH-ENERGY LASER SAFETY

The Navy operates laser systems approved for fielding by the Laser Safety Review Board or service equivalent. Only properly trained and authorized personnel operate high-energy lasers within designated areas. Designated areas where lasers are used are required to have a Laser Range Safety Certification Report that is updated every three years. Prior to commencing activities involving high-energy lasers, the operator performs a search of the intended impact location to ensure that the area is clear of unauthorized persons. These standard operating procedures benefit public health and safety by reducing the potential for interaction with high-energy lasers.

### C.1.6 WEAPONS FIRING PROCEDURES

### C.1.7 NOTICE TO MARINERS

A Notice to Mariners is routinely issued in advance of missile firing activities. A notice is also issued in advance of explosive bombing activities when they are conducted in an area that does not already have a standing Notice to Mariners. For activities involving large caliber gunnery, the Navy evaluates the need to publish a Notice to Mariners based on the scale, location, and timing of the activity. More information on the Notices to Mariners is found in Section 3.13 (Public Health and Safety) of the 2015 MITT EIS/OEIS.

### C.1.8 WEAPONS FIRING RANGE CLEARANCE

The weapons firing hazard range must be clear of non-participating vessels and aircraft before firing activities commence. The size of the firing hazard range is based on the farthest firing range capability of the weapon being used. All missile and rocket firing activities are carefully planned in advance and conducted under strict procedures that place the ultimate responsibility for range safety on the Officer Conducting the Exercise or civilian equivalent. All weapons firing is secured when cease fire orders are

received from the Range Safety Officer or when the line of fire is endangering any object other than the designated target.

Pilots of military aircraft are not authorized to expend ordnance, fire missiles, or drop other airborne devices through extensive cloud cover where visual clearance of the air and surface area is not possible. The two exceptions to this requirement are (1) when operating in the open ocean, air, and surface clearance through visual means or radar surveillance is acceptable; and (2) when the operational commander conducting the exercise accepts responsibility for the safeguarding of airborne and surface traffic.

During activities that involve recoverable targets (e.g., aerial drones) the military recovers the target and any associated decelerator/parachutes to the maximum extent practicable consistent with operational requirements and personnel safety.

### C.1.9 Target Deployment and Retrieval Safety

Under the Proposed Action, the standard operating procedure for target deployment and retrieval safety applies to weapons firing activities that involve small boats deploying or retrieving targets. These activities are typically conducted in daylight hours in Beaufort sea state number 4 conditions or better to ensure safe operating conditions during target deployment and recovery. These standard operating procedures benefit public health and safety, and marine mammals and sea turtles by increasing the effectiveness of visual observations for mitigation, thereby reducing the potential for interactions with the weapons firing activities associated with the use of applicable deployed targets.

During activities that involve recoverable targets (e.g., aerial drones), the military recovers the target and any associated decelerators/parachutes to the maximum extent practicable consistent with personnel and equipment safety. Recovery of these items helps minimize the amount of materials that remain on the surface or on the seafloor, which could potentially alert enemy forces to the presence of military assets during military missions and combat operations. This standard operating procedure benefits biological resources (e.g., marine mammals, sea turtles, fish, marine birds) by reducing the potential for physical disturbance and strike, entanglement, or ingestion of applicable targets and any associated decelerators/parachutes.

### C.1.10 Swimmer Defense Testing Procedures

#### C.1.10.1 Notice to Mariners

A Notice to Mariners is issued in advance of all swimmer defense testing.

#### C.1.10.2 Swimmer Defense Testing Clearance

A daily in situ calibration of the source levels is used to establish a clearance area to the 145 decibels (dB) referenced to (re) 1 micro (μ) Pascal (Pa) sound pressure level threshold for non-participant personnel safety. A hydrophone is stationed during the calibration sequences in order to confirm the clearance area. Small boats patrol the 145 dB re 1 μPa sound pressure level area during all test activities. Boat crews are equipped with binoculars and remain vigilant for non-participant divers and boats, swimmers, snorkelers, and dive flags. If a non-participating swimmer, snorkeler, or diver is observed entering into the area of the swimmer defense system, the power levels of the defense system are reduced. An additional 100-yard (yd.) (91) buffer is applied to the initial sighting location of the non-participant as an additional precaution. If the area cannot be maintained free of non-participating swimmers, snorkelers, and divers, testing ceases until the non-participant has moved outside the area.

### C.1.10.3 Unmanned Aerial and Underwater Vehicle Procedures

For activities involving unmanned aerial and underwater vehicles, the military evaluates the need to publish a Notice to Airmen or Mariners based on the scale, location, and timing of the activity. Unmanned aerial vehicles and unmanned aerial systems are operated in accordance with Federal Aviation Administration air traffic organization policy as issued in Office of the Chief of Naval Operations Instructions 3710, 3750, and 4790.

### C.1.10.4 Towed In-Water Device Procedures

Prior to deploying a towed device from a manned platform, there is a standard operating procedure to search the intended path of the device for any floating debris (e.g., driftwood) or other potential obstructions (e.g., concentrations of animals), which have the potential to cause damage to the device.

### C.1.10.5 Amphibious Assault and Amphibious Raid Procedures

All established harbor navigation rules are observed during amphibious assault and amphibious raid training activities, when applicable. The Navy conducts a hydrographic survey prior to amphibious assault and amphibious raid training activities involving beach landings by large amphibious vehicles (e.g., Air Cushioned Landing Craft [LCACs]). During the surveys, personnel identify and designate vessel traffic lanes that are free of coral, hard bottom substrate, and obstructions that could present personnel and equipment safety concerns. The Navy does not conduct hydrographic surveys for beach landings with small boats, such as RHIBs, which have a much smaller draft than large amphibious vehicles. Large amphibious vehicle beach landings and departures are scheduled at high tide, and vehicles stay fully on cushion or hover when over shallow reefs to avoid corals, hard bottom, and other substrate that could potentially damage equipment.

For training and testing to be effective, units must be able to safely use their sensors and weapon systems as they are intended to be used in military missions and combat operations and to their optimum capabilities. Standard operating procedures applicable to training and testing have been developed through years of experience, and their primary purpose is to provide for safety (including public health and safety) and mission success.

### C.1.10.6 Sea Space and Airspace Deconfliction

The Navy schedules training and testing activities to minimize conflicts with the use of sea space and airspace within ranges and throughout the Study Area to ensure the safety of military personnel, the public, commercial aircraft, commercial and recreational vessels, and military assets. The Navy deconflicts its own use of sea space and airspace to allow for the necessary separation of multiple military units to prevent interference with equipment sensors and to avoid interaction with established commercial air traffic routes and commercial shipping lanes. The Navy also minimizes conflicts within areas used for commercial and recreational fishing, subsistence use, and tourism. For example, during applicable seasons around the islands of Guam and the CNMI, the Navy works collaboratively with local communities to deconflict sea space used for fishing to the maximum extent practicable, such as avoiding known fishery infrastructures (e.g., fish aggregating devices) and high-use fishing areas. To help civilian mariners better plan fishing and boating activities that involve accessing the waters around FDM, the Navy notifies them through various means, such as U.S. Coast Guard-issued Notices to Mariners and social media, of the time periods when FDM will not be in use for several consecutive days. Announcing in advance when FDM will be in use (and when it will not be in use for an extended period of time) facilitates use of waters around FDM by the public during time periods that do not conflict with training and testing activities. These standard operating procedures benefit public health and safety (including people participating in activities that have subsistence benefits and socioeconomic value, such as recreational or commercial fishing) by reducing potential interactions with training and testing activities.

### C.1.10.7 Pierside Testing Safety

The *U.S. Navy Dive Manual* (U.S. Department of the Navy, 2011) prescribes safe distances for divers from active sonar sources and in-water explosions. Safety distances for the use of electromagnetic energy are specified in Department of Defense Instruction 6055.11 (U.S. Department of Defense, 2009) and Military Standard 464A (U.S. Department of Defense, 2002). These distances are used as the standard safety buffers for in-water energy to protect military divers. If an unauthorized person is detected within the exercise area, the activity is temporarily halted until the area is again cleared and secured. These standard operating procedures benefit public health and safety (including persons participating in activities that have socioeconomic value, such as commercial or recreational diving) by reducing the potential for interaction with pierside testing activities.

### C.1.10.8 Underwater Detonation Safety

Underwater detonation training takes place in designated exercise areas located away from popular recreational dive sites, primarily for human safety. If an unauthorized person (e.g., a recreational diver) or vessel is detected within the exercise area, the activity is temporarily halted until the area is cleared and secured. Recreational dive sites often include shallow-water coral reefs, artificial reefs, and wrecks. Notices to Mariners are issued when the events are scheduled to alert the public to stay clear of the area. These standard operating procedures benefit public health and safety, environmental resources (e.g., shallow-water coral reefs, artificial reefs, and the biological resources such as fish that inhabit, shelter in, or feed among them), and cultural resources by reducing the potential for interaction with underwater detonation activities.

### C.1.10.9 Sonic Booms

As a general policy, aircraft do not intentionally generate sonic booms below 30,000 feet of altitude unless over water and more than 30 miles from inhabited land areas or islands. The military may authorize deviations from this policy for tactical missions, phases of formal training syllabus flights, or research, test, and operational suitability test flights. The standard operating procedures for sonic booms benefit public health and safety by reducing the potential for exposure to sonic booms.

### C.1.10.10 Unmanned Surface Vehicle Safety

For activities involving unmanned surface vehicles, the Navy evaluates the need to publish a Notice to Airmen or Notice to Mariners based on the scale, location, and timing of the activity. When necessary, Notices to Airmen and Notices to Mariners are issued to alert the public to stay clear of the area. These standard operating procedures benefit public health and safety by reducing the potential for interaction with unmanned surface vehicles.

### C.1.10.11 Sinking Exercise Safety

The Navy is required to conduct sinking exercises greater than 50 nautical miles from land and in waters at least 6,000 feet deep (40 CFR section 229.2). The Navy selects sinking exercise areas to avoid established commercial air traffic routes, commercial vessel shipping lanes, and areas used for recreational activities, and to allow for the necessary separation of Navy units to ensure safety for Navy personnel, the public, commercial aircraft and vessels, and Navy assets. These standard operating procedures benefit public health and safety (including persons participating in activities that have socioeconomic value, such as recreational or commercial fishing) by reducing the potential for interaction with sinking exercises.

#### C.1.10.12 Amphibious Assault and Amphibious Raid Procedures

All established harbor navigation rules are observed during amphibious assault and amphibious raid training activities, when applicable. The Navy conducts a hydrographic survey prior to amphibious assault and amphibious raid training activities involving beach landings by large amphibious vehicles (e.g., Landing Craft, Air Cushion vessel). During the surveys, Navy personnel identify and designate vessel traffic lanes that are free of coral, hard bottom substrate, and obstructions that could present personnel and equipment safety concerns. The Navy does not conduct hydrographic surveys for beach landings with small boats, such as rigid-hulled inflatable boats, which have a much smaller draft than large amphibious vehicles and are therefore less likely to damage seafloor resources. Large amphibious vehicle beach landings and departures are scheduled at high tide, and vehicles stay fully on cushion or hover when over shallow reefs to avoid corals, hard bottom, and other substrate that could potentially damage equipment.

Due to the grounding of the French Navy Landing Craft that occurred on May 12, 2017, in Apra Harbor, the Navy has implemented additional standard operating procedures for amphibious assault and raid activities. The Navy requires the following standard operating procedures for amphibious landings at Reserve Craft Beach: (1) Concept of Operations for the event and for notification and coordination with Naval Base Guam Operations Officer, (2) presence of craft master who coordinates planned routes with Mariana Islands Range Complex Ops and Naval Base Guam, (3) presence of a beach master (observers) to assist in approach to shore and restore beach to original condition, and (4) distribution of the Reserve Craft Beach Training Aid to all vessel captains participating in any training event in the vicinity of Reserve Craft Beach.

### C.1.11 Farallon de Medinilla Access Restrictions

Only personnel authorized by Joint Region Marianas Operations are allowed on Farallon de Medinilla (FDM) for the safety of personnel.

## C.2 Mitigation Measures

### C.2.1 Introduction

The terms "mitigation" and "mitigation measures" mean actions taken to completely avoid, partially reduce, or minimize the potential for a stressor to affect a resource. This chapter describes and assesses mitigation the Action Proponents will implement under Alternatives 1 or 2 of the Proposed Action. Mitigation was designed to be implemented under every action alternative carried forward. Additionally, the Action Proponents developed mitigation in coordination with regulators and cooperating agencies, including NMFS. Mitigation is designed to achieve one or more of the following overarching benefits: (1) ensure that the Proposed Action has a negligible effect on marine mammal species and stocks, and effects the least practicable adverse effect on marine mammal species or stocks and their habitat (as required under the MMPA); (2) ensure that the Proposed Action does not jeopardize the continued existence of endangered or threatened species, or result in destruction or adverse modification of critical habitat (as required under the ESA); (3) avoid or minimize adverse effects on Essential Fish Habitat and habitats that provide critical ecosystem functions (as required under the Magnuson-Stevens Fishery Conservation and Management Act); (4) avoid adversely affecting historic shipwrecks (as required under the Abandoned Shipwreck Act and National Historic Preservation Act).

For requirements under the MMPA, NMFS has supported the position that the reduction of effects on marine mammal stocks and species (e.g., effects on reproductive success or survivorship) may accrue through the application of mitigation that limits effects on individual animals (National Marine Fisheries

Service, 2023). Mitigation developed for the following types of effects is thought to have greater value in reducing the likelihood or severity of adverse effects on marine mammal populations (National Marine Fisheries Service, 2023): (1) avoiding injury or mortality; (2) limiting interruption of known feeding, breeding, mother/young, or resting behaviors; (3) minimizing abandonment of important habitat (temporally and spatially); (4) minimizing the number of individuals subjected to these types of disruptions; and (5) limiting degradation of habitat.

NMFS has also described species-correlated factors that may (alone, or in combination) result in mitigation having a greater benefit towards reducing potential effects on marine mammal species or stocks: (1) the stock is known to be decreasing or status is unknown, but believed to be declining; (2) the known annual mortality (from any source) is approaching or exceeding the potential biological removal level (as defined in section 3(20) of the MMPA); (3) the species or stock is a small, resident population; or (4) the stock is involved in an unusual mortality event or has other known vulnerabilities, such as recovering from an oil spill. Activity-based mitigation and geographic mitigation (which can include year-round or seasonal measures to reduce effects on marine mammals or their prey and physical habitat), particularly within feeding, breeding, mother/young, migration, and resting areas (National Marine Fisheries Service, 2023), are relevant to achieving the mitigation goals described above. Using this guidance from NMFS, the Action Proponents considered the potential benefits of mitigation for marine mammals in terms of the degree, likelihood, and context of the anticipated avoidance of effects to individuals (and how many individuals), and within the context of the species-correlated factors. Similar considerations were applied to mitigation developed for ESA-listed species, including sea turtles, fish, birds, and corals.

The Navy standardizes its mitigation across the Atlantic, Hawaii-California, Mariana Islands, Northwest, and Gulf of Alaska Study Areas to the maximum extent practical. Mitigation is tailored to each Study Area as needed and appropriate based on the following: (1) the Proposed Action; (2) best available science on species occurrence and potential effects from the Proposed Action; (3) expected mitigation benefits; (4) operational practicality assessments; (5) consultations and coordination with regulatory agencies or departments, such as NMFS, the NOAA, the USFWS, Coastal Zone Management program offices, and State Historic Preservation Officers; (6) consultations and coordination with Alaska Native federally recognized tribes, Native Hawaiian organizations, and Native American Tribes, nations, and tribal organizations; and (7) suggestions received through public comments during scoping and on the 2026 MITT Draft SEIS/OEIS.

Mitigation was initially developed for Phase I of at-sea environmental planning (2009 to 2014) and subsequently revised for Phase II (2013 to 2018) and Phase III (2020 to 2027 for the MITT SEIS/OEIS). The 2026 MITT Draft SEIS/OEIS (which represents Phase IV) uses mitigation from the 2020 SEIS/OEIS as the baseline for refining mitigation specific to the Proposed Action. Terrestrial mitigation measures were originally developed for past environmental compliance documents in coordination with the USFWS. Data inputs for assessing and developing terrestrial mitigation included the operational data described in Table C-1.

**Table C-1: Practicality Assessment Criterion**

| Criterion | Description of Practicality Assessment Criterion |
|---|---|
| Criterion 1. Safety: Implementing mitigation must be safe | Assessments considered if mitigation would increase safety risks to personnel, equipment, or the public through:<br>- Increased fatigue of pilots or other personnel<br>- Accelerated fatigue-life of vessels, aircraft, and other systems or platforms<br>- Increased distance to aircraft emergency landing fields, critical medical facilities, and search and rescue capabilities |

| Criterion | Description of Practicality Assessment Criterion |
|---|---|
| | – Exceedance of aircraft fuel restrictions (e.g., lengthened event duration, increased distance to refueling stations)<br>– Exceedance of space restriction on visual observation platforms<br>– Decreased ability to de-conflict sea space or airspace conflicts (e.g., ensuring military readiness activities do not affect each other, avoiding interaction with established commercial air traffic routes, commercial vessel shipping lanes, and areas used for energy exploration or alternative energy development)<br>– Decreased ability for Lookouts to safely and effectively maintain situational awareness while observing the mitigation zones during typical activity conditions<br>– Decreased ability for Lookouts to safely perform other assigned job responsibilities<br>– Decreased proficiency in the use of sensors and weapon systems, or reduced ability to complete shipboard maintenance, repairs, or testing prior to at-sea use (which would result in a significant risk to personnel or equipment safety during training, testing, and real-world missions)<br>– Increased administrative burden that would significantly distract from safe conduct of primary mission objectives |
| Criterion 2. Sustainability: Implementing mitigation must be sustainable for the duration of the Proposed Action | • Assessments considered if mitigations would be unsustainable for the duration of the Proposed Action by:<br>– Requiring personnel to spend an inordinate amount of time on station or away from their homeport<br>– Requiring the use or obligation of additional resources (e.g., personnel and equipment) in excess of what is available<br>– Requiring expenditure of additional funding for increased operations costs associated with higher fuel consumption, additional maintenance of existing equipment, or acquisition of new equipment<br>– Reducing efficiency in travel time and associated costs by increasing distance between activities and homeports, home bases, associated training ranges, testing facilities, air squadrons, and existing infrastructure (e.g., instrumented underwater ranges) |
| Criterion 3. Mission: Implementing mitigation must allow for the Action Proponents to continue meeting mission objectives and statutory mandates | • Assessments considered if mitigation would modify military readiness activities in a way that would prevent them from meeting mission objectives, and the implications for the ability to continue meeting statutory mandates. Example barriers to meeting mission objectives and statutory mandates include:<br>– Degraded training or testing realism<br>– Decreased ready access to ranges, operating areas (OPAREAs), airspace, or sea space with a variety of realistic tactical oceanographic and environmental conditions (e.g., variations in bathymetry, topography, surface fronts, and sea surface temperatures) that are extensive enough to allow for completion of activities without physical or logistical obstructions, to provide personnel the ability to develop competence and confidence in their capabilities across multiple types of weapons and sensors, and the ability to train to communicate and operate in a coordinated fashion as required during real-world missions and to avoid observation by potential adversaries<br>– Decreased proficiency, erosion of capabilities, or reduction in perishable skills related to the use of sensors or weapon systems<br>– Decreased ready access to facilities, range support structures, or systems command support facilities that provide critical infrastructure support and technical expertise necessary to conduct testing<br>– Reduced ability to meet individual training and testing schedules, pre-deployment certification requirements, deployment schedules, and to deploy on time (factoring in variables such as maintenance and weather when scheduling event locations and timing) with the required level of skill and flexibility to accomplish any tasking by Combatant Commanders, national command authorities, or other national security |

| Criterion | Description of Practicality Assessment Criterion |
|---|---|
| | tasking, including responding to national emergencies or emerging national security challenges<br>– Reduced ability to conduct accurate oceanographic or acoustic research to meet research objectives, validate acoustic models, and conduct accurate engineering tests of acoustic sources, signal processing algorithms, and acoustic interactions<br>– Reduced ability to ensure the safety, functionality, and accuracy of systems, platforms, and components through maintenance, repairs, or testing prior to use at sea as needed or required by acquisition milestones<br>– Reduced ability to effectively test systems, platforms, and components before full-scale production or delivery in order to validate whether they perform as expected to determine whether they are operationally effective, suitable, survivable, and safe for their intended use by the fleet<br>– Increased administrative burden that would significantly distract from efficient and effective conduct of primary mission objectives<br>– Increased national security concerns related to providing advance notification of specific times and locations of platforms, such as those using active sonar<br>– Measures that extend outside of the Action Proponents' legal authority to implement |

### C.2.2 MITIGATION DISSEMINATION

The Action Proponents will publish, broadcast, disseminate, or distribute mitigation instructions through pre-event briefs, governing instructions, broadcast messages, the Protective Measures Assessment Protocol, or other established internal processes. The Protective Measures Assessment Protocol is a software program accessed by appointed personnel during pre-event planning (Figure C-1). The program provides operators with the required mitigation measures applicable to a particular training or testing event, as well as a visual display of the planned event location overlaid with relevant environmental data. Its text and mapping data will be updated to align with best available science and the final mitigation that results from the 2026 MITT Draft SEIS/OEIS and associated consultation documents.


**Figure C-1: Protective Measures Assessment Protocol Home Screen**

Mitigation requirements are mandatory for the Action Proponents when conducting activities under the Proposed Action. In furtherance of national security objectives, foreign militaries may participate in multinational training and testing events in the Study Area. See Section 2.3.1 of the 2026 MITT Draft SEIS/OEIS for a discussion of foreign military activities that would be considered as part of the Proposed Action. During U.S.-led training events within the U.S. territorial seas (0 to 12 NM from shore), the Action Proponents will request a foreign military unit's voluntary compliance with the applicable mitigations. When a foreign military unit participates in a training event with the Action Proponents beyond the U.S. territorial seas but within the U.S. EEZ (12 to 200 NM from shore), the Action Proponents will encourage that unit's voluntary compliance with the mitigation when practical.

### C.2.3 PERSONNEL TRAINING

As described in Section 2.3.3 of the 2020 SEIS/OEIS, underway surface ships operated by or for the Action Proponents have personnel assigned to stand watch at all times (day and night) for safety of navigation, collision avoidance, range clearance, and man-overboard precautions. Personnel underway on small boats (e.g., crewmembers responsible for navigation) fulfill similar watch standing responsibilities to those positioned on surface ships. To qualify to stand watch as a Lookout, personnel undertake a training program that includes computer-based training, on-the-job instruction, and a formal qualification program. Lookouts are trained in accordance with the *U.S. Navy Lookout Training Handbook* or equivalent to use correct scanning procedures while monitoring assigned sectors, to estimate the relative bearing, range, position angle, and target angle of sighted objects, and to rapidly communicate accurate sighting reports. The *U.S. Navy Lookout Training Handbook* was updated in 2022 to include a more robust chapter on environmental compliance, mitigation, and marine species observation tools and techniques (NAVEDTRA 12968-E). Environmental awareness and education training is also provided to personnel through the Afloat Environmental Compliance Training program (described below) or equivalent. Training is designed to help personnel gain an understanding of their personal environmental compliance roles and responsibilities (including mitigation implementation). Upon reporting aboard and annually thereafter, appointed personnel must complete training identified in their career path training plan.

**Introduction to Afloat Environmental Compliance.** Developed in 2014, the introduction module provides information on at-sea environmental laws, regulations, and compliance roles.

**Marine Species Awareness Training. This** module was developed by civilian marine biologists employed by the Navy and was reviewed and approved by NMFS. It provides information on marine species sighting cues, visual observation tools and techniques, and sighting notification procedures. It is a video-based complement to the *U.S. Navy Lookout Training Handbook* or equivalent. Since 2007, this module has been required for commanding officers, executive officers, equivalent civilian personnel, and personnel who will stand watch as a Lookout.

**Protective Measures Assessment Protocol.** This module provides information on how personnel should access and operate the Protective Measures Assessment Protocol. Since 2014, this module has been required for personnel tasked with generating mitigation reports.

**Sonar Positional Reporting System and Marine Mammal Incident Reporting.** This module provides information on sonar reporting requirements and marine mammal incident reporting procedures, which are described in Section 4.4 of the 2026 MITT Draft SEIS/OEIS. Since 2014, this module has been required for personnel tasked with preparing, approving, or submitting applicable reports.

### C.2.4 REPORTING

Reporting requirements are designed to track compliance with MMPA and ESA authorizations. They also provide the Action Proponents and regulators with sufficient information to consider if changes to mitigation, monitoring, or reporting requirements might be appropriate. Report content and submission details are included in the NMFS MMPA Regulations and Letters of Authorization. The Navy developed a classified data repository known as the Sonar Positional Reporting System to maintain internal records of in-water sound source use and to facilitate reporting pursuant to its MMPA Regulations and Letters of Authorization. Applicable data is provided to the NMFS Office of Protected Resources with annual reports describing the level of training and testing conducted in the Study Area and the special reporting mitigation areas described in Section 4.7 of the 2026 MITT Draft SEIS/OEIS. The reports include additional information for major training exercises, and the Sinking Exercise, such as records of individual marine mammal sightings when mitigation was implemented during the events. The Action Proponents also submit an annual report to NMFS on monitoring conducted under the U.S. Navy Marine

Species Monitoring Program (described in Section 4.5 of the 2026 MITT Draft SEIS/OEIS). Unclassified reports submitted to NMFS are available on the NMFS Office of Protected Resources (https://www.fisheries.noaa.gov/about/office-protected-resources).

#### C.2.4.1 Incident Reporting

As needed, the Action Proponents will follow established internal communication methods directed by Office of Chief of Naval Operations Instruction 3100.6 (series) if reportable incidents applicable to their activities are observed. Further, the Action Proponents will: (1) Notify the appropriate regulatory agency, which may include NMFS or the USFWS, immediately (or as soon as operational security considerations allow) if a vessel strike, injury, or mortality of a marine mammal or sea turtle occurs that is (or may be) attributable to activities conducted under the Proposed Action. The notification will include relevant information pertaining to the incident, including, but not limited to, vessel speed or event type. (2) Comply with the communication protocol for incidents involving marine mammals under NMFS' jurisdiction as outlined in the Notification and Reporting Plan, which will be publicly available on the NMFS Office of Protected Resources webpage. (3) Comply with the reporting requirements for incidents involving ESA-listed species under NMFS' jurisdiction, as outlined in the NMFS Biological Opinion. (4) Comply with the reporting and response requirements for incidents involving ESA-listed species under USFWS' jurisdiction, as outlined in the USFWS consultation documents. (5) Commence consultation with the appropriate State Historic Preservation Officer or Tribal Historic Preservation Officer in accordance with 36 CFR section 800.13(b)(3) in the event a submerged historic property (e.g., archaeological resource) is found to have been incidentally affected during a training or testing event.

### C.2.5 Monitoring, Research, and Adaptive Management

The Navy is one of the nation's largest sponsors of scientific research on, and monitoring of, protected marine species (Marine Mammal Commission, 2023). Through the Action Proponents' environmental offices and programs, the U.S. Navy Marine Species Monitoring Program, the Living Marine Resources Program, and the ONR, the Action Proponents have been sponsoring research and monitoring for over 30 years in areas where they conduct military readiness activities. Additionally, the USCG spends tens of millions of dollars annually protecting living marine resources through its maritime response, prevention, and law enforcement missions, which have a direct and positive effect on the maritime environment.

Thanks in part to advancements in science from these programs, the understanding of military readiness activity effects on protected marine species continues to evolve. The programs have also made significant advancements in research on and development of emergent mitigation technologies, such as thermal detection systems, infrared systems, radar systems, passive acoustic range instrumentation, and autonomous and unmanned platforms with automated passive acoustic detection capabilities. Technological advancements are also being made through research conducted by private industry (e.g., commercial off-the-shelf products). While these technologies have not reached the level of performance needed for deployment during military readiness activities, the Action Proponents plan to continue researching, testing, and developing them. If mitigation technologies mature to the state where they are determined to be sufficiently effective at mitigating marine mammal effects when considering the range of environmental conditions analogous to where the Action Proponents train and test, the species that could co-occur in space and time with the activities, and the characteristics of the sound sources and platforms used during the activities, then the Action Proponents will assess their compatibility with military readiness applications. This would include a practicality assessment of the budget and acquisition process (including costs associated with designing, building, installing, maintaining, and manning equipment), the logistical and physical considerations for retrofitting platforms with the appropriate equipment and their associated maintenance, repairs, or replacements (e.g., conducting

engineering studies to ensure compatibility with existing shipboard systems), the resource considerations for training personnel to effectively operate the equipment, and the potential security and classification issues.

The Action Proponents will continue to host marine species monitoring technical review meetings with NMFS, to include researchers and the Marine Mammal Commission. Additionally, routine Adaptive Management meetings will continue to be held with NMFS and the Marine Mammal Commission as a systematic approach to help account for advancements in science and technology made after the issuance of MMPA Regulations and Letters of Authorization. The Action Proponents will provide information about the status and findings of sponsored mitigation technology research and any associated practicality assessments at these meetings. Through Adaptive Management: decisions, policies, or actions can be adjusted as the science and outcomes from management actions become better understood over time (Williams et al., 2009).

### C.2.6 Activity-Based Mitigation

Activity-based mitigation was referred to as "Procedural Mitigation" in the 2020 SEIS/OEIS. Activity-based mitigations are fundamentally consistent across stressors; however, there are activity-specific variations to account for differences in platform configurations, event characteristics, and stressor types. These mitigations have a primary objective of reducing overlap of individual marine mammals and sea turtles (and in some instances, ESA-listed fish and birds) in real time with stressors that have the potential to cause injury or mortality.

Observations for "indicator species" are also conducted to offer an additional layer of protection for marine mammals and sea turtles. Floating vegetation can be an indicator of potential marine mammal or sea turtle presence because these animals have been known to seek shelter in, feed on, or feed among concentrations of floating vegetation. For example, young sea turtles have been known to hide from predators and eat the algae associated with floating concentrations of floating vegetation. For mitigation purposes, the term "floating vegetation" refers to floating concentrations of detached kelp paddies or other vegetation. For events with the largest NEW, indicator species also include other prey species or co-feeding species, such as jellyfish aggregations, large schools of fish, or flocks of seabirds, depending on the event and observation platforms involved.

Visual observations will be conducted by trained Lookouts. Some events may have additional personnel (beyond the minimum number of required Lookouts) who are already standing watch in or on the platform conducting the event or additional participating platforms and would have eyes on the water for all or part of an event. For example, Bridge Watch Teams on underway surface ships typically include numerous personnel on the bridge, bridge wings, and aft deck. These additional personnel will serve as members of the "Lookout Team" for all acoustic, explosive, and physical disturbance and strike stressor mitigation categories. While performing their primary duties, the Lookout Team will perform ad hoc visual observations before, during, or after events as a secondary task when doing so is compatible with, and does not compromise, safety and primary duty performance.

Lookouts may be positioned on surface vessels, aircraft, piers, or the shore. Lookouts positioned on U.S. Navy surface vessels (including surfaced submarines) will be solely dedicated to visually observing their assigned sectors. Lookouts on vessels with limited crew may fulfill additional duties. For example, a Lookout on a small boat may also be responsible for navigation or personnel supervision. A Lookout in an aircraft is typically an existing crewmember such as a pilot or Flight Officer whose primary duty is navigation or other mission-essential tasks. Observation platforms will be positioned according to safety, mission, and environmental conditions. For example, small boats observing explosive mine events would always be positioned outside of the detonation plume and human safety zone.

Lookouts will employ standard visual search techniques using naked-eye scanning, potentially in combination with the use of handheld binoculars, high-powered "big-eye" binoculars mounted on the deck of a surface ship (depending on the event and observation platform), and night search techniques (e.g., the use of night vision devices) if events occur after sunset or prior to sunrise. Lookouts will be advised that personal use of polarized sunglasses, when available, may help reduce sea surface glare, which could improve the sightability of marine resources. Prior to the start of an event (or use of a stressor) and throughout the duration of the event (or stressor use), Lookouts will observe a "mitigation zone" and the sea space surrounding the mitigation zone; within the direct path of underway vessels, unmanned surface or underwater vehicles that are already being escorted and operated under positive control by manned surface vehicles, or towed in-water devices; and throughout the range of visibility (e.g., to the horizon, depending on weather and observation platform characteristics). Mitigation zones are distances from a stressor (typically a radius measured in yards [yd.]). The specified mitigation zones are the largest areas Lookouts can reasonably be expected to observe during typical activity conditions and that are practical to implement from an operational standpoint. Lookouts may be responsible for observing multiple mitigation zones. For example, a Lookout positioned on a surface ship during an explosive large-caliber gunnery event may be responsible for observing both the weapon firing noise mitigation zone and the mitigation zone around the intended detonation location.

Lookouts will immediately relay relevant sightings information (e.g., animal or indicator species type, bearing, distance, direction of travel or drift, position relative to the mitigation zone) to the appropriate watch station through established communication methods. Lookouts will continue to observe for new sightings while maintaining situational awareness of the originally sighted animal or indicator species' position relative to the mitigation zone (to the extent possible). Lookouts will immediately relay any relevant new or updated information to the watch station. The watch station will disseminate relevant information to other participating assets as needed for their situational awareness. When passive acoustic devices are required for an event, or are already being used in an event, acoustic operators will relay information, when applicable using established communication methods, about any passive acoustic detections of marine mammals to Lookouts prior to or during an event. Lookouts will use the information received to help inform their visual observation of mitigation zones.

### C.2.6.1 Mitigation Specific to Acoustic Stressors, Explosives, and Non-Explosive Ordnance

The mitigation measures described below will be implemented (as appropriate) in response to an applicable sighting within or entering the relevant mitigation zone for acoustic stressors, explosives, and non-explosive practice munitions.

Prior to the initial start of an event (or stressor use), the Action Proponents will (1) relocate the event to a location where applicable species are not observed, or (2) delay the initial start of the event (or stressor use) until one of the "Mitigation Zone All-Clear Conditions" has been met.

During the event (i.e., during use of a stressor), the Action Proponents will (until one of the Mitigation Zone All-Clear Conditions has been met) (1) power down or shut down active acoustic transmissions, (2) cease weapon firing or ordnance deployment, or (3) cease explosive detonations or fuse initiations.

Mitigation Zone All-Clear Conditions indicate that the mitigation zone is determined to be free of applicable species. The conditions include (1) a Lookout observes the applicable species exiting the mitigation zone; (2) a Lookout determines the applicable species has exited the mitigation zone based on its observed course and speed relative to the mitigation zone; (3) a Lookout affirms the mitigation zone has been clear from additional sightings for an applicable "wait period;" or (4) for mobile events, the stressor has transited a distance equal to double the mitigation zone size beyond the location of the last sighting. Wait periods were established because events cannot be delayed or ceased indefinitely for the purpose of mitigation due to effects on safety, sustainability, and the ability to meet mission

requirements. Wait periods are designed to allow animals the maximum amount of time practical to resurface (i.e., become available to be observed) before activities resume. The assumption that mitigation may need to be implemented more than once was factored when developing wait period durations. Wait periods are 10 minutes when events involve aircraft that are typically fuel constrained (e.g., rotary-wing aircraft, fighter aircraft), or 30 minutes when events involve only vessels or aircraft that are not typically fuel constrained.

#### C.2.6.1.1 Additional Details for Acoustic Stressors

Additional details on the activity-based mitigation requirements for acoustic stressors are described in Table C-2. Activity-based mitigation will not apply to: (1) sources not operated under positive control; (2) sources used for safety of navigation; (3) sources used or deployed by aircraft operating at high altitudes; (4) sources used, deployed, or towed by unmanned platforms except when escort vessels are already participating in the event and have positive control over the source; (5) sources used by submerged submarines; (6) *de minimis* sources; (7) unattended sources, such as moored buoys used for acoustic and oceanographic research; (8) vessel-based, unmanned vehicle-based, or towed in-water sources when marine mammals (e.g., dolphins) are determined to be intentionally swimming at the bow or alongside or directly behind the vessel, vehicle, or device (e.g., to bow-ride or wake-ride); and (9) sources above 2 kHz for sea turtles (based on their hearing capabilities).

#### C.2.6.1.2 Additional Details for Explosives

Additional details on the activity-based mitigation requirements for explosives are described in Table C-2. Activity-based mitigation will not apply to explosives (1) deployed by aircraft operating at high altitudes; (2) deployed by submerged submarines, except for explosive torpedoes; (3) deployed against aerial targets; (4) during vessel missile or rocket events; (5) used at or below the *de minimis* threshold; and (6) deployed by unmanned platforms except when escort vessels are already participating in the event and have positive control over the explosive. Post-event observations are intended to aid incident reporting requirements for marine mammals and sea turtles. Practicality and the duration of post-event observations will be determined on site by fuel restrictions and mission-essential follow-on commitments.

#### C.2.6.1.3 Additional Details for Non-Explosive Ordnance

Additional details on the activity-based mitigation requirements for non-explosive ordnance are described in Table C-2. Explosive aerial-deployed mines do not detonate upon contact with the water surface and are therefore considered non-explosive when mitigating the potential for a mine shape to strike a marine mammal or sea turtle at the water surface. Mitigation for the explosive component of aerial-deployed mines is described in Table C-2. Activity-based mitigation does not apply to non-explosive ordnance deployed (1) by aircraft operating at high altitudes, (2) against aerial targets and land-based targets, (3) during vessel missile or rocket events, and (4) by unmanned platforms except when escort vessels are already participating in the event and have positive control over ordnance deployment.

## Table C-2: Activity-Based Mitigations for Acoustic, Explosive, and Non-Explosive Ordnance Stressors

| Mitigation Category | Mitigation Zones | Mitigation Requirements | Mitigation Requirement Timing | Wait Period |
|---|---|---|---|---|
| **Acoustic Stressors** | | | | |
| **Active Acoustic Sources** | | | | |
| • Active acoustic sources with power down and shut down capabilities:<br>– Low-frequency active sonar ≥200 dB<br>– Mid-frequency active sonar sources that are hull mounted on a surface ship (including surfaced submarines)<br>– Broadband and other active acoustic sources >200 dB | • 200 yd. from active acoustic sources (shut down)<br>• 500 yd. from active acoustic sources (power down of 10 dB total)<br>• 1,000 yd. from active acoustic sources (power down of 6 dB total) | • One Lookout in/on one of the following:<br>– Aircraft<br>– Pierside, moored, or anchored vessel<br>– Underway vessel with space/crew restrictions (including small boats)<br>– Underway vessel already participating in the event that is escorting (and has positive control over sources used, deployed or towed by) an unmanned platform<br>• Two Lookouts on an underway vessel without space/crew restrictions<br>• Lookouts would use information from passive acoustic detections to inform visual observations when passive acoustic devices are already being used in the event | • Immediately prior to the initial start of using active acoustic sources (e.g., while maneuvering on station), observe for:<br>– Marine mammals<br>– Sea turtles (for sources <2 kHz)<br>– Floating vegetation<br>• During use of active acoustic sources, observe for:<br>– Marine mammals<br>– Sea turtles (for sources <2 kHz) | • 10 or 30 minutes (depending on fuel constraints of the platform) |
| • Active acoustic sources with shut down (but not power down) capabilities:<br>– Low-frequency active sonar <200 dB<br>– Mid-frequency active sonar sources that are not hull mounted on a surface ship (e.g., dipping sonar, towed arrays)<br>– High-frequency active sonar<br>– Broadband and other active acoustic sources <200 dB | • 200 yd. from active acoustic sources (shut down) | | | |
| **Weapon Firing Noise** | | | | |
| • Explosive and non-explosive large-caliber gunnery firing noise (surface-to-surface and surface-to-air) | • 30 degrees on either side of the firing line out to 70 yd. from the gun muzzle (cease fire) | • One Lookout on a vessel | • Immediately prior to the initial start of large-caliber gun firing (e.g., during target deployment) observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During large-caliber gun firing observe for:<br>– Marine mammals<br>– Sea turtles | • 30 minutes |

## Table C-2: Activity-Based Mitigations for Acoustic, Explosive, and Non-Explosive Ordnance Stressors (continued)

| Mitigation Category | Mitigation Zones | Mitigation Requirements | Mitigation Requirement Timing | Wait Period |
|---|---|---|---|---|
| **Explosive Stressors** | | | | |
| **Explosive Bombs** | | | | |
| • Any NEW | • 2,500 yd. from the intended target (cease fire) | • One Lookout in an aircraft | • Immediately prior to the initial start of bomb delivery (e.g., when arriving on- station), observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During bomb delivery, observe for:<br>– Marine mammals<br>– Sea turtles<br>• After the event, when practical, observe the detonation vicinity for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately and established incident reporting procedures would be followed | • 10 minutes |
| **Explosive Gunnery** | | | | |
| • Air-to-surface medium-caliber ordnance | • 200 yd., from the intended impact location (cease fire) | • One Lookout on a vessel or in an aircraft | • Immediately prior to the initial start of gun firing (e.g., while maneuvering on station), observe for:<br>– Marine Mammals<br>– Sea turtles<br>– Floating vegetation<br>• During gunnery firing, observe for:<br>– Marine mammals<br>– Sea turtles<br>• After the event, when practical, observe the detonation vicinity for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately, and established incident reporting procedures would be followed. | • 10 or 30 minutes (depending on fuel constraints of the platform) |
| • Surface-to-surface medium-caliber ordnance | • 600 yd. from the intended impact location (cease fire) | | | |
| • Surface-to-surface large-caliber ordnance | • 1,000 yd. from the intended impact location (cease fire) | | | |
| **Explosive Mine Countermeasure and Neutralization (No Divers)** | | | | |
| • 0.1-5 lb. NEW | • 600 yd. from the detonation site (cease fire) | • One Lookout on a vessel or in an aircraft | • Immediately prior to the initial start of detonations (e.g., while maneuvering on station; typically, 10 or 30 minutes depending on fuel constraints) observe for: | • 10 or 30 minutes (depending on |

## Table C-2: Activity-Based Mitigations for Acoustic, Explosive, and Non-Explosive Ordnance Stressors (continued)

| Mitigation Category | Mitigation Zones | Mitigation Requirements | Mitigation Requirement Timing | Wait Period |
|---|---|---|---|---|
| • >5 lb. NEW | • 2,100 yd. from the detonation site (cease fire) | • Two Lookouts: one in a small boat and one in an aircraft | – Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During detonations or fuse initiation, observe for:<br>– Marine mammals<br>– Sea turtles<br>• After the event, observe the detonation vicinity for 10 or 30 minutes (depending on fuel constraints), observe for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately and established incident reporting procedures would be followed. | fuel constraints of the platform) |
| **Explosive Mine Neutralization (With Divers)** | | | | |
| • Activities under positive control | • 500 yd. from the detonation site (cease fire) | • Two Lookouts in two small boats (one Lookout per boat), or one small boat and one rotary-wing aircraft (with one Lookout each), and one Lookout on shore for shallow-water events | • Time-delay devices will be set not to exceed 10 minutes<br>• Immediately prior to the initial start of detonations or fuse initiation for positive control events (e.g., while maneuvering on station) for 30 minutes prior for time-delay events, observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>– Manta rays<br>– Hammerhead sharks<br>• During detonations or fuse initiation, observe for:<br>– Marine mammals<br>– Sea turtles<br>– Hammerhead sharks and manta rays within the Mariana Islands Range Complex: Divers will notify the support boat or Range Safety Officer of sightings (of any hammerhead sharks or manta rays, due to difficulty in differentiating species). Detonations will cease if divers' sight a hammerhead when setting charges and will recommence when it is no longer observed.<br>• When practical based on mission, safety, and environmental conditions:<br>– Boats will observe from the mitigation zone radius mid-point<br>– When two are used, boats will observe from opposite sides of the mine location<br>– Platforms will travel a circular pattern around the mine location<br>– Boats will have one Lookout observe inward toward the mine location and one observe outward toward the mitigation zone perimeter<br>– Divers will be part of the Lookout Team | • 10 or 30 minutes (depending on fuel constraints or the platform) |
| • Activities using time-delay fuses | • 1,000 yd. from the detonation site (cease fire) | • Four Lookouts in two small boats (two Lookouts per boat), and one additional Lookout in an aircraft if used in the event | | |

## Table C-2: Activity-Based Mitigations for Acoustic, Explosive, and Non-Explosive Ordnance Stressors (continued)

| Mitigation Category | Mitigation Zones | Mitigation Requirements | Mitigation Requirement Timing | Wait Period |
|---|---|---|---|---|
| | | | • After the event, observe the detonation vicinity for 30 minutes for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>– Manta rays<br>– Hammerhead sharks<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately and established incident reporting procedures would be followed. | |
| **Explosive Missiles and Rockets** | | | | |
| • 0.6–20 lb. NEW (air-to-surface) | • 900 yd. from the intended impact location (cease fire) | • One Lookout in an aircraft | • Immediately prior to the initial start of missile or rocket delivery (e.g., during a fly-over of the mitigation zone), observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During missile or rocket delivery, observe for:<br>– Marine mammals<br>– Sea turtles<br>• After the event, when practical, observe the detonation vicinity for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately and established incident reporting procedures would be followed | • 10 or 30 minutes (depending on fuel constraints of the platform) |
| • >20–500 lb. NEW (air-to-surface) | • 2,000 yd. from the intended impact location (cease fire) | | | |
| **Research-Based Sub-Surface Explosives** | | | | |
| • 0.1–5 lb. NEW for other types of sub-surface explosives used in research applications | • 600 yd. from the device detonation site (cease fire) | • One Lookout on a small boat or in an aircraft<br>• Conduct passive acoustic monitoring for marine mammals; use information from detections to assist visual observations. | • Immediately prior to the initial start of detonations, observe for:<br>– Marine mammas<br>– Sea turtles<br>– Floating vegetation<br>• During detonations, observe for:<br>– Marine mammals<br>– Sea turtles<br>• After the event, when practical, observe the detonation vicinity for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended | • 10 or 30 minutes (depending on fuel constraints of the platform) |

## Table C-2: Activity-Based Mitigations for Acoustic, Explosive, and Non-Explosive Ordnance Stressors (continued)

| Mitigation Category | Mitigation Zones | Mitigation Requirements | Mitigation Requirement Timing | Wait Period |
|---|---|---|---|---|
| | | | immediately, and established incident reporting procedures would be followed | |
| **Explosive Torpedoes** | | | | |
| • Any NEW | • 2,100 yd. from the intended impact location (cease fire) | • One Lookout in an aircraft<br>• Conduct passive acoustic monitoring for marine mammals; use information from detections to assist visual observations. | • Immediately prior to the initial start of detonations (e.g., during target deployment), observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>– Jellyfish aggregations<br>• During torpedo launches, observe for:<br>– Marine mammals<br>– Sea turtles<br>– Jellyfish aggregations<br>• After the event, when practical, observe the detonation vicinity for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately, and established incident reporting procedures would be followed | • 10 or 30 minutes (depending on fuel constraints of the platform) |
| **Sinking Exercise (SINKEX)** | | | | |
| • Any NEW | • 2.5 NM from the target ship hull (cease fire) | • Two Lookouts; one on a vessel and one in an aircraft<br>• Conduct passive acoustic monitoring for marine mammals; use information from detections to assist visual observations | • During aerial observations for 90 minutes prior to the initial start of weapon firing, observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>– Jellyfish aggregations<br>• From the vessel during weapon firing, and from the aircraft and vessel immediately after planned or unplanned breaks in weapon firing or more than 2 hours, observe for:<br>– Marine mammals<br>– Sea turtles<br>• Observe the detonation vicinity for 2 hours after sinking the vessel or until sunset, whichever comes first, for dead or injured:<br>– Marine mammals<br>– Sea turtles<br>• If a marine mammal is visibly injured or killed as a result of detonation, explosives use in the event would be suspended immediately, and established incident reporting procedures would be followed | • 30 minutes |
| **Non-Explosive Ordnance Stressors** | | | | |

## Table C-2: Activity-Based Mitigations for Acoustic, Explosive, and Non-Explosive Ordnance Stressors (continued)

| Mitigation Category | Mitigation Zones | Mitigation Requirements | Mitigation Requirement Timing | Wait Period |
|---|---|---|---|---|
| **Non-Explosive Aerial-Deployed Mines and Bombs** | | | | |
| • Non-explosive aerial-deployed mines<br>• Non-explosive bombs | • 1,000 yd. from the intended target (cease fire) | • One Lookout in an aircraft | • Immediately prior to the initial start of mine or bomb delivery (e.g., when arriving on station), observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During mine or bomb delivery, observe for:<br>– Marine mammals<br>• Sea turtles | • 10 minutes |
| **Non-Explosive Gunnery** | | | | |
| • Non-explosive surface-to-surface large-caliber ordnance<br>• Non-explosive surface-to-surface and air-to-surface medium-caliber ordnance<br>• Non-explosive surface-to-surface and air-to-surface small-caliber ordnance | • 200 yd. from the intended impact location (cease fire) | • One Lookout on a vessel or in an aircraft | • Immediately prior to the initial start of gun firing (e.g., while maneuvering on station), observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During gunnery firing, observe for:<br>– Marine mammals<br>• Sea turtles | • 10 or 30 minutes (depending on fuel constraints of the platform) |
| **Non-Explosive Missiles and Rockets** | | | | |
| • Non-explosives (air-to-surface) | • 900 yd. from the intended impact location (cease fire) | • One Lookout in an aircraft | • Immediately prior to the start of missile or rocket delivery (e.g., during a fly-over of the mitigation zone), observe for:<br>– Marine mammals<br>– Sea turtles<br>– Floating vegetation<br>• During missile or rocket delivery, observe for:<br>– Marine mammals<br>• Sea turtles | • 10 or 30 minutes (depending on fuel constraints of the platform) |

### C.2.6.2 Mitigation Specific to Vessels, Vehicles, and Towed In-Water Devices

Additional details on the activity-based mitigation requirements for vessels, unmanned vehicles, and towed in-water devices are described in Table C-3. For ship classes required to maintain more than one Lookout, the specific requirement is subject to change over time in accordance with the applicable navigation instruction, such as the Surface Ship Navigation Department Organization and Regulations Manual (U.S. Department of the Navy, 2021). The Action Proponents will notify NMFS should their Lookout policies change, including in the Surface Ship Navigation Department Organization and Regulations Manual. Mitigation will be implemented to the maximum extent practical based on the prevailing circumstances, including consideration of safety of vessels, unmanned vehicles, towing platforms, and crews, as well as maneuverability restrictions. Mitigation will not be implemented (1) by submerged submarines, (2) by unmanned vehicles except when escort vessels are already participating in the event and have positive control over the unmanned vehicle movements, (3) when marine mammals (e.g., dolphins) are determined to be intentionally swimming at the bow, alongside the vessel or vehicle, or directly behind the vessel or vehicle (e.g., to bow-ride or wake-ride), and (4) when impractical based on mission requirements (e.g., during certain aspects of amphibious exercises).

**Table C-3: Activity-Based Mitigations for Vessels, Vehicles, and Towed In-Water Devices**

| Mitigation Category | Mitigation Requirements | Mitigation Zones and Requirements |
|---|---|---|
| **Manned Surface Vessels** | | |
| • Manned surface vessels, including surfaced submarines | • One or more Lookouts on manned underway surface vessels in accordance with the most recent navigation safety instruction | • Immediately prior to manned surface vessels getting underway and while underway, the Lookout(s) will observe for the following:<br>– Marine mammals<br>– Sea turtles<br>• Underway manned surface vessels will maneuver themselves (which may include reducing speed) to maintain the following distances as mission and circumstances allow:<br>– 500 yd. from whales<br>– 200 yd. from other marine mammals<br>– Vicinity of sea turtles<br>• Within the designated vessel traffic lane during Amphibious Assault and Amphibious Raid exercises, while underway, observe for sea turtles; if observed, cease beach approach. To allow a sighted sea turtle to leave the designated vessel traffic lanes, the Navy will not recommence the beach approach until one of the recommencement conditions has been met:<br>– The animal is observed exiting the designated vessel traffic lane<br>– The animal is thought to have exited the designated vessel traffic lane based on a determination of its course, speed, and movement relative to the intended impact location<br>– The designated vessel traffic lane has been clear from any additional sightings for 30 minutes |
| **Unmanned Vehicles** | | |
| • Unmanned Surface Vehicles and Unmanned Underwater Vehicles already being escorted (and operated under positive control) by a manned surface support vessel | • One Lookout on a surface support vessel that is already participating in the event, and has positive control over the unmanned vehicle | • Immediately prior to unmanned vehicles getting underway and while underway, the Lookout will observe for the following:<br>– Marine mammals<br>– Sea turtles<br>• A surface support vessel that is already participating in the event, and has positive control over the unmanned vehicle, will maneuver the unmanned vehicle (which may include reducing its speed) to ensure it maintains the following distances as mission and circumstance allow:<br>– 500 yd. from whales<br>– 200 yd. from other marine mammals<br>– Vicinity of sea turtles |
| **Towed In-Water Devices** | | |
| • In-water devices towed by an aircraft, a manned surface support vessel, or an Unmanned Surface | • One Lookout on the manned towing vessel or aircraft, or on a surface support vessel that is already participating in | • Immediately prior to and while in-water devices are being towed, the Lookout will observe for the following:<br>– Marine mammals<br>– Sea turtles |

| Mitigation Category | Mitigation Requirements | Mitigation Zones and Requirements |
|---|---|---|
| Vehicle or Unmanned Underwater Vehicle already being escorted (and operated under positive control) by a manned surface vessel | the event and has positive control over an unmanned vehicle that is towing an in-water device. | • Manned towing platforms, or surface support vessels already participating in the event that have positive control over an unmanned vehicle that is towing an in-water device, will maneuver itself or the unmanned vehicle (which may include reducing speed) to ensure towed in-water devices maintain the following distances as mission and circumstances allow:<br>– 250 yd. from marine mammals<br>– Vicinity of sea turtles |

### C.2.6.3 Visual Observation Effectiveness

Oedekoven and Thomas (2022) evaluated the effectiveness of Navy Lookout Teams at detecting marine mammals before they entered a defined set of mitigation zones (i.e., 200, 500, and 1,000 yd.). The study analyzed sighting data collected by the Navy over 27 embarks from 2010 to 2019. Results indicated that the effectiveness of Navy Lookout Teams was generally less than that of trained biologist observer teams, and varied by sighted species, group size, and distance. The Navy reviewed the same dataset used by Oedekoven and Thomas (2022), plus sonar use data, and found that sonar status (e.g., on versus off) was an important factor in evaluating how species availability may influence the prevalence of marine mammal sightings for Navy Lookouts and biologists alike. Sighting rates near vessels using hull-mounted active sonar were lower when sonar was on versus off, suggesting that a portion of marine mammals were not available to be sighted when the sonar was on (due to changed surfacing behavior or avoiding close exposures to sonar) (Navy, 2023). Table C-4 provides a summary of the factors that could potentially influence the real-time effectiveness of the Action Proponents' visual observations (Barlow, 2015; Jefferson et al., 2015; Navy, 2023; Oedekoven & Thomas, 2022). As described in the Acoustic and Explosive and Acoustic Effects Report, the quantitative analysis for the 2026 MITT Draft SEIS/OEIS does not reduce model-estimated impacts to account for activity-based mitigation.

**Table C-4: Potential Factors Influencing Visual Observation Effectiveness**

| Factor | Description of Influence on Sightability |
|---|---|
| Species dive behavior | Long-duration and deep-diving species are not at the surface often or for long period of time, which limits the amount of time they are available to be seen by Lookouts. Groups size also influences sightability. Species that travel in groups or large pods (e.g., delphinids, sperm whales, fin whales) are generally easier to detect than solitary individuals or pairs. Information on dive behaviors and group sizes for species that occur in the Study Area is provided in the technical reports titled *Dive Distribution for Marine Species Occurring in the U.S. Navy's* and the *U.S. Navy Marine Species Density Database Phase IV for the Mariana Islands Training and Testing Study Area*. |
| Species group size | |
| Species physical traits and surface behaviors | Larger-bodied species (e.g., baleen and sperm whales) or species with tall dorsal fins (e.g., killer whales) would generally be easier to detect relative to small-bodied species and species without dorsal fins (e.g., sea turtles). Similarly, species with highly conspicuous surface-active behaviors (e.g., breaching, leaping, bow-riding) are generally easier to detect than cryptic species. For example, whales that fluke regularly (e.g., humpback) or variably (e.g., blue and fin whales) before they dive may be easier to detect than those that fluke rarely (e.g., sei, common minke, and Bryde's whales). Similarly, species that are active at the surface (e.g., bottlenose and spinner dolphins) or remain at the surface for extended periods of time as they forage or socialize (e.g., sperm whales) would be easier to detect than cryptic species that surface inconspicuously (e.g., beaked whales, dwarf and pygmy sperm whales, sea turtles). Prominent blows, such as those exhibited by many species of baleen whales (e.g., humpback whales) are easier to detect than small or less visible blows (e.g., Bryde's and common minke whales). Some species do not exhibit a blow when they surface to breathe (e.g., sea turtles). |
| Observation conditions | Weather conditions, such a clear daytime skies, low sea states, low winds (i.e., low prevalence of white caps), and low glare are optimal for marine species observations. Animal sightability generally declines as viewing conditions decline. |
| Observation area and platform | Marine mammal and sea turtle sightability may be influenced by the mitigation zone size, observation platform, ad distance between the two. Aircraft (when no operating at high altitudes) generally have the best vantage point for observing throughout an entire mitigation zone due to their height and speed over the water, and ability to conduct close-approach flyovers (depending on the event). Aircraft Lookouts are typically existing crewmembers responsible for other essential tasks (e.g., navigation), and some types of aircraft may have windows that are small or positioned in a way that partially obstruct views of the sea space directly beneath the aircraft. Due to their low vantage point on the water, Lookouts in small boats may be more likely to detect animals in close proximity to the boat or that display conspicuous visual cues (e.g., blows, splashes, flukes, travel in groups) than animals at further distances (e.g., near a mitigation zone perimeter) or that display inconspicuous visual cues (e.g., solitary sea turtles surfacing without a splash). The bridges of surface ships offer a higher vantage point relative to small boats. For certain events, such as hull-mounted active sonar, the mitigation zone is located directly around the hull of the ship on which the Lookout is positioned. Species sightability |

| Factor | Description of Influence on Sightability |
|---|---|
| | would generally decrease with distance, particularly for mitigation zones located far from the observation platform (e.g., a gunnery mitigation zone several NM down range). The use of hand-held or big-eye binoculars can help compensate for the difficulty of sighting animals at distance (depending on the event). |

### C.2.7 GEOGRAPHIC MITIGATION

Designated portions of the Study Area where the Action Proponents will implement geographic mitigation for physical habitats, marine species habitats, or cultural resources are referred to as "mitigation areas" (Figure C-2). The remainder of this section provides the geographic mitigation requirements and a qualitative discussion of their environmental benefits. Mitigation areas apply year-round unless specified otherwise, and do not apply to *de minimis* sources. Detailed descriptions of important seafloor habitats (e.g., for corals), marine mammal habitats, and cultural resources (e.g., shipwrecks), as well as maps depicting how these features overlap the mitigation areas, are provided in this chapter.

Should national security require the Action Proponents to exceed the limit of a mitigation area (e.g., sonar hours), personnel conducting the activity would be required to obtain approval through the chain of command prior to commencing the applicable event. The Action Proponents would provide NMFS with advance notification and include relevant information about the event (e.g., sonar hours, use of explosives) in their annual training and testing activity reports.

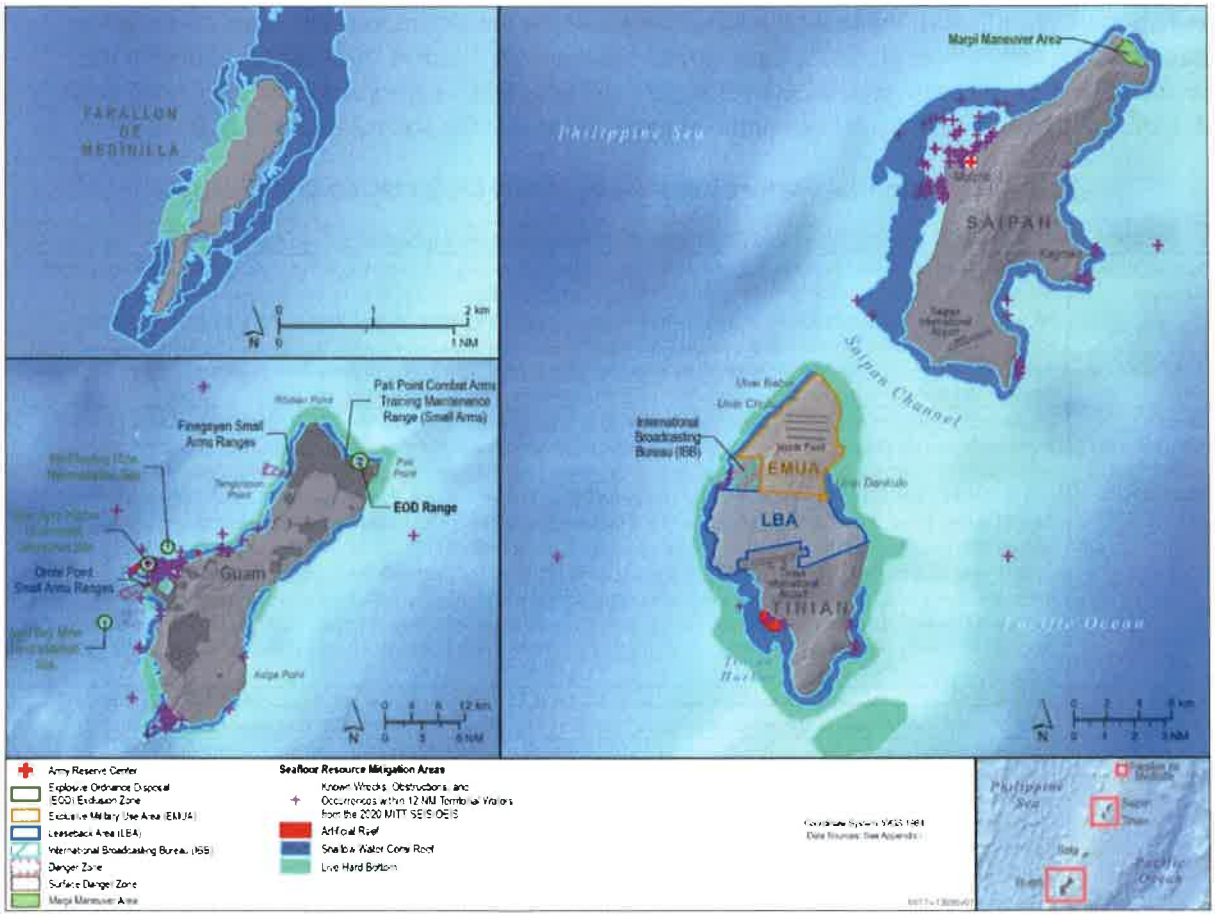


**Figure C-2: Guam and CNMI Mitigation Areas**

### C.2.7.1 Seafloor Resource Mitigation Areas

The Action Proponents implement geographic mitigation to protect sensitive seafloor habitats (including shallow-water coral reefs, artificial reefs, shipwrecks, and hard bottom substrates) from the impacts of explosives and physical strike stressors (as indicated in Table C-5). These measures are designed to safeguard not only the physical structures themselves but also the vital ecosystem services they provide for fish, sea turtles, and invertebrates that rely on them for feeding and shelter. The effectiveness of these protections is largely dependent on high-quality mapping data from the 2026 MITT Draft SEIS/OEIS: Marine Benthic Habitat Database Technical Report (U.S. Department of the Navy, 2024d), which allows for the precise placement of training activities to avoid these ecologically and socioeconomically valuable areas.

**Table C-5: Seafloor Resource Mitigation Area Requirements**

| Category | Mitigation Requirements | Mitigation Benefits |
|---|---|---|
| **Shallow Water Coral Reef** | | |
| Explosives | • The Action Proponents will not detonate any in-water explosives (including underwater explosives and explosives deployed against surface targets) within a horizontal distance of 350 yd. from shallow-water coral reefs (except at designated nearshore training areas around Guam and Apra Harbor, such as Piti Floating Mine Neutralization Site, Outer Apra Harbor Underwater Detonation Site, and Agat Bay Mine Neutralization Site, where these resources will be avoided to the maximum extent practicable). | • The 350-yd. mitigation area radius for in-water explosives was conservatively designed to be several times larger than the impact footprint (e.g., crater and expelled material radius) of the largest bottom-laid explosive used in the Study Area. The military expended material with the largest footprint used in other Navy study areas is a 650-lb. net explosive weight (NEW) mine with an estimated impact footprint radius of 22.7 yd. (20.8 m). The 350-yd. mitigation area radius is 11 times larger than this footprint radius and is even more conservatively sized when compared to the impact footprints of smaller explosives, including the largest explosive applicable to the MITT Study Area, which has a charge size of 20 lb. NEW and a footprint radius of just 2.2 yd. (2 m). Therefore, the mitigation will prevent direct effects (and some level of indirect effects) from explosives on shallow-water coral reefs in the Study Area. |
| Physical disturbance and strike | • The Action Proponents will not set vessel anchors within the anchor swing circle radius from shallow-water coral reefs (except in designated anchorages).<br>• The Action Proponents will not place non-explosive seafloor devices or deploy non-explosive ordnance against surface targets (including aerial-deployed mine shapes) within a horizontal distance of 350 yd. from shallow-water coral reefs (except at designated anchorages and nearshore training areas around Guam and within Apra Harbor, where these resources will be avoided to the maximum extent practicable). | • The anchor swing circle mitigation will ensure that vessel anchors do not come into contact with shallow-water coral reefs and precious coral beds when factoring in environmental conditions that could affect anchoring positions, such as winds, currents, and water depth.<br>• For ease of implementation, the 350-yd. mitigation area radius for explosives was also adopted for seafloor devices and non-explosive ordnance deployed against surface targets. This mitigation area radius is even more conservative when compared to the small impact footprints of these non-explosive stressors. Therefore, the mitigation will prevent direct effects (and some level of indirect effects) from seafloor devices and non-explosive ordnance deployed against surface |

| Category | Mitigation Requirements | Mitigation Benefits |
|---|---|---|
| | | targets on shallow-water coral reefs and precious coral beds. |
| **Artificial Reef, Hard Bottom Substrate, and Shipwreck** | | |
| Explosives | • The Action Proponents will not detonate explosives on or near the seafloor (e.g., explosive bottom-laid or moored mines) within a horizontal distance of 350 yd. from artificial reefs, hard bottom substrate, and shipwrecks (except in designated locations, where these resources will be avoided to the maximum extent practicable). | • The 350-yd. mitigation area radius will prevent direct effects (and some level of indirect effects) from explosives on artificial reefs, hard bottom substrate, and shipwrecks. |
| Physical disturbance and strike | • The Action Proponents will not set vessel anchors within the anchor swing circle radius from artificial reefs, hard bottom substrate, and shipwrecks (except at designated anchorages and nearshore training areas around Guam and within Apra Harbor, where these resources will be avoided to the maximum extent practicable).<br>• The Action Proponents will not place non-explosive seafloor devices (that are not precisely placed) within a horizontal distance of 350 yd. from artificial reefs, hard bottom substrate, and shipwrecks except at designated nearshore training areas, where these resources will be avoided to the maximum extent practicable).<br>• The Action Proponents will not position precisely placed non-explosive seafloor devices directly on artificial reefs, hard bottom substrate, or shipwrecks.<br>• The Action Proponents will avoid positioning precisely placed non-explosive seafloor devices near these resources by the largest distance that is practical to implement based on mission requirements. | • Mitigation ensures that vessel anchors do not come into contact with artificial reefs, hard bottom substrate, and shipwrecks, when factoring in environmental conditions that could affect anchoring position, such as winds, current, and water depth.<br>• For ease of implementation, the 350-yd. mitigation area radius for explosives was also adopted for seafloor devices (that are not precisely placed) and is even more conservative when compared to the small impact footprints of non-explosive seafloor devices.<br>• Mitigation specific to precisely placed seafloor devices was first developed and coordinated with NMFS for live hard bottom habitats during the 2022 HSTT Study Area's Essential Fish Habitat Assessment consultation (U.S. Department of the Navy, 2022). That mitigation is being included in this document and applied to the whole mitigation area category of hard bottom substrate as well as artificial reefs and shipwrecks, for consistency and practicality of implementation. Because precisely placed seafloor devices are deployed with a high degree of placement accuracy, the original intent of the mitigation (i.e., preventing direct physical strike and disturbance) will continue to be achieved. Therefore, the mitigation for seafloor devices that are either precisely placed or not precisely placed will collectively prevent direct effects (and some level of indirect effects) from seafloor devices on artificial reefs, hard bottom substrate, and shipwrecks. |

### C.2.7.2 Marine Mammal and Sea Turtle Mitigation Areas

Table C-6 details geographic marine mammal and sea turtle mitigation related to the use of active sonar and explosives off Marpi Reef, north of Saipan, Chalan Kanoa Reef, west of Saipan, and Agat Bay, Guam. The mitigation is a continuation from the 2020 SEIS/OEIS.

## Table C-6: Mitigation Area Requirements for Marpi Reef, Chalan Kanoa Reef, and Agat Bay Nearshore

| Category | Mitigation Requirements | Mitigation Benefits |
|---|---|---|
| **Marpi Reef** | | |
| Acoustic | • From December 1 – April 30, the Action Proponents will not use more than 20 combined hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar during training and testing within the Marpi Reef and Chalan Kanoa Reef mitigation areas.<br>• The Navy will report the total hours of active sonar (all bins, by bin) used in the Marpi Reef Mitigation Area and Chalan Kanoa Reef Mitigation Area from December 1 to April 30 in its annual training and testing activity reports submitted to NMFS. | • Mitigation is designed to reduce exposure of humpback whales in important seasonal reproductive habitat to levels of sound that have the potential to cause injurious or behavioral effects. |
| Explosives | • The Action Proponents will not detonate in-water explosives (including underwater explosives and explosives deployed against surface targets) within the mitigation area (year-round). | • Mitigation is designed to prevent exposure of humpback whales in important seasonal reproductive habitat to explosives that have the potential to cause injury, mortality, or behavioral disturbance. |
| Acoustic, Explosives, Physical disturbance and strike | • The Navy will issue an annual seasonal awareness notification message to alert ships and aircraft operating in the Marpi Reef Mitigation Area and Chalan Kanoa Reef Mitigation Area to the possible presence of increased concentrations of humpback whales from December 1 through April 30. To maintain safety of navigation and to avoid interactions with large whales during transits, the Navy will instruct vessels to remain vigilant to the presence of humpback whales that, when concentrated seasonally, may become vulnerable to vessel strikes.<br>• Platforms will use the information from the awareness notification messages to assist their visual observation of applicable mitigation zones during training and testing activities and to aid in the implementation of activity-based mitigation. | • Mitigation is designed to minimize potential humpback whale vessel interactions and exposure to acoustic, explosive, and physical disturbance and strike stressors that have the potential to cause mortality, injury, or behavioral disturbance during the reproductive season. |
| **Chalan Kanoa Reef** | | |
| Acoustic | • From December 1 to April 30, the Action Proponents will not use more than 20 combined hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar during training and testing within the Marpi Reef and Chalan Kanoa Reef mitigation areas.<br>• The Navy will report the total hours of active sonar (all bins, by bin) used in the Marpi Reef Mitigation Area and Chalan Kanoa Reef Mitigation Area from December 1 to April 30 in its annual training and testing activity reports submitted to NMFS. | • Mitigation is designed to avoid or reduce exposure of humpback whales in important seasonal reproductive habitat and sea turtles foraging at or near the reef to levels of sound that have the potential to cause injurious or behavioral effects. |
| Explosives | • The Action Proponents will not detonate in-water explosives (including underwater explosives and | • Mitigation is designed to prevent exposure of humpback whales in important seasonal reproductive |

| Category | Mitigation Requirements | Mitigation Benefits |
|---|---|---|
| | explosives deployed against surface targets) within the mitigation area (year-round). | habitat and sea turtles foraging at or near the reef to explosives that have the potential to cause injury, mortality, or behavioral disturbance. |
| Acoustic, Explosives, Physical disturbance and strike | • The Navy will issue an annual seasonal awareness notification message to alert ships and aircraft operating in the Marpi Reef Mitigation Area and Chalan Kanoa Reef Mitigation Area to the possible presence of increased concentrations of humpback whales from December 1 through April 30. To maintain safety of navigation and to avoid interactions with large whales during transits, the Navy will instruct vessels to remain vigilant to the presence of humpback whales that, when concentrated seasonally, may become vulnerable to vessel strikes.<br>• Platforms will use the information from the awareness notification messages to assist their visual observation of applicable mitigation zones during training and testing activities and to aid in the implementation of activity-based mitigation. | • Mitigation is designed to minimize potential humpback whale vessel interactions and exposure to acoustic, explosive, and physical disturbance and strike stressors that have the potential to cause mortality, injury, or behavioral disturbance during the reproductive season. |
| **Agat Bay Nearshore** | | |
| Acoustic | • The Action Proponents will not use MF1 or MF1C surface ship hull-mounted mid-frequency active sonar during training and testing annually within the mitigation area (year-round). | • Mitigation is designed to avoid or reduce exposure of spinner dolphins in seasonally important resting habitat and sea turtles in foraging habitat to levels of sound that have the potential to cause injurious or behavioral effects. |
| Explosives | • The Action Proponents will not detonate in-water explosives (including underwater explosives and explosives deployed against surface targets) within the mitigation area (year-round). | • Mitigation is designed to prevent exposure of spinner dolphins in seasonally important resting habitat and sea turtles in foraging habitat to explosives that have the potential to cause injury, mortality, or behavioral disturbance. |

### C.2.8 TERRESTRIAL MITIGATION

The Action Proponents implement terrestrial mitigation on FDM, which serves as the only land-based area for activities like air-to-ground bombing and naval surface fire support. Recognized as an important habitat, FDM supports several endangered and protected species, including the Micronesian megapode, Mariana fruit bat, and various migratory seabirds. Because the island's unique environment allows for training under realistic combat conditions, the Action Proponents have developed a baseline of protection designed to minimize the physical and biological impact on these sensitive resident populations.

To protect these species, the Action Proponents enforce strict restrictions on the locations and types of ordnance used, particularly in the northern SUA where megapodes and fruit bats are most likely to forage and roost. Furthermore, ship-based bombardment is strategically limited to firing from the west to prevent disturbances to major seabird rookeries located on the island's eastern cliffs. These measures

represent the highest level of mitigation that remains operationally practical, ensuring that essential military readiness tasks can coexist with the preservation of FDM's diverse avian and bat populations.

Table C-7 details terrestrial mitigation measures related to physical disturbance, strikes, and explosives on FDM. The mitigation is a continuation from the 2020 SEIS/OEIS.

**Table C-7: Farallon de Medinilla Mitigation Requirements**

| Category | Mitigation Requirements | Mitigation Benefits |
|---|---|---|
| Physical Disturbance and Strikes | • The Navy will not use explosive cluster weapons, scatterable munitions, fuel air explosives, incendiary munitions, depleted uranium rounds, and bombs greater than 2,000 lb. within the mitigation area (year-round).<br>• The Navy will not target the northern Special Use Area and the narrow land bridge with explosive or non-explosive ordnance (year-round).<br>• The Navy will not use explosive ordnance in Impact Area 1 (year-round)<br>• The Navy will only target Impact Areas 1, 2, and 3 during air-to-ground bombing, missile, and gunnery exercises.<br>• The Navy will only fire from the west during ship-based bombardment. | • Mitigation is designed to avoid or reduce exposure of birds, bats, and sea turtles that occur on land to physical disturbance and strikes that have the potential to cause injury, mortality, or behavioral disturbance.<br>• Certain mitigations provide further benefit by reducing the potential for physical damage to the island. |
| Explosives | • Navy personnel will not be authorized on FDM without approval from Joint Region Marianas Operations.<br>• During training activities involving aircraft dropping explosive or non-explosive ordnance on a surface target, mitigation will include visual observation immediately before and during the exercise. Firing will cease if a sea turtle is observed (on shore) in the vicinity of the intended impact location. Firing will recommence if the sea turtle is observed exiting the vicinity of the intended impact location, or if the intended impact location has been repositioned to a new location (i.e., to where the sea turtle is no longer within the vicinity of the intended impact location). | • Mitigation is designed to prevent exposure of birds, bats, and sea turtles that occur on land to explosives that have the potential to cause injury, mortality, or behavioral disturbance. |

### C.2.9 SUMMARY OF NEW OR MODIFIED MITIGATION REQUIREMENTS

Table C-8 summarizes new mitigation measures and substantive modifications to existing measures.

**Table C-8: Summary of New or Modified Mitigation Requirements**

| Category | Changes in Mitigation Requirements for the 2026 MITT Draft SEIS/OEIS |
|---|---|
| **Activity-Based Mitigation** | |
| **Lookout Teams** | The 2026 MITT Draft SEIS/OEIS includes a requirement for additional personnel on the platform conducting the event, or on additional participating platforms, to serve as part of the Lookout Team for all acoustic, explosive, and physical disturbances and strike stressor mitigation categories. In the 2020 SEIS/OEIS, additional personnel were required to assist Lookouts for explosive events only. The Action Proponents have also been, in practice, implementing this for active sonar and non-explosive events, and are now formalizing their current practice as a requirement. Additionally, the *U.S. Navy Lookout Training Handbook* was updated in 2022 to include a more robust chapter on environmental compliance, mitigation, and marine species observation tools and techniques (NAVEDTRA 12968-E). These changes are collectively designed to improve the effectiveness of activity-based mitigation. |
| **Broadband and Other Active Acoustic Sources** | For the 2026 MITT Draft SEIS/OEIS, a 200-yd. shut down mitigation zone would apply broadband and other active acoustic sources less than 200 dB, while the tiered 1,000-yd. power down/500-yd. power down/200-yd. shut down mitigation zones would apply to those sources greater than or equal to 200 dB. This requirement is meant to encompass new acoustic sources (e.g., sources used for oceanographic and acoustic research) that use a range of frequencies. Broadband source mitigation zones were not specified in the 2020 SEIS/OEIS. |
| **High-Altitude Aircraft** | The 2026 MITT Draft SEIS/OEIS clarifies that aircraft operating at high altitudes (e.g., Maritime Patrol Aircraft) are exempt from requirements to conduct activity-based mitigation. When operating at high altitudes, observations for marine mammals or sea turtles would not be effective. |
| **Vessel Movements** | The 2026 MITT Draft SEIS/OEIS clarifies that one or more Lookouts will be posted in accordance with the most recent navigation guidance, which is subject to change over time. The 2020 SEIS/OEIS required one Lookout on underway vessels. |
| **Unmanned Vehicles** | The 2026 MITT Draft SEIS/OEIS includes new activity-based mitigation requirements for applicable events that involve Unmanned Surface Vehicles and Unmanned Underwater Vehicles (and the sources they use, tow, or deploy) that are already being escorted and operated under positive control by a manned surface vessel. In the 2020 SEIS/OEIS, activity-based mitigations were not required for unmanned vehicles or sources they used, towed, or deployed. |
| **Research-Based Sub-Surface Explosives** | The 2026 MITT Draft SEIS/OEIS includes requirements for "research-based sub-surface explosives" to account for new explosive events with research applications (e.g., oceanographic and acoustic research) that would use 0.1 to 5-lb. NEW. |
| **Geographic Mitigation** | |
| **Artificial Reef, Hard Bottom Substrate, and Shipwreck Mitigation Areas** | The 2026 MITT Draft SEIS/OEIS includes new mitigation for precisely placed seafloor devices developed for hard bottom substrate during the 2022 Hawaii-Southern California Training and Testing Study Area's Essential Fish Habitat consultation reinitiation (U.S. Department of the Navy, 2022). For the 2026 MITT Draft SEIS/OEIS, that mitigation is being applied to the whole mitigation area category of hard bottom substrate as well as artificial reefs and shipwrecks for consistency and practicality of implementation. |

### C.2.10 MITIGATION CONSIDERED BUT ELIMINATED

Mitigation measures that were considered but eliminated for not meeting the appropriate balance between being environmentally beneficial and practical to implement are described in Table C-9.

## Table C-9: Mitigation Considered but Eliminated

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| 1. Mitigation for navigation sonar | | X | | | Shutting down or powering down active sonar used for safety of navigation would present unacceptable safety risks to personnel and equipment |
| 2. Activity-based Mitigations for long-duration acoustic sources | | | X | | Long-duration active sonar sources, such as the low-level sources used by the Office of Naval Research for acoustic and oceanographic research, are deployed in remote locations for long time spans (e.g., 1 year). Adding visual observers would require substantial additional resources (e.g., personnel and equipment) in excess of what is available, and associated increases in operation costs. |
| 3. Activity-based Mitigations for acoustic sources not under positive control | | | | X | Activity-based mitigations for active sonar sources not under positive control would not be effective because these types of sources could not be powered down or shut down in response to a sighting after they are deployed. Maintaining positive control throughout the duration of the training or testing activity could result in degraded realism or a reduced ability to meet pre-deployment certification requirements. |
| 4. Activity-based Mitigations for high-altitude aircraft | | | X | X | Visual observations by Lookouts positioned in aircraft operating at high altitudes would not be effective due to the vertical distance between mitigation zone and observation platform. Additional maneuvering to lower altitudes where visual observations are effective would degrade training or testing realism and result in increased operational cost associated with higher fuel consumption. |
| 5. Activity-based Mitigations for manned escort vessels for all use of unmanned platforms | | | X | | Unmanned platforms are remotely controlled or designed to operate independently, oftentimes in remote locations or for long time spans. Adding escort vessels (when they are not already participating in an event) for the purpose of activity-based mitigation would require substantial additional resources (e.g., personnel and equipment) in excess of what is available, and an associated increase in operational costs. |
| 6. Adding third-party marine species observers to conduct visual observations that inform mitigations for additional even types | | X | X | X | Adding third-party visual observers to observe additional event types would require additional resources in excess of what is available (e.g., berthing and space availability), and an associated increase in operational costs. The use of third-party observers presents security clearance issues, as well as national security concerns due to the requirement to provide advance notification of specific times and locations of platform movements and activities (e.g., vessels using active sonar). Events may occur simultaneously and in various locations throughout the Study Area, and some may last for a long period of time (e.g., weeks). Event timetables may be based on free-flow development of tactical situations and cannot be precisely fixed to accommodate arrival of third-party aircraft or vessels. Pre-event surveys to clear areas prior to an event begins would be ineffective for the purpose of real-time mitigation (e.g., the location of a moving animal in proximity to the mitigation zone would change, animals could move in or out of the event area after surveys have been completed). For offshore events, the length of time observers would spend on station would be limited due to aircraft fuel restrictions. Increased safety risks would be associated with offshore surveys and the presence of civilian aircraft or vessels in the vicinity of events (e.g., sea space conflicts, airspace conflicts, proximity to explosives). |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| 7. Requiring active sonar mitigation for marine mammals swimming at the bow, alongside the vessel, or directly behind the vessel | X | | | X | Marine mammals (e.g., dolphins) intentionally bow-riding, swimming alongside to wake-ride, or pursuing underway vessels would be out of the main active sonar transmission axis. Furthermore, implementing mitigation for animals persistently located within an active sonar mitigation zone (due to their intentional pursuit of underway vessels) would have the same types of effects on mission requirements as increasing the mitigation zone size, which is described in row 15 of this table. |
| 8. Adding additional Lookouts or observation platforms | | X | X | X | The number of required Lookouts and observation platforms is based on resource availability (e.g., crews, platforms, and equipment) safety considerations (e.g., space restrictions, sea space or airspace conflicts), and duty assignments (e.g., requiring additional personnel or reassigning duties). Adding vessels or aircraft to observe a mitigation zone would result in sea space or airspace conflicts with the event participants. For explosives, weapon firing, or ordnance deployment, this would increase safety risks due to the presence of additional vessels or aircraft within the vicinity of explosives, intended impact locations, or projectile paths. Sea space and airspace conflicts would either require participating platforms to modify their flight plans or vessel movement tracks (which would reduce event realism) or force the added observation platforms to position themselves a safe distance away from the activity area (which would not be effective). However, additional personnel on platforms conducting the events, or on additional participating platforms, will serve as part of the Lookout Team for all acoustic, explosive, and physical disturbance and strike stressor mitigation categories. |
| 9. Developing additional weapon firing mitigation zones | X | | | | Weapon firing noise from weapon systems other than large caliber guns (which are deck-mounted on surface ships with a muzzle that extends over the water) would not expose marine mammals or sea turtles to potentially injurious levels of underwater sound. |
| 10. Developing a mitigation zone for non-explosive vessel-deployed mines | X | | | | Mitigation zones for non-explosive vessel-deployed mines is not warranted because of the extremely low potential for physical strike of a marine mammal or sea turtle from a mine deployed so close to the water surface (by vessels that are implementing vessel movement mitigation for marine mammals and sea turtles), or below the surface for submarine-deployed mines. |
| 11. Developing mitigation zones around aerial targets | X | | | | Mitigation zones for explosive and non-explosive weapon firing is not warranted for ordnance fired against air targets because there is no potential for direct effect because the detonations occur in air, and the potential for projectile fragments to co-occur in space and time with a marine mammal or sea turtle at or near the surface is extremely low. |
| 12. Developing mitigation zones for surface-to-surface missiles and rockets | X | | X | X | Mitigation zones apply to missiles and rockets deployed from aircraft because aircraft can fly over the intended impact area prior to commencing firing. Mitigation would not be effective for vessel missiles and rockets (without requiring additional observation platforms) because of the distance between the firing platform and target location. It would not be possible for vessels to conduct close-range observations due to the length of time (and associated operational costs and event delays) it would take to complete observations and then transit back to the firing position (typically around 15 or 75 NM each way, depending on the event). |
| 13. Establishing a minimum pre-event | | | X | X | Some events have established minimum time requirements for observations prior to the initial start of an event or after completion of an event, while the time requirements for other events must remain more general to accommodate dynamic |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| or post-event observation duration for additional events | | | | | event schedules or other operational factors. Requiring minimum pre-event or post-event observation durations would have the same types of effects on mission requirements as increasing the mitigation zone size as described in row 15 of this table. |
| 14. Using developmental mitigation technologies for mitigation | X | | | | The Action Proponents plan to continue investing in research on and development of mitigation technologies, such as infrared, thermal detection, unmanned aerial vehicles, passive acoustic range instrumentation, and automated detection software or sensors. The development of any associated mitigation measures will be undertaken in coordination with NMFS through the adaptive management process. |
| 15. Increasing mitigation zone sizes, or extending the post-sighting wait periods beyond 10 or 30 minutes | | X | X | X | Increasing mitigation zone sizes or post-sighting wait periods would potentially increase the number of instances and the total length of time activities would be ceased or delayed. This would significantly diminish realism in a way that would prevent activities from meeting intended objectives and decrease the ability to complete events as required and on time. This would have implications for fuel restrictions (e.g., need for aircraft to go off station to refuel), personnel fatigue, range scheduling (e.g., sea space and air space conflicts), and operational costs. Multiple refueling events could double (or more) event length, which would decrease the ability for Lookouts to safely and effectively maintain situational awareness of the event area. For events with multiple participants, degrading the training or testing value of one event element degrades the value of all other elements. For active sonar events, requiring additional or lengthier power downs or shutdowns would create fundamental differences in how active sonar would be used in training versus real-world missions. For example, additional power downs or shutdowns would prevent sonar operators from developing and maintaining awareness of the tactical picture. Without realistic training in conditions analogous to real-world missions, sonar operators cannot become proficient in effectively operating active sonar. Sonar operators, vessel crews, and aircrews would be expected to operate sonar during real-world missions in a manner inconsistent with how they were trained. Diminishing proficiency or eroding capabilities presents significant risk to personnel safety during real-world missions and impacts affects the ability to deploy with required levels of readiness necessary to accomplish tasking by Combatant Commanders or other national security tasking.<br>For events involving explosives, weapon firing, or ordnance deployment, requiring additional or lengthier delays or shut downs would cause a significant loss of training or testing time, reduce the number of opportunities crews have to fire or deploy ordnance on a target, decrease realism, impede the ability for crews to train and become proficient in using weapons or systems, prevent development of the ability to react to changes in the tactical situation or respond to incoming threats, cause significant delays to training or testing schedules, prevent units from meeting individual training and certification requirements, prevent units from deploying with the level of readiness necessary to accomplish their missions, and impede the ability of program managers and weapons system acquisition programs to meet testing requirements per required acquisition milestones or on an as-needed basis to meet operational requirements. For SINKEX, explosive torpedo events, and medium- or large caliber gunnery events, visual observations within the margin of increased mitigation zone size would be unsafe and ineffective unless additional observation platforms were allocated. Mission-essential safety protocols require all event participants (including Lookouts) to maintain focus on the activity area for safety of the public, personnel, and equipment. Mitigation zone sizes are correlated with the activity area; therefore, an increase in mitigation zone size would not meet the safety criteria. For example, when air-to-surface medium-caliber gunnery events involve fighter aircraft |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| | | | | | descending on a target, or rotary-wing aircraft flying a racetrack pattern and descending on a target using a forward-tilted firing angle, maintaining focused attention on the activity area is paramount to aircraft safety. Vessel movement mitigation for marine mammals is based on guidance from NMFS and the USFWS. A mitigation zone size is not specified for sea turtles to allow flexibility based on vessel type and mission requirements (e.g., small boats operating in a narrow harbor). For towed in-water devices, mission and safety requirements determine the operational parameters (e.g., course) for towing platforms. Because these devices are towed and not self-propelled, they generally have limited maneuverability and are unable to make immediate course corrections. For example, a high degree of pilot skill is required when rotary-wing aircraft are deploying in-water devices, safely towing them at relatively low speeds and altitudes, and recovering them. The aircraft can safely alter course to shift the route of the towed device in response to a sighted marine mammal or sea turtle up to a certain extent (i.e., up to the size of the mitigation zone) while still maintaining the parameters needed for stable towing. However, the aircraft would be unable to further alter its course to more drastically course-correct the towed device without decreasing towing stability, which would have implications for safety of personnel and equipment. |
| 16. Implementing mandatory vessel speed restrictions | | X | X | X | Vessel movement mitigation involves maneuvering to maintain a specified distance from marine mammals and sea turtles, which may include reducing speed. As described in Section 2.3.3 of the 2020 SEIS/OEIS, vessels used under the Proposed Action are required to operate in accordance with applicable navigation rules. In addition, vessels transit at speeds that are optimal for fuel conservation, to maintain schedules, and to meet mission requirements. Vessel captains use the totality of the circumstances to ensure the vessel is traveling at appropriate speeds in accordance with navigation rules. Depending on the circumstances, this may involve adjusting speeds during periods of reduced visibility or in certain locations (e.g., locations with other vessel traffic).<br>For training, mandatory vessel speed restrictions would be impractical to implement because vessel operators need to train to operate vessels safely and proficiently as they realistically would during real-world missions, including being able to react to changing tactical situations and evaluate system capabilities. For example, during training activities involving flight operations from an aircraft carrier, the vessel must maintain a certain wind speed over the deck to launch or recover aircraft. Depending on wind conditions, the aircraft carrier itself must travel at a certain speed to generate the wind required to launch or recover aircraft. Additionally, operating vessels at speeds that are not optimal for fuel conservation or mission requirements would be unsustainable due to increased time on station and operational costs. Seasonal vessel speed restrictions would result in vessels being unable to meet all of their requirements during their limited time available to be underway based on the complex logistical considerations involved with maintaining individual vessel and deployment schedules. For testing and research, the Action Proponents need to test the full range of their vessels and vessel-deployed system capabilities to ensure safety and functionality in conditions analogous to real-world missions, and before full-scale production or delivery to the fleet. For example, the Action Proponents conduct propulsion testing specifically to test the functionality of vessel propulsion systems, including maneuvering, full-power runs, and endurance runs. During this event, vessels must operate across the full spectrum of capable speeds to accomplish the primary testing objectives. |
| 17. Additional geographic mitigation for active sonar in areas with | | | | X | The Action Proponents select locations for certain active acoustic activities based on water depths that are ideal for acoustic propagation research, seafloor types, or bathymetric phenomena (e.g., seamounts) that are of particular interest for ocean acoustic research and realism of military readiness activities. Shifting events to alternative or sub-ideal locations to avoid certain bathymetric features (e.g., shelf breaks, underwater canyons) would preclude ready access to the environmental and oceanographic conditions needed to meet mission objectives. |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| certain bathymetric features | | | | | |
| 18. Restrictions on the location or timing of major training exercises | | X | | X | Major training exercises may require large areas of the littorals, open ocean, and nearshore areas for realistic and safe anti-submarine warfare training. Exercise locations may have to change during an exercise or during exercise planning based on assessments of unit performance or other conditions, such as weather and mechanical issues, which precludes the ability to develop restrictions on event location or timing within the Study Area. |
| 19. Restricting training activities to certain established locations | | X | | X | Modern sensing technologies make training on a large scale without observation more difficult. A foreign military's continual observation of U.S. military training in predictable geographic areas and timeframes would enable foreign nations to gather intelligence and subsequently develop techniques, tactics, and procedures to potentially and effectively counter U.S. military operations. Other activities may be conducted on a smaller and more localized scale, with training or testing at discrete locations that are critical to certain aspects of readiness. Threats to national security are constantly evolving, and the Action Proponents require the ability to adapt training to meet these emerging threats. Restricting access to broad-scale areas of water would impact the ability for training to evolve as threats evolve. Eliminating opportunities to train in myriad at-sea conditions would put U.S. forces at a tactical disadvantage during real-world missions. This would also present a risk to national security if potential adversaries were to be alerted to the environmental conditions within which training has been prohibited. |
| 20. Restrictions on explosives and non-explosive stressor use near additional types of seafloor resources | | | | X | Implementing additional mitigation for other activities or types of seafloor resources would not allow the Action Proponents to continue meeting their mission requirements to successfully accomplish readiness objectives due to restrictions on ready access to a significant portion of the Study Area. |
| 21. Prohibiting activities in areas with low historic use for training and testing | | | | X | The frequency at which an area is used for training or testing does not necessarily equate to its level of importance for meeting an activity objective or collectively contributing to meeting mission requirements. Some infrequently used areas are critical for a particular event. |
| 22. Additional seasonal restrictions for training and testing based on species occurrence or density | | X | X | X | Training and testing schedules are based on national tasking, the Optimized Fleet Response Plan and other training plans, Department of Homeland Security strategic goals, evolving geopolitical world events, forecasting of future testing requirements, deployment schedules, maintenance schedules, acquisition schedules, and emerging requirements. The Action Proponents require flexibility in the timing of their use of active sonar and explosives in order to meet mission and deployment schedules. Vessels, aviation squadrons, and testing programs have a limited amount of time available for training and testing. Variables such as maintenance and weather must be accounted for when scheduling event locations and timing. Event locations may have to change during an event or during pre-event planning based on assessments of unit performance or other conditions, such as inclement weather (e.g., hurricanes) and mechanical issues. This precludes the ability to completely prohibit events from occurring seasonally within areas delineated by marine species occurrence or seasonal densities. |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| 23. Restricting active sonar based on time of day or visibility (e.g., weather conditions) | | | | X | Although the majority of active sonar use occurs during the day, the Action Proponents may have a nighttime training requirement for some systems. Training in both good visibility (e.g., daylight, favorable weather conditions) and low visibility (e.g., nighttime, inclement weather conditions) is vital because environmental differences between day and night and varying weather conditions affect sound propagation and the detection capabilities of sonar. Temperature layers that move up and down in the water column and ambient noise levels can vary significantly between night and day. This affects sound propagation and could affect how sonar systems function and are operated. |
| 24. Blanket geographic restrictions within certain regions or areas (e.g., distances from shore) | | X | X | X | Blanket expansions on the scope or size of mitigation areas would encroach upon the primary water space where military readiness activities are scheduled to occur. The Action Proponents select locations for their events based on proximity to training ranges, available airspace, unobstructed sea space, aircraft emergency landing fields, target storage and deployment locations, systems command support facilities, and areas of historical use that provide critical known bathymetric features and consistency for comparative data collection. Requiring the Action Proponents to shift activities to alternative locations or farther offshore would have significant effects on safety, sustainability, and the ability to meet mission requirements within limited available timeframes. For example, certain surface-to-surface and air-to-surface small, medium, and large caliber gunnery activities and missile and rocket activities, must be conducted in proximity to the target storage depots because the associated targets (e.g., remotely controlled jet ski targets) are limited by how far offshore they can safely be employed and controlled based on distance, weather, and sea state. Certain training activities, such as deployment certification exercises that involve integration with multiple warfare components, require large areas of the littorals and open ocean for realistic and safe training. Similarly, the testing community is required to install and test systems on platforms at the locations where those platforms are stationed. Logistical support of range testing can only efficiently and effectively occur when the support is co-located with the testing activities. Some types of pierside and at-sea testing must occur in proximity to naval shipyards or contractor shipyards.<br>Nearshore areas also serve as critical training and testing locations for certain explosive activities. For example, the explosive ordnance disposal training location at the Silver Strand Training Complex is vital due to its existing target setup, ideal bottom structure, and good bottom depth to safely train divers with explosives. Explosive ordnance disposal teams can be required to deploy with a 3-week notice, which presents a need to constantly train to maintain readiness for real-world missions. Relocating this activity to a location without these features would increase safety risks and diminish the effectiveness of training events. |
| 25. Implementing active sonar ramp-up | X | | | X | Implementing active sonar ramp-up procedures during training or testing under the Proposed Action would not be representative of real-world missions and would significantly affect realism. For example, during an anti-submarine warfare exercise using active sonar, ramp-ups would alert opponents (e.g., target submarines) to the transmitting vessel's presence. This would defeat the purpose of the training by allowing the target submarine to detect the searching unit and take evasive measures, thereby denying the sonar operator the opportunity to learn how to locate the submarine. Additionally, based on the source levels, vessel speeds, and sonar transmission intervals that will be used during typical active sonar activities under the Proposed Action, ramp-up would likely be an ineffective mitigation measure for the active sonar activities conducted under the Proposed Action. |
| 26. Reducing annual active sonar hours, replacing active | | | | X | Passive sonar and other available sensors are used in concert with active sonar to the maximum extent practical. Training with active sonar is essential to national security. Active sonar is the only reliable technology for detecting and tracking potential enemy diesel-electric submarines. Equipment power levels are set consistent with mission requirements. Active |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| sonar with passive sonar, or modifying active sonar sources for training | | | | | sonar signals are designed explicitly to provide optimum performance at detecting underwater objects (e.g., submarines) in a variety of acoustic environments. The ability to effectively operate active sonar is a highly perishable skill that must be repeatedly practiced during realistic training. The Action Proponents must train in the same mode and manner in which they conduct real-world missions. Anti-submarine warfare training typically involves the periodic use of active sonar to develop the "tactical picture," or an understanding of the battle space (e.g., area searched or unsearched, identifying false contacts, and understanding the water conditions). This can take from several hours to multiple days and typically occurs over vast areas with varying physical and oceanographic conditions (e.g., bathymetry, topography, surface fronts, and variations in sea surface temperature). Sonar operators train to avoid interference and sound-reducing clutter from varying ocean floor topographies and environmental conditions, practice coordinating their efforts with other sonar operators in a strike group, develop skill proficiency in detecting and tracking submarines and other threats, and practice the focused endurance vital to effectively working as a team in shifts around the clock until the conclusion of the event. The Action Proponents use active sonar only when it is essential to the mission. For example, for this EIS/OEIS, the Action Proponents are using a representative level of activity (rather than a maximum tempo of training activity in every year), which has reduced the amount of mid-frequency active sonar hours estimated to be necessary to meet training requirements relative to the 2020 SEIS/OEIS. |
| 27. Replacing active sonar training with synthetic activities (e.g., computer simulated training) | | | | X | The Action Proponents currently use, and will continue to use, computer simulation to augment training whenever possible. Simulators and synthetic training are critical elements that provide early skill repetition and enhance teamwork; however, they cannot replicate the complexity and stresses faced during real-world missions to which the Action Proponents train under the Proposed Action (e.g., anti-submarine warfare training using surface ship hull-mounted mid-frequency active sonar). Just as a pilot would not be ready to fly solo after simulator training, operational Commanders cannot allow personnel to engage in real-world missions based solely on simulator training. |
| 28. Restricting active sonar training during surface ducting conditions | | | | X | Surface ducting occurs when water conditions, such as temperature layers and lack of wave action, result in little sound energy penetrating beyond a narrow layer near the surface of the water. Submarines have long been known to take advantage of the phenomena associated with surface ducting to avoid being detected by active sonar. Training with active sonar in these conditions is a critical component of readiness because sonar operators need to learn how sonar transmissions are altered due to surface ducting, how submarines may take advantage of them, and how to operate sonar effectively under these conditions. Avoiding military readiness activities during surface ducting conditions, reducing power, shutting down active sonar based on environmental conditions, or implementing other sonar modification techniques (e.g., sound shielding) for the purpose of mitigation would affect a Commander's ability to develop the tactical picture. It would also prevent sonar operators from training in conditions analogous to those faced during real-world missions, which is described in row 15 of this table. The ocean conditions contributing to surface ducting change frequently, and surface ducts lack uniformity, may or may not extend over a large geographic area and can be of varying duration, making it difficult to determine where to reduce power and for how long. As noted by the U.S. Supreme Court in Winter v. Natural Resources Defense Council Inc., 555 U.S. 7 (2008), because surface ducting conditions occur relatively rarely and are unpredictable, it is especially important for the Action Proponents to be able to train under these conditions when they occur. |
| 29. Requiring use of active acoustic monitoring devices | | X | X | X | During Surveillance Towed Array Sensor System low-frequency active sonar (which is not part of the Proposed Action), the Navy uses a specially designed adjunct high-frequency marine mammal monitoring active sonar, or "HF/M3." HF/M3 can only be towed at slow speeds and operates like fish finders used by fishermen. Installing the HF/M3 adjunct system on the tactical |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| | | | | | sonar ships used under the Proposed Action would have implications for safety and mission requirements due to effects on speed and maneuverability, as well as excessive additional operating costs. |
| 30. Requiring mitigation based on passive acoustic detections of marine mammals | | | X | X | When platforms with passive acoustic monitoring capabilities are already participating in an event, sonar technicians will alert Lookouts to passive acoustic detections of marine mammals. Significant logistical constraints (e.g., personnel and equipment availability, operational costs) would make diverting equipped platforms or constructing and maintaining new passive acoustic monitoring systems impractical. The fluidity and nature of military readiness activities (e.g., fast-paced and mobile readiness evolutions) make it impractical for passive acoustic devices to be used as precise real-time indicators of marine mammal location for the purposes of implementing mitigation (e.g., active sonar power downs or shutdowns, ceasing use of explosives) without an accompanying visual sighting. Implementing mitigation for animals located outside of the mitigation zone (which could occur due to imprecise localizations or relative movements of animals and the mitigation zone) would have the same types of effects on mission requirements as increasing the mitigation zone size, which is described in row 15 of this table. |
| 31. Reducing explosive counts or NEW, or substituting with non-explosives | | | | X | Activities that involve explosives are inherently different from those that involve non-explosive ordnance. For example, critical components of an explosive Bombing Exercise Air-to-Surface include the assembly, loading, delivery, and assessment of the explosive bomb. Explosive bombing training exercises start with ground personnel, who must practice the building and loading of explosive munitions. Training includes the safe handling of explosive material, configuring munitions to precise specifications, and the loading of munitions onto aircraft. Aircrew must then identify a target and safely deliver fused munitions, discern if the bomb was assembled correctly, and determine bomb damage assessments based on how and where the explosive detonated. An air-to-surface bombing exercise using non-explosive ordnance can train aircrews on valuable skills to locate and accurately deliver munitions on a target; however, it cannot effectively replicate the critical components of an explosive activity in terms of assembly, loading, delivery, and assessment of an explosive bomb. Reducing the counts or sizes of explosives would impede the ability for the Action Proponents to train and become proficient in using explosive weapon systems (which would result in a significant risk to personnel safety during real-world missions), and would ultimately prevent units from meeting individual training and certification requirements (which would prevent them from deploying with the required level of readiness necessary to accomplish missions) and impede the ability to certify forces to deploy to meet national security tasking. For testing, the Action Proponents need to test the full range of their platforms, weapon systems, and components to ensure safety and functionality in conditions analogous to real-world missions, and before full-scale production or delivery to the fleet. |
| 32. Adopting mitigation implemented by foreign military units | | | | X | Mitigation is carefully developed for and assessed by each individual unit based on their own assessment of mitigation benefits and practicality of implementation. Readiness considerations differ based on each nation's strategic reach, global mission, country-specific legal requirements, and geographic considerations. The Action Proponents will implement mitigation that has been determined to be effective at avoiding effects from the Proposed Action and practical to implement. Many of these measures are the same as, or comparable to, those implemented by foreign navies. For example, most navies implement some form of mitigation to cease certain activities if a marine mammal is visually observed in a mitigation zone (Dolman et al., 2009). Some navies also implement geographic mitigation. The Action Proponents will implement several mitigation measures and environmental compliance initiatives that are not implemented by foreign navies, such as providing extensive support for scientific monitoring and research and complying with stringent reporting requirements. |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| 33. Additional reporting requirements | | X | X | X | The Action Proponents developed their reporting requirements in conjunction with NMFS to be consistent with mission requirements and balance the usefulness of the information to be collected with the practicality of collecting it. The Action Proponents' activity reports and incident reports are designed to verify implementation of mitigation; comply with current permits, authorizations, and consultation requirements; and improve future environmental analyses. Additional reporting would be ineffective as mitigation because it would not result in modifications to training activities or further avoidance or reductions of potential effects. Lookouts are not trained to make species-specific identification and would not be able to provide detailed scientific data if more detailed marine species observation reports were to be required. Furthermore, the Action Proponents do not currently maintain a record management system to collect, archive, analyze, and report every marine species observation or all vessel speed data for every event and all vessel movements. For example, the speed of Action Proponent vessels can fluctuate an unlimited number of times during training or testing events. Developing and implementing a record management system of this magnitude would be unduly cost prohibitive and place a significant administrative burden on vessel operators and activity participants. Burdening operational Commanders, vessel operators, and event participants with requirements to complete additional administrative reporting would distract them from focusing on mission-essential tasks. Additional reporting requirements would draw event participants' attention away from the complex tactical tasks they are primarily obligated to perform, such as driving a warship or engaging in a gunnery event, which would adversely affect personnel safety, public health and safety, and the ability to meet mission objectives. |
| 34. Developing mitigation outside the Action Proponent's legal authority | | | | X | The Action Proponents did not develop mitigation outside their legal authority to implement. For example, the Action Proponents do not have legal authority to develop Marine Protected Areas to restrict commercial or recreational fishing, which is a recommendation received through public comments on previous EIS/OEISs. |
| 35. Vessel movement mitigation for cable laying vessels performing Modernization & Sustainment of Ranges activity | | X | | X | The Action Proponents determined it would be impractical based on safety and mission requirements to implement mitigation for manned surface vessels and towed in-water devices actively conducting cable laying during Modernization & Sustainment of Ranges activities. The vessels performing these activities move very slowly through the water column (e.g., 2-3 kts) to facilitate a gradual, controlled rate of descent to minimize risk of damage to the cable. Additionally, vessels are required to follow a prescribed route based on ROV surveys to ensure the cable is laid on its intended route, predominantly sandy bottom habitat avoiding rocky areas, to minimize damage to the cable. Deviating from this route or slowing to a near stop once cable laying has commenced would present risk of damage to cable laying equipment and personnel operating it. |
| 36. Requiring NMFS Protected Species Observer (PSO) certification for Navy Lookouts | X | | X | X | Requiring NMFS PSO certification for Navy Lookouts is impractical and provides insufficient benefit.<br>NOAA's PSO certification requires educational, experiential, and training qualifications, including a background in biological sciences, which are incompatible with the duties and training of a Navy Lookout. Lookouts perform numerous duties beyond observation, including maintaining proficiency in general seamanship and rate-specific skills. Mandating a biological sciences background would drastically reduce the pool of eligible personnel.<br>Furthermore, PSO certification for all Lookouts would create a substantial administrative burden and severely challenge Lookout manning requirements. The Navy operates numerous large vessels (e.g., destroyers, aircraft carriers) and smaller support craft within the action area, each with rotating Lookout crews to manage watch rotations, mitigate fatigue, and ensure vigilance. This rotation, coupled with frequent personnel transfers, would necessitate certifying a large number of |

## Table C-9: Mitigation Considered but Eliminated (continued)

| Mitigation Considered | Not Sufficiently Beneficial | Impractical | | | Assessment Summary |
|---|---|---|---|---|---|
| | | Criterion 1: Safety | Criterion 2: Sustainability | Criterion 3: Mission | |
| | | | | | Lookouts, significantly complicating manning efforts. Additionally, relying on the NMFS PSO application process could create certification delays incompatible with Navy manning and readiness needs.<br>Existing PSO training curricula vary considerably in frequency, cost, length, activity focus, and geographic scope, and are typically conducted by third-party providers. Establishing a separate Navy PSO training program for Lookouts would be unsustainable within the demanding Optimized Fleet Response Plan and negatively affect Navy readiness.<br>Moreover, Navy Lookouts already must complete Lookout Training, which includes marine resource sighting cues and observation techniques, as well as the roles and responsibilities of Lookouts and the official in charge of an activity. In addition to this training, Lookouts complete NMFS-approved Marine Species Awareness Training. Furthermore, the Lookout Training Handbook was updated in 2022 with a thorough Marine Resources chapter covering topics from identifying indicator species to determining direction of travel.<br>The goal of PSO certification is to ensure that PSOs have the appropriate training to safely and effectively perform their required duties to meet the needs of a particular project. The Navy's Lookout training and qualification program already achieves that goal for Navy's at-sea activities. Therefore, the Navy has determined that PSO certification and/or PSO-specific training would not provide sufficient benefit to outweigh the risk to Navy readiness |

# Appendix D
# Coastal Zone Management Act Agency Correspondence

# APPENDIX D COASTAL ZONE MANAGEMENT ACT AGENCY CORRESPONDENCE

This appendix contains the previous correspondence between the Navy, Government of Guam Bureau of Statistics and Plans, and the Commonwealth of the Northern Mariana Island's (CNMI) Division of Coastal Resources Management (DCRM) regarding the Navy's CZMA compliance for the 2009 Mariana Islands Range Complex (MIRC) Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) (Phase I), 2015 Mariana Islands Training and Testing (MITT) EIS/OEIS (Phase II), and 2020 MITT Supplemental Environmental Impact Statement (SEIS)/OEIS (Phase III). Table D-1 and Table D-2 summarize the federal consistency review history for MITT Phases I, II, and III, documenting the submittals and determinations reached since 2009 and includes section references to associated correspondence.

**Table D-1: History of Guam CZMA Compliance for MITT Phase I, II, and III**

| Date of Submittal | Summary | Section Reference |
|---|---|---|
| **2009 MIRC EIS/OEIS** | | |
| March 18, 2009 | Phase I Consistency Determination (CD) submitted to Guam Bureau of Statistics and Plans (GBSP) | Section D.1.1 |
| June 25, 2009 | GBSP response received by the Navy; however, the response was received after the close of the 60-day review period (15 CFR Part 930.41[a]) | Not included |
| July 20, 2009 | The Navy issued a reply addressing the concerns raised in GBSP's late response. Following this, no further communication was received, and the Navy assumed concurrence per the statutory deadline | |
| **2015 MITT EIS/OEIS** | | |
| June 4, 2014 | Phase II CD submitted to GBSP | Section D.2.1.1 |
| August 29, 2014 | GBSP issues concurrence on Phase II CD | Section D.2.1.2 |
| December 09, 2019 | Phase III CD submitted to GBSP | Section D.3.1.1 |
| **2020 MITT SEIS/OEIS** | | |
| March 6, 2020 | GBSP issues Conditional Concurrence to the Phase III CD | Section D.3.1.2 |
| June 8, 2020 | Navy formally submits supplemental information addressing GBSP conditions | Not included |
| July 13, 2020 | Navy received letter from Governor Guerrero requesting informal mediation | |
| July 22, 2020 | The Navy issues a final response to the Governor of Guam regarding the 2020 CD (declining informal mediation) and proceeds with the Record of Decision | |

Notes: MITT= Mariana Islands Training and Testing, MIRC= Mariana Islands Range Complex, EIS = Environmental Impact Statement, SEIS= Supplemental Environmental Impact Statement, OEIS= Overseas Environmental Impact Statement CD= Consistency Determination, GBSP= Guam Bureau of Statistics and Plans, CFR= Code of Federal Regulations

## Table D-2: History of the Commonwealth of the Northern Mariana Islands CZMA Compliance for MITT Phase I, II, and III

| Date of Submittal | Summary | Section Reference |
|---|---|---|
| **2009 MIRC EIS/OEIS** | | |
| March 18, 2009 | Phase I. Based on the location of MIRC activities and the enforceable policies of the CNMI Coastal Zone Management Plan, and pursuant to 15 CFR Part 930.35, a Negative Determination for CNMI was submitted on March 18, 2009. CNMI did not object to the Negative Determination. | Section D.1.2.1 |
| **2015 MITT EIS/OEIS** | | |
| July 2, 2014 | Phase II MITT CD submitted. | Section D.2.2.1 |
| July 27, 2014 | CNMI DCRM informed Navy that MITT Consistency Determination was incomplete. | Section D.2.2.2 |
| September 9, 2014 | Navy submitted an updated Consistency Determination that addressed applicable sections of CNMI regulations. | Section D.2.2.3 |
| October 7, 2014 | CNMI DCRM found the proposed activities within the CNMI coastal zone were consistent with five of the enforceable policies but not consistent with six of the policies, and that more information was required. | |
| December 17, 2014 | Navy provided written clarifications and additional information to CNMI DCRM. | |
| January 20, 2015 | CNMI DCRM issued a conditional concurrence. | |
| March 4, 2015 | Navy further clarified to the CNMI DCRM the issues that triggered conditional concurrence. | Not included |
| March 12, 2015 | Navy provided CNMI DCRM a follow-up letter concluding that the MITT activities were consistent to the maximum extent practicable with CNMI's enforceable policies. | Section D.2.2.3 |
| **2020 MITT SEIS/OEIS** | | |
| December 16, 2019 | Phase III MITT CD submitted by the Navy and received by the CNMI Division of Coastal Resources Management (DCRM) | Section D.3.2.1 |
| March 9, 2020 | CNMI DCRM issues an initial response finding the Phase III CD inconsistent with enforceable policies and identifying substantial data gaps. | Section D.3.2.2 |
| June 8, 2020 | Navy formally submits supplemental information to the CNMI DCRM to help clarify the proposed action and address specific recommendations. | Not included |
| June 19, 2020 | Additional supplemental information submitted by the Navy in response to ongoing discussions and the CNMI's March 9 findings. | |
| July 20, 2020 | CNMI DCRM issues a Conditional Concurrence for MITT activities, contingent upon six primary conditions regarding coordination, water quality, and resource surveys. | |
| July 22, 2020 | Navy response to Conditional Concurrence; while the Navy committed to several of the CNMI's requests, it maintained its original consistency determination. Under 15 CFR Part 930.4(b), the Navy treated the conditional concurrence as an objection and provided notification of its intent to proceed with the Proposed Action. | |

Notes: CNMI= Commonwealth of the Northern Mariana Islands, DCRM= Division of Coastal Resources Management, MITT= Mariana Islands Training and Testing, MIRC= Mariana Islands Range Complex, EIS = Environmental Impact Statement, SEIS= Supplemental Environmental Impact Statement, OEIS= Overseas Environmental Impact Statement CD= Consistency Determination, GBSP= Guam Bureau of Statistics and Plans, CFR= Code of Federal Regulations

# D.1 2009 MIRC EIS

## D.1.1 GUAM

### D.1.1.1 Navy Consistency Determination Notice Letter

DEPARTMENT OF THE NAVY
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N01CE1/0312
18 Mar 09

Mr. Alberto A. Lamorena V
Director
Guam Bureau of Statistics and Plans
P.O. Box 2950
Hagåtña, Guam 96923

Dear Mr. Lamorena:

SUBJECT: FEDERAL CONSISTENCY DETERMINATION FOR THE DEPARTMENT OF DEFENSE ACTIVITIES WITHIN THE MARIANA ISLANDS RANGE COMPLEX (MIRC)

In accordance with the Federal Coastal Zone Management Act, we request your review and concurrence on the Department of Defense Representative Guam, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia and Republic of Palau (DoD Rep) consistency determination based on the assessment provided in the January 2009 MIRC draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) previously provided to you as well as the information contained herein.

As detailed in the draft EIS/OEIS separately provided to you, the proposed federal action is to achieve and maintain military readiness using the MIRC to support and conduct current, emerging, and future training and RDT&E activities, while enhancing training resources through investment in the MIRC. Although the majority of actions proposed to take place within the MIRC are outside the coastal zone or are either at sea in international waters or on Federally-owned lands and submerged lands on military installations and therefore outside of Guam's coastal zone, the DoD Rep is submitting this consistency determination.

As part of the National Environmental Policy Act (NEPA) process, the Navy acting for the DoD Rep, assessed reasonably foreseeable direct and indirect effects on Guam's defined coastal zone, Guam's resources and reviewed relevant management program enforceable policies. A completed Guam Coastal Management Program Assessment form is attached in support of this consistency determination. DoD Rep has determined that

SUBJECT: FEDERAL CONSISTENCY DETERMINATION FOR THE DEPARTMENT OF DEFENSE ACTIVITIES WITHIN THE MARIANA ISLANDS RANGE COMPLEX (MIRC)

based upon an evaluation in light of Guam's applicable enforcement policies there are no adverse direct or indirect (cumulative or secondary) effects on coastal uses or resources and the proposed action and its alternatives are consistent to the maximum extent practicable with the enforceable policies of Guam's CZM Program.

We appreciate your continued support. If you have any questions on this matter, please contact Mr. Edward J. Lynch, at (808) 471-1714 or by email at edward.j.lynch.ctr@navy.mil.

Sincerely,

J. D. RIOS
Captain, U.S. Navy
By direction

Enclosure: Guam Coastal Management Program Assessment Form

Copy to:
Naval Facilities Engineering Command, Pacific (EV)
Naval Facilities Engineering Command, Marianas (EV -
Mr. Robert Wescom)

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## D.1.2 COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

### D.1.2.1 Navy Negative Determination Notice Letter

**DEPARTMENT OF THE NAVY**
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N01CE1/0310
18 Mar 09

Dr. John B. Joyner
Director
Coastal Resources Management Office
P.O. Box 10007
Morgen Building, 2nd Floor, San Jose
Saipan, MP 96950

Dear Dr. Joyner:

SUBJECT: COASTAL ZONE MANAGEMENT ACT (CZMA) NEGATIVE DETERMINATION NOTICE, MARIANA ISLANDS RANGE COMPLEX (MIRC) ENVIRONMENTAL IMPACT STATETEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATETEMENT (EIS/OEIS)

The Department of Defense Representative Guam, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia and Republic of Palau (DoD Rep) wishes to inform you of its negative determination under the CZMA for the subject proposed action. As detailed in the draft EIS/OEIS separately provided to you, the proposed federal action is to achieve and maintain military readiness using the MIRC to support and conduct current, emerging, and future training and RDT&E activities, while enhancing training resources through investment in the MIRC.

A federal consistency determination for this action is not required because the proposed action occurs on federal property, in waters for which the use is by law subject solely to the discretion of or which is held in trust by the Federal Government, or is not located within the coastal zone of the Commonwealth of the Northern Mariana Islands (CNMI) as defined by the CZMA. The proposed actions would not have reasonably foreseeable direct or indirect effects on any coastal use or resource of the coastal zone of the CNMI. Federally-leased lands of the CNMI include the island of Farallon de Medinilla (FDM), the Military Lease Area (MLA) on the island of Tinian, land at Tanapag Harbor on the island of Saipan, and the waters over federally controlled submerged lands in the CNMI, all of which form parts of the MIRC.

SUBJECT: COASTAL ZONE MANAGEMENT ACT (CZMA) NEGATIVE DETERMINATION NOTICE, MARIANA ISLANDS RANGE COMPLEX (MIRC) ENVIRONMENTAL IMPACT STATETEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATETEMENT (EIS/OEIS)

The lease of these public lands was enacted under the 1976 *Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union with the United States of America*, "made available to the United States by lease to enable it to carry out its defense responsibilities" for an initial period of 50 years with an option to renew the lease for another 50 years. For purposes of evaluating federal consistency of federal activities under the CZMA, these lands have been designated as excluded lands according to the Covenant. In addition, the waters over federally owned submerged lands of the Commonwealth have been designated as excluded lands of the Commonwealth under the CZMA.

A copy of this negative determination is being provided to you under 15 CFR 930.35(3), as the DoD Rep undertook a thorough consistency assessment before arriving at the negative determination. In addition to the draft EIS/OEIS previously submitted, the following is provided to you: 1) detailed description of the proposed project; 2) a description of the project's associated facilities; 3) a description of the combined, cumulative coastal effect of the project; and 4) data and additional information to support the DoD's negative determination.

The Navy welcomes your concurrence with the negative determination. If you have any questions on this matter, please contact Mr. Edward J. Lynch, at (808) 471-1714 or by email at edward.j.lynch.ctr@navy.mil.

Sincerely,

J. P. RIOS
Captain, U.S. Navy
By direction

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# D.2 2015 MITT EIS/OEIS

## D.2.1 GUAM

### D.2.1.1 Navy Consistency Determination Notice Letter

DEPARTMENT OF THE NAVY
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N01CE1/0522
June 4, 2014

Ms. Lorilee T. Crisostomo
Director
Bureau of Statistics and Plans
P.O. Box 2950
Hagatna, Guam 96932

Dear Ms. Crisostomo:

In accordance with the Federal Coastal Zone Management Act (CZMA) and the National Oceanic and Atmospheric Administration regulations (15 C.F.R. § 930), the U.S. Navy submits the enclosed Federal Consistency Determination (CD) for proposed activities in the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable coastal effects on Guam.

Based on the enclosed consistency assessment and the activities and analysis contained in the enclosed Draft Environmental Impact Statement/Overseas Impact Statement (DEIS/OEIS), the Navy finds that the proposed military training and testing activities are consistent to the maximum extent practicable with the enforceable policies of the Guam Coastal Management Program (GCMP).

We look forward to your timely review of and concurrence with the Navy's determination. If you have any questions on this matter, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil.

Sincerely,

L. M. FOSTER
By direction

Enclosures: 1. CZMA Consistency Determination for Guam
2. CD-ROM of the MITT DEIS/OEIS

Copy to: (w/o encls)
Chief of Naval Operations (N45)
Naval Facilities Engineering Command, Pacific (EV)
Commander, Joint Region Marianas

### D.2.1.2 Guam Response Letter

**Eddie Baza Calvo**
Governor of Guam

**Ray Tenorio**
Lieutenant Governor

BUREAU OF
STATISTICS & PLANS
SAGAN PLANU SIHA YAN EMFOTMASION
P.O. Box 2950 Hagåtña, Guam 96932
Tel: (671) 472-4201/3 Fax: (671) 477-1812

**Loriiee T. Crisostomo**
Director

AUG 2 9 2014

Mr. Larry M. Foster
Director,
U.S. Pacific Fleet Environmental Readiness Division
Department of the Navy
250 Makalapa Drive
Pearl Harbor, Hawaii 96860-3131

Greetings Mr. Foster:

Hafa Adai. The Bureau of Statistics and Plans' Guam Coastal Management Program has reviewed the Department of the Navy's Federal Consistency Determination (CD) for the proposed activities in the Mariana Islands Training and Testing (MITT) Study Area, Ref: 5090 Ser NO1CE1/0522, June 4, 2014.

The Proposed Action is to continue to conduct training and testing activities, which may include the use of active sonar and explosives, primarily in established operating and military warning areas of the MITT Study Area, including the pier-side sonar maintenance and testing in the Inner Apra Harbor, and land-based training activities at existing ranges and other training locations on Guam and the Commonwealth of the Northern Mariana Islands (CNMI). As we understand, "the proposed action is to ensure that the Navy accomplishes its mission to maintain, train, and equip combat-ready military forces capable of winning wars, deterring aggression and maintaining freedom of the seas."

Your letter indicates that the proposed military training and testing activities would not occur within Guam's "coastal zone" and therefore, are not subject to Guam's jurisdiction. It was acknowledged on the submitted consistency determination that certain Department of Defense (DoD) actions that occur on federal land could have reasonably foreseeable effects on coastal uses or resources subject to federal consistency review requirements. The MITT study area includes the existing Mariana Islands Range Complex (MIRC), additional areas on the high seas, and a general transit corridor between Hawaii to MITT where training and testing activities may occur and that the Mariana Island Range Complex (MIRC) is the only major Navy range complex in the study area. It states that the EIS/OEIS was prepared by the Navy to renew current regulatory permits and authorizations, address current training and testing not covered under existing permits and authorizations, and to obtain the permits and authorizations necessary to support force structure changes and emerging and future training and testing requirements including those associated with new platforms and weapons systems within the MITT Study Area starting in 2015, needed to ensure that critical DoD requirements are met. The MTT Study Area is composed of the established ranges at sea ranges and land based training areas in Guam and Commonwealth of the Northern Mariana Islands (CNMI), operating areas, and its special use airspace of the Mariana Islands Range Complex (MIRC), its surrounding seas, including a transit corridor outside the geographic boundaries of the MIRC.

**Accordingly, the GCMP Resource Policies that will be affected by the Navy Activities are as follows:**

**RP1 – Air Quality:** All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality. [10 GCA, Chapters 47-52; P.L. 25-152; P.L. 12-200, as amended by P.L. 20-147; P.L. 12-208].

- The foreseeable direct and indirect effect of military training and testing on Guam is in the increase of air pollutants on Guam's air quality that are considered minimal because the training and testing activities described in the MITT DEIS/OEIS will occur mostly offshore of Guam, beyond Guam's territorial boundaries.

- Training and testing activities for sulfur dioxide will be outside the nonattainment areas, such as CNMI, AAFB, Naval Base Guam Munitions Site, Naval Base Telecommunications Site and many other training locations in the Mariana Islands.

- Trace amounts of hazardous air pollutants emitted by combustion sources and use of ordinance during missile and target use are typically smaller in magnitude than emissions of air pollutants from large amounts of fuel, explosives, or those materials consumed during single activity or in one location.

The Navy indicates that because the emissions are intermittent and short-term, its effect is considered minimal with regards to any foreseeable direct or indirect effect on uses and other resources of the Guam coastal zone.

**RP2. Water Quality-** Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuaries, reef and aquifer areas. [P.L. 12-200, as amended by P.L. 20-147; P.L. 24-161; P.L. 25-152; P.L. 26-32 as amended by P.L. 26-113].

- Most activities involving explosives and explosion by products would be conducted beyond the 3 nautical miles off Guam The reasonably foreseeable direct and indirect effects to the uses and resources of the Guam coastal zone from chemicals other than explosives would be minimal because of where these activities would be conducted and the very low concentrations of the chemicals in seawater.

- Based on the Navy's Comprehensive Water Quality Impact analysis of the proposed action, the potential impacts from training and testing activities could be associated with explosives and explosion by products, metals, chemicals other than explosives, and other material. The resulting concentrations in seawater are expected to be very low and not harmful to aquatic organisms.

- Military expended materials with metal components used in nearshore areas specifically designated for mine countermeasure and mine neutralization activities within Apra Harbor and Agat would be subject to State Sediment and Water Quality Standards and guidelines for metals.

**RP3. Fragile Areas** – Development in the following types of fragile areas including Guam's Marine Protected Areas (MPA) shall be regulated to protect their unique character. - Historical and archeological sites- wildlife habitats;- pristine marine and terrestrial communities; - limestone forests; - mangrove stands and other wetlands and coral reefs shall be regulated to protect their unique character[ [P.L. 12-200, as amended by P.L. 20-147; P.L. 24-21; P.L. 27-87; E.O. 97-10].

- Completion of consultation requirements under Section 7(a)(2) of the ESA with U.S. Fish and Wildlife Service Pacific Islands Fish and Wildlife office for species on Guam.

- The Navy has determined that the proposed action may affect, but is not likely to adversely affect the Mariana fruit bat, Mariana swiftlet, and Mariana common moorhen because the military training and testing activities would not be conducted in the Guam National Wildlife Refuge in Ritidian.

- Implementation of mitigation measures described in Chapter 5, Standard Operating Procedures, Mitigation, and Monitoring of the MITT DEIS/OEIS to minimize impacts on terrestrial species and habitats.

- Protective measures will continue to be implemented for all military training and testing activities for all military installations on Guam as iterated in the Programmatic Agreement among the Guam Defense Representative; Commonwealth of the Northern Mariana Islands; Federated States of Micronesia and Republic of Palau; Joint Region Marianas; Commander, Navy Region Marianas; Commander, 36th Wing, Andersen Air Force Base; the Guam Historic Preservation Officer; and the Commonwealth of the Northern Marianas Islands Historic Preservation Officer.

**RP4. Living Marine Resources** – All living resources within the waters of Guam, particularly fish, shall be protected from over-harvesting and, in the case of corals, sea turtles and marine mammals, from any taking whatsoever. [10 GCA, Chapters 47-52; P.L. 25-152; P.L. 12-200, as amended by P.L. 20-147; P.L. 12-208, P.L. 28-107, P.L. 26-25, P.L. 24-21]

- The Navy will implement mitigation measures resulting from consultations with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service under Section 7 of the ESA for proposed action and will implement mitigation measures for sea turtles and corals in the marine environment resulting from the consultation.

- Most of the training and testing activities that involve stressors would be conducted intermittently and more than 3 nautical miles offshore, outside of the Guam coastal zone. Impacts from stressors to fish would be localized.

- Mitigation measures will be implemented resulting from the Navy's consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act for this training and testing activities. The foreseeable direct and indirect effects to the uses and resources of the Guam coastal zone from impacts to fish from military training and testing activities would be minimal.

- Terms and conditions of the Section 7 consultation between the Navy and the NMFS and U.S. FWLS will be reflected in the Record of Decision (ROD) for the MITT EIS.OEIS.

As noted, the NMFS offered conservation recommendations in accordance with the Essential Fish Habitat provision of the Magnuson-Stevens Fishery Conservation and Management Act (50 C.F.R. §600.905-930) to avoid and minimize impacts to EFH, as iterated in a letter addressed to you from the NMFS, Assistant, Regional Administrator, Habitat Conservation Director dated July 21, 2014. Additionally, the DOD Policy Statement on Executive Order 13089, Coral Reef Protection Implementation Plan states, "DOD has committed to protect U.S. and International coral reef ecosystems and to avoid impacting coral reefs to the maximum extent feasible." *USEPA Dec.12, 2013 letter to NAVFAC.*

RP7. Public Access - The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all Territorial recreation areas, parks, scenic overlooks, designated conservation areas and other public lands; and agreements shall be encouraged with the owners of private and federal property

for the provision of reasonable access to, and use of, resources of public nature located on such land. P.L. 12-200, P.L. 20-147, Seashore Protection Act, Territorial Beach Areas Act, Territorial Parks, Subdivision Law, Public Rights Provisions].

- No non-federally owned beach areas, recreational areas, parks, scenic overlooks, designated conservation areas, or other public lands will be affected by the proposed military activities. For security and safety reasons, public access normally allowed (by permit) within military installations may be temporarily curtailed during military training and testing activities and restored upon completion of the training and testing exercises.

Please note that on December 12, 2013, the Bureau provided the attached comments to the Department of Defense (DoD) for the preparation of EIS/OEIS for the MITT activities reviewed in the Mariana Islands Range Complex (MIRC) EIS/OEIS completed by the Navy. We feel that the issues and concerns we provided can be incorporated in the DOD preparation of the Final EIS/OEIS for the MITT.

Based on our review of the Department of the Navy's consistency determination, the Bureau fully understands that the DoD still has to maintain, train and equip the military forces as needed, to balance between protecting the environment and ensuring U.S. soldiers are trained. Therefore, we concur with the Navy consistency determination that the proposed military training and testing activities are consistent to the maximum extent practicable with the enforceable policies of the Guam Coastal Management Program, in accordance with the Coastal Zone Management Act of 1972, (P.L. 92-583) as amended (P.L. 94-370), 15 CFR Part 930 Federal Consistency Rules and Regulations. However, please note that this GCMP concurrence does not fully preclude the need to obtain other required Federal and Government of Guam concurrences, clearances/waivers and permit approvals.

Finally, we will appreciate receiving copies of the Final EIS when released. Please send a hard copy and an electronic copy to Edwin Reyes, Administrator of the Guam Coastal Management Program. Should you have further questions, please contact (671) 475-9672 or email:edwin.reyes@bsp.guam.gov. Si Yu'os Ma'ase and thank you for your attention.

Sincerely,

LORILEE T. CRISOSTOMO
Director

Enclosure: a/s

cc: GEPA
DoAg
DPR/GHPO
DLM
ACOE/R.Winn
Gov. Office/M. Calvo
NOAA-K. Kehoe/A. Loerzel
Navy/M.Cruz
OAG/J.Toft

Page 4 of 4

## D.2.2 COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

### D.2.2.1 Navy Consistency Determination Notice Letter

**DEPARTMENT OF THE NAVY**
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N465/0668
July 2, 2014

Ms. Fran Castro
Director
Division of Coastal Resources Management
CNMI Bureau of Environmental and Coastal Quality
Gualo Rai Center, Suite 201F
P.O. Box 501304
Saipan, MP 96950

Dear Ms. Castro:

In accordance with the Federal Coastal Zone Management Act (CZMA) and the National Oceanic and Atmospheric Administration regulations (15 C.F.R. § 930), the U.S. Navy submits the enclosed Federal Consistency Determination (CD) for proposed activities in the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable coastal effects on the Commonwealth of the Northern Mariana Islands (CNMI).

Based on the enclosed consistency assessment and the activities and analysis in the enclosed Draft Environmental Impact Statement/Overseas Impact Statement (DEIS/OEIS), the Navy finds that the proposed military training and testing activities are consistent to the maximum extent practicable with the enforceable policies of the CNMI Coastal Resources Management Program (CRMP).

We look forward to your timely review of and concurrence with the Navy's determination. If you have any questions on this matter, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil.

Sincerely,

L. M. FOSTER
By direction

Enclosures: 1. CZMA Consistency Determination
2. CD-ROM of the MITT DEIS/OEIS

Copy to (w/o encls):
Naval Facilities Engineering Command, Pacific (EV)
Commander, Joint Region Marianas

### D.2.2.2 Commonwealth of the Northern Mariana Islands Response Letter

Commonwealth of the Northern Mariana Islands
OFFICE OF THE GOVERNOR
Bureau of Environmental and Coastal Quality
Division of Coastal Resources Management
P.O. Box 10007, Saipan, MP 96950
Tel: (670) 664-8500, Fax: (670) 664-8515
www.crm.gov.mp

Frank M. Rabauliman
Administrator

Frances A. Castro
Director

Mr. John Van Name
Naval Facilities Engineering Command, Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

Re: Consistency Determination for MITT (letter 5090 Ser N01CE1/0523)

Dear Mr. Van Name:

The Commonwealth of the Northern Mariana Island's (CNMI) Division of Coastal Resources Management (DCRM) has received the U.S. Navy's Consistency Determination for the Mariana Islands Training and Testing (MITT) Study Area (letter: 5090 Ser N01CE1/0523). As we noted in our phone conversation on July 23rd 2014, the U.S. Navy's Consistency Determination is currently incomplete, as it does not address the *enforceable policies* of CRM. According to the federal regulations promulgated pursuant to the Coastal Zone Management Act (CZMA):

> The consistency determination shall include a brief statement indicating whether the proposed activity will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. The statement must be based upon an evaluation of the *relevant enforceable policies* of the management program. (italics added, 15 CFR § 930.39 )

The current consistency determination addresses statutes listed in the CNMI's Coastal Resources Management Act. These statutes are largely directed towards the CNMI government and are precatory in nature. The enforceable policies of the CNMI can be found in the Coastal Resource Management Rules and Regulations, Chapter 15-10 of the Northern Mariana Islands Administrative Code (NMIAC), which can be accessed online at: http://www.cnmilaw.org/mediawiki-1.21.2/index.php?title=15-10

We have been discussing the CNMI's enforceable policies with the National Oceanic and Atmospheric Administration (NOAA). In order to be an enforceable policy under the CZMA, the policy must be approved by NOAA. As we discussed, we will be happy to provide you with further guidance regarding the CNMI's enforceable policies as soon as we have made a definitive determination as to which policies are applicable.

At a minimum, we request that the U.S Navy address the following sections of the regulations:

**§ 15-10-310 Specific Criteria; Areas of Particular Concern** (please note the Management Standards and Unacceptable Use Priorities for the various APCs).

**§ 15-10-505 Specific Criteria for Major Sitings**

After we receive the updated Consistency Determination, the 60 day review period shall commence. We greatly appreciate your assistance with this process. If you have any questions about this matter, please contact Megan Jungwiwattanaporn at (670) 664-8311 ext 225 or at megan.jungwi@crm.gov.mp.

Sincerely,

Richard Brooks
Acting Director
Division of Coastal Resources Management
Bureau of Environmental and Coastal Quality

### D.2.2.3 Additional Correspondence

DEPARTMENT OF THE NAVY
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N465/0926
Sep 9, 2014

Ms. Fran Castro
Division of Coastal Resources Management
CNMI Bureau of Environmental and Coastal Quality
Gualo Rai Center, Suite 201F
P.O. Box 10007
Saipan, MP 96950

Dear Ms. Castro:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

In accordance with the Federal Coastal Zone Management Act (CZMA) and 15 C.F.R. § 930, the U.S. Navy submits the enclosed presumptive Federal Consistency Determination (CD) for proposed activities in the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable coastal effects on the coastal zone of the Commonwealth of the Northern Mariana Islands (CNMI). The Navy originally submitted a CD to CNMI in July 2014. Thereafter, the Navy and CNMI Coastal Resources Management Program (CRMP) Office engaged in teleconference meetings and e-mail correspondence concerning the applicable enforceable polices of the CNMI CRMP. The enclosed CD is in accordance with those conversations. The Navy requested copies of public notices of NOAA's approval of the CNMI's enforceable policies required by 15 C.F.R. § 923.84(b)(4). This assessment presumes that required public notices have been published.

Based on the enclosed consistency assessment and the activities and analysis in the Draft Environmental Impact Statement/Overseas Impact Statement (DEIS/OEIS), the Navy finds that the proposed military training and testing activities are consistent to the maximum extent practicable with the presumptively enforceable policies of the CNMI CRMP.

We look forward to your timely review of and concurrence with the Navy's determination. If you have any questions on this matter, please contact Mr. John Van Name at (808) 471-1714 or john.vannamc@navy.mil.

Sincerely,

L. M. FOSTER
By direction

Enclosure: 1. CZMA Consistency Determination for CNMI

Copy to: (w/o encl)
CNO (N454)
COMNAVAIRSYSCOM PATUXENT RIVER, MD (AIR-1.6)
COMNAVSEASYSCOM WASHINGTON, DC (SEA 04)
ONR (3220A)
NAVFAC PAC (EV)
COMMANDER JOINT REGION MARIANAS

Commonwealth of the Northern Mariana Islands
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Division of Coastal Resources Management
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**Frank M. Rabauliman**
Administrator

**Frances A. Castro**
Director

October 7, 2014

Mr. John Van Name
Naval Facilities Engineering Command, Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

**Re. Federal Consistency Determination for Mariana Islands Training and Testing (MITT) Study Area (5090 Ser N465/0926)**

Dear Mr. Van Name:

The Commonwealth of the Northern Mariana Island's (CNMI) has completed its review of the U.S. Navy's Federal Consistency Determination (CD) for the Mariana Islands Training and Testing (MITT) Study Area. The Navy originally submitted a CD to the CNMI in July 2014. Thereafter, the Navy and the CNMI Division of Coastal Resources Management (DCRM) engaged in teleconference meetings and e-mail correspondence concerning the applicable enforceable policies of the CNMI Coastal Resources Management Program. A revised CD was received by the CNMI on September 11, 2014 (letter 5090 Ser N465/0926).

After careful review of the revised Federal Consistency Determination (CD) and the Draft Environmental Impact Statement (DEIS) upon which it is based, DCRM finds that the proposed MITT activities are not consistent with the enforceable policies of the CNMI Coastal Management Program. Therefore, the CNMI cannot support the proposal as currently proposed by the Department of the Navy, without further mitigation of potential effects on the CNMI's coastal resources.

The Government of the CNMI recognizes the needs of the U.S. military and hopes to accommodate those needs in a manner that is consistent with the federally approved coastal management policies of the CNMI Coastal Management Program. We look forward to the opportunity to discuss our concerns and how the policies of the CNMI Coastal Management Program can be met as soon as possible.

## I. How the Navy Could Be Consistent and Move Forward With the MITT

As outlined below, DCRM finds that the MITT is not consistent with the enforceable policies of the CNMI Coastal Management Program. In order to be consistent with the enforceable policies of the CNMI, the Navy needs to implement further monitoring and mitigation, including:

- **Fish**: Mitigate permanent effects to essential fish habitat areas from near-bottom explosions. Collect and share baseline data on fish species diversity and abundance within training area, including populations around Saipan, Farallon de Medinilla (FDM), Tinian, and Rota.

- **Birds**: Develop and implement a monitoring plan that assesses the effects of the MITT on endangered bird populations, including collecting population data for the Micronesian megapode, Mariana crow, and Rota bridled white-eyes throughout the MITT study area, including populations on Saipan, FDM, Rota, and Tinian

- **Marine Invertebrates**: Develop and implement a monitoring plan that assesses the presence and population of US Endangered Species Act listed corals in the MITT study area, including coral populations around FDM and Tinian. Share data with DCRM. Restrict testing and training activities, such as amphibious landings and activities that create vessel noise, during coral mass spawning events.

- **Marine Mammals:** Develop and implement a monitoring plan that assesses effects of the MITT to marine mammals, including collecting and analyzing population data over time. Data must be shared with DCRM.

- **Marine Vegetation**: Develop and implement a plan to identify and address any serious damage to seagrass that may occur. The plan should include a pre-assessment of seagrass coverage and health, survey the recovery of marine vegetation, and provide mitigation for damage to seagrass beds. Baseline and recovery data must be shared with DCRM.

- **Sea turtles**: Since the incubation period for green sea turtles is around 62 days, daily beach monitoring at least 60 days prior to beach landing activities should be required to ensure that all sea turtle nests are detected and impacts on nests are avoided. If sea turtle nests are detected, no military activity should occur in the vicinity of the nests for 70 days, until after the nests have hatched.

- **Terrestrial Species**: Develop and implement a monitoring plan that assesses effects of the MITT to the Mariana fruit bat, including collecting and analyzing population data of the Mariana fruit bat over time. Particular care should be given to avoid effects to the Mariana fruit bat population on Rota.

- **Farallon de Medinilla:** Address major erosion, mass wasting, and changes to landforms on certain areas of FDM through a detailed assessment of changes to FDM's landforms over time and the development of a model/projections that may predict future loss of land and mass wasting due to ongoing military activity. Data must be shared with DCRM. If historic analysis and future projections indicate significant changes to the physical character of FDM, DCRM requests development of a detailed mitigation plan, outlining actions that will minimize loss of any additional land.

- **Rota**: Among the islands included in the study area, Rota is the most pristine and provides critical habitat for endangered and threatened species including the Mariana crow, Rota white-eye, and Mariana fruit bat. Rota should be removed as a location for any activities.

- **Water Quality**: Develop and implement a monitoring plan to ensure water quality stays within CNMI standards. Include an assessment of bio-accumulation of toxins in marine life and localized effects within the monitoring plan, including an assessment of fish around Saipan, FDM, Tinian, and Rota.

## II. Insufficient Information

The CNMI's Division of Coastal Resources Management finds that the Navy has not provided sufficient information necessary for complete and adequate analysis for multiple components of the proposed action. Further, the CD presumes the Preferred Alternative will go into effect, but does not provide sufficient evidence that an increase in operations will, in fact, have a "negligible" contribution to environmental stressors.

CZMA Section 930.37 of the Federal Consistency regulations provides that the DEIS can be used as a vehicle for a consistency determination, "[h]owever, a Federal agency's federal consistency obligations under the Act are independent of those required under NEPA and are not necessarily fulfilled by the submission of a NEPA document. DCRM appreciates that the updated CD addresses coastal effects not included in the last submission. As stated in the CD, "updates to the Final EIS/OEIS are included in this CZMA consistency determination", including mentions of an improved analysis of sedimentation on Tinian, clarifications on activities on Rota, and measures to protect endangered species (including sea turtles and sea birds) once the Section 7 Endangered Species Act (ESA) consultation between the Navy and the U.S. Fish and Wildlife Service is completed. Although these items are mentioned in the CD, they cannot be considered part of the CD as they have not yet been completed.

As outlined in Section IV of this letter, additional information is needed on the following in order to assess the consistency of the MITT with the CNMI enforceable policies:

- Cumulative impacts - the CD does not look at the cumulative impacts of the MITT with other military activities in the study area, including the divert airfield and the CJMT (§15-10-305and §15-10-505 of the CNMI's enforceable policies)

- Localized and long-term effects of water quality contamination on marine biota (§15-10-305)
- How testing and training will affect hazardous lands (§15-10-305)
- How testing and training will affect Anjota Island(§15-10-310)
- How testing and training will affect the Micronesian megapode, particularly on Saipan (§15-10-505)
- How testing and training will affect fish and fish habitat (§15-10-505)

The updated CD outlines the proposed increase in number of activities from the baseline number of activities analyzed in the 2010 Mariana Islands Range Complex (MIRC) EIS/OEIS. However there is little to no information on when these activities will occur, over what period of time the activities will take place, and whether these are separate or simultaneous activities for each location. It is impossible to evaluate the effects of the proposed activities without having these critical details.

DCRM holds that further mitigation measures are needed in addition to those mentioned in the DEIS/OEIS and looks forward to seeing the results of the Section 7 ESA consultation. In order to comply with the enforceable policies of the CNMI, further measures are needed to protect the wildlife and habitats of the CNMI (as outlined in Sections I and IV).

## III. The Basis for Finding That the MITT is Consistent to the Maximum Extent Practicable Has Not Been Established

The Coastal Zone Management Act (CZMA) of 1972, 16 USC §§ 1451-1465, § 1456 (c)(1), and the Federal Consistency regulations, 15 CFR §§ 930.30-930.46, mandate that Federal agency activity with a reasonably foreseeable effect on the State's coastal zone must be consistent to the maximum extent practicable with the enforceable policies of the States' federally approved CZMA programs. Under 15 C.F.R. §930.32(a)(1), the standard for "consistent to the maximum extent practicable" means fully consistent with the enforceable policies of the CNMI's management programs unless full consistency is prohibited by existing law applicable to the Federal agency.

The Navy must show how existing law prohibits full consistency with the CNMI's Coastal Management Program. The Navy has not provided any description of any statutory provisions, legislative history, or other legal authority which limits the Navy's discretion to be fully consistent with the enforceable policies of the management program. Accordingly, for the reasons cited below, the proposed MITT is not fully consistent with the enforceable policies of the CNMI coastal management program.

## IV. Consistency with Enforceable Policies

The CNMI has determined the MITT is inconsistent with the enforceable policies of the CNMI Coastal Management Program in the following ways:

**Part 300 – § 15-10-305, Standards for DCRM Permit Issuance: General Criteria**

**a) Cumulative Impact**

*...determine whether the added impact of the proposed project seeking a DCRM permit will result, when added to the existing use, in a significant degradation of the coastal resource*

As noted above, although the DEIS/OEIS looks at the cumulative impacts of the various components of the MITT, it does not look at the cumulative impacts of the MITT in combination with other military activities within the study area. These activities include, but are not limited to, activities described in the Guam and CNMI Military Relocation FEIS/OEIS, Divert Activities and Exercises, Guam and CNMI DEIS, and the upcoming CNMI Joint Military Training DEIS/OEIS. If implemented, these activities will undoubtedly have cumulative effects on the CNMI's coastal resources.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**b) Compatibility**

*...determine, to the extent practicable, whether the proposed project is compatible with existing adjacent uses and is not contrary to designated land and water uses...*

This section is addressed under Part 300, Areas of Particular Concern (APCs). DCRM needs further information on the effects the MITT will have on Rota's APCs.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**c) Alternatives**

*...determine whether or not a reasonable alternative site exists for the proposed project.*

As stated in the CD, "The Navy has assessed reasonable alternatives to training and testing locations" as described in Chapters 1 and 2 of the DEIS/OEIS. The CNMI understands that the MITT Study Area is strategically important for military training and testing. However, it is unclear why the military training and testing operations must be spread out over several islands. The Department of the Navy should consider and explain why testing and training cannot be consolidated to fewer areas in order to minimize environmental impact. In particular, Rota could be removed as a location for proposed terrestrial activities in order to protect its pristine habitat.

*Conclusion: Inconsistent – the Navy should consolidate activities to fewer areas in order to minimize environmental impact.*

**d) Conservation**

*...determine, to the extent practicable, the extent of the impact of the proposed project...on its watershed and receiving waters, marine, freshwater, wetland, and terrestrial habitat, and preserve, to the extent practicable, the physical and chemical characteristics of the site necessary to support water quality and living resources.*

The CD states that "When considered together, the impact of the four stressors (explosive byproducts, metals, chemicals other than explosives, and other military expended materials) would be additive". The Navy maintains that "changes in sediment or water quality would not be detectable", however the CD and the DEIS/OEIS appear to overly rely on dilution and settling of contaminants to keep water quality impacts within water quality standards. The CD includes the following reasons for its no-effect conclusion: "military expended materials and activities are widely dispersed in space and time throughout the MITT study area", "When multiple stressors occur at the same time, it is usually for a brief period", and "potential areas of negative impacts would be limited to small zones".

However, the localized effects of such contaminants could adversely affect many forms of marine biota, potentially harming resources utilized by local stakeholders. The DEIS/OEIS continually mentions that effects to water quality would be short in duration, yet there is no in-depth discussion about possible long-term effects as a result of secondary impacts to the environment, such as sedimentation and bio-accumulation. A study by Woodley and Downs (2014) investigated whether munitions compounds or their breakdown products impact corals. The study found that all nine munitions compounds (six nitrotoluene compounds, RDX, HMX, and Picric acid) tested had some level of toxicity. Further, studies by Denton et al (2010) show bio-accumulation of toxins such as mercury, arsenic, and PCBs in fish caught in Saipan Lagoon.

Further, the CD does not address the effects the MITT will have on FDM. Satellite imagery and oblique photographs show there have been significant changes to the morphology of FDM, apparently through mass wasting along the eastern cliff lines. The land bridge on FDM shows significant signs of mass wasting on the eastern side. The southern end of FDM also shows a recent sea cave collapse. The total loss of land mass on FDM since bombing commenced must be presented.

Although FDM is a federally leased island, testing and training on FDM could lead to spillover effects. DCRM is particularly concerned with the effects of proposed ordinance use on FDM on mass wasting, vegetation loss, erosion, and sedimentation. Both Alternative 1 and Alternative 2 include substantial increases in explosive detonations on

FDM over the current level of activities (the no action alternative). These activities could lead to loss of habitat for migratory birds, while sedimentation could affect habitat for migratory fish.

DCRM requests that baseline data and ongoing monitoring be provided in order to assess the localized and long-term effects of water quality contamination on marine biota.

*Conclusion: Inconsistent – the Navy should consider localized and long-term effects of water quality contamination, and provide baseline and monitoring data.*

**e) Compliance with Local and Federal Law**

*...require compliance with Federal and CNMI laws, including, but not limited to, air and water quality standards, land use, Federal and CNMI constitutional standards, and applicable permit processes necessary for completion of the proposed project*

As outlined throughout this letter, DCRM finds that the MITT is not consistent with the enforceable policies of the CNMI Coastal Management Program. However, further mitigation of potential effects could bring the MITT in line with the CNMI's enforceable policies. The CNMI hopes to discuss possible mitigation efforts going forward and looks forward to the results of the Section 7 ESA consultation between the Navy, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service.

*Conclusion: Inconsistent – MITT activities do not comply with local laws as outlined throughout this letter.*

**f) Right to a Clean and Healthful Environment**

*Projects shall be undertaken and completed so as to maintain and, where appropriate, enhance and protect the Commonwealth's inherent natural beauty and natural resources, so as to ensure the protection of the people's constitutional right to a clean and healthful environment.*

Section f of § 15-10-305 appears to not have been included in the CD. DCRM holds, until shown otherwise, that the MITT will not "maintain and, where appropriate, enhance and protect the Commonwealth's inherent natural beauty and natural resources" (NMIAC, § 15-10-305).

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**g) Effect on Existing Public Services**

*Activities and uses which would place excessive pressure on existing facilities and services to the detriment of the Commonwealth's interests, plans and policies, shall be discouraged.*

The CD states that: "The Proposed Action has no effect on existing public services within the CNMI coastal zone." DCRM concurs with this statement.

*Conclusion: Consistent*

**h) Adequate Access**

*...determine whether the proposed project would provide adequate public access to and along the shoreline.*

The updated CD states that: "The Proposed Action does not hinder public access to anywhere within the CNMI coastal zone. Public access will only be affected on Navy leased lands within the CNMI."

Historically significant and coastal public-use areas are located in and near the shoreline in the Military Lease Area on Tinian and public access to these areas and beaches for recreation and fishing remain a concern. DCRM is likewise concerned that the cumulative impacts from a combination of activities proposed in this DEIS/OEIS with other military activities in the region could limit public access to these important cultural areas. DCRM recognizes that these areas do not fall within the CNMI's Coastal Management Program. However *The Covenant to Establish a Commonwealth of Northern Mariana Islands* and the *Technical Agreement Regarding Use of Land to Be Leased by the United States in the Northern Mariana Islands* state that closures for military maneuvers will be "kept to a minimum". Further information regarding the closures, including a schedule of such closures is requested.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**i) Setbacks**

*...determine whether the proposed project provides adequate space between the project and identified hazardous lands including floodplains, erosion-prone areas, storm wave inundation areas...*

The CD states that: "There is no construction associated with the Proposed Action; therefore, there is no requirement for setbacks." DCRM concurs with this statement.

*Conclusion: Consistent*

**j) Management measures for control of nonpoint source pollution**

*...determine if the selected management measures are adequate for the control of nonpoint source pollution resulting from project construction, operations, and maintenance...*

The CD states that: "Standard operating procedures for spill prevention and waste management are included in Chapter 5 of the MITT EIS/OEIS and are also specified in the Mariana Islands Training Manual (COMNAVMARIANSASINST 3500.4A), dated 13 October 2013." It is unclear from Chapter 5 of the EIS/OEIS what the procedures for spill prevention and waste management are. Further, DCRM does not have a copy of the Mariana Islands Training Manual. DCRM requests more information on the control of nonpoint source pollution.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**Part 300 – § 15-10-310, Standards for DCRM Permit Issuance: Specific Criteria/Area of Particular Concern**

- **Lagoon and Reef APC (general)**
  The CD states that: "MITT activities within the CNMI coastal zone do not hinder use categories considered high priority"; further, "Nor do MITT activities that would occur within the CNMI coastal zone contribute to unacceptable uses".

  Under the CNMI's enforceable policies, "Unacceptable" uses for the Lagoon and Reef APC include:
  A) discharge of untreated sewage, petroleum products, or other hazardous materials
  C) destruction of coralline reef matter not associated with permitted activities and uses
  D) dumping of trash, litter, garbage or other refuse into the lagoon, or at a place on shore where entry into the lagoon is inevitable

  The MITT plans to discharge hazardous materials (explosive byproducts, chemicals) and dump military expended materials into the Study Area (as outlined under 'DEQ Water Quality Standards'). Corals may be impacted by testing and training activities, particularly around Tinian. Although activities may be restricted to federally leased waters, hazardous materials could travel to CNMI waters and negatively affect wildlife and habitat therein.

  *Conclusion: Inconsistent due to discharge of hazardous materials and military expended materials.*

- **Lagoon and Reef APC (Anjota Island)**
  The CD states that amphibious raid activities will occur on Anjota Island located off of the island of Rota. The CD claims that these activities and use of Anjota Island's offshore areas will "not hinder activities that are considered high priority categories" or "contribute to the unacceptable activities identified in the regulations". However, no information has been provided to DCRM so that DCRM can assess the effects on its own. In the DEIS/OEIS, listed potential impact concerns for amphibious raids include: vessel noise, weapons firing noise, vessel strike, vehicle strike (pedestrian), and physical disturbance (coral, sea-turtle nests). The only mention of Anjota (Angyuta in the

DEIS/OEIS) is a brief line under the 'Cultural Resources' section stating that there are no historic properties on Angyuta.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

- **Port and Industrial APC (Rota, Tinian, Saipan)**
  The CD notes that "Some training activities may occur within port and industrial areas of Rota" and that these activities "may include intelligence, surveillance, reconnaissance training, urban warfare training, and amphibious raid training at Anjota Island and Song Song Village". No information has been provided to DCRM so that DCRM can assess the effects on its own in either the CD or the DEIS/OEIS. It is unclear whether or how the MITT will affect port activities or wildlife within the Anjota Preserve.

  *Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**Part 500- Standards for Determining Major Siting: Specific Criteria**
Under the CNMI's enforceable policies, a "major siting" is defined as "any proposed project which has the potential to directly and significantly impact coastal resources" including "proposed projects with potential for significant adverse effects on submerged lands, ...reefs, wetlands, beaches and lakes...and endangered or threatened species or marine mammal habitats" (§15-10-020(jj)). As outlined below, DCRM believes the MITT could have significant adverse effects on the CNMI's coastal resources.

**a) Project Site Development (§15-10-505)**
*The proposed project site development shall be planned and managed so as to ensure compatibility with existing and projected uses of the site and surrounding area.*

The CD states that: "The Proposed Action does not include construction of any kind; therefore, there are no site development activities."DCRM concurs that the project complies with this particular enforceable policy.

*Conclusion: Consistent*

**b) Minimum Site Preparation (§15-10-505)**
*Proposed projects shall, to the extent practicable, be located at sites with pre-existing infrastructure, or which require a minimum of site preparation*

The CD states that: "Training activities that occur on land require minimal or no site preparation." DCRM concurs that the project complies with this particular enforceable policy.

*Conclusion: Consistent*

**c) Adverse Impact on Fish and Wildlife (§15-10-505)**
*The proposed project shall not adversely impact fragile fish and wildlife habitats, or other environmentally sensitive areas*

The MITT Study Area is home to several threatened and endangered species that may be adversely affected by the proposed action, including the green sea turtle, hawksbill turtle, a number of endangered bird species, the Mariana fruit bat, and several marine mammals.

- **Effects on Marine Mammals (§15-10-505 (c))**

According to the CD: "Potential impacts of the Proposed Action on marine mammals could be attributed to acoustic, energy, physical disturbance and strike, entanglement, ingestion, and secondary stressors. Under the [Marine Mammal Protection Act] MMPA, training and testing activities that involve the use of sonar, other active acoustic sources, and explosives may result in Level A harassment, Level B harassment, or mortality of certain marine mammals".

DCRM is concerned about the effects the MITT will have on marine mammals and requests further mitigation measures so as to better protect the habitats and wildlife in and around the CNMI. One option, previously suggested by the CNMI Governor, is the creation of habitat protection areas which will exclude portions of the MITT Study Area from training and testing activities so as to better protect wildlife. Of absolute importance is an additional effort to acquire monitoring data on the effects of the MITT to marine mammal populations, and to share this data and any ensuing reports with the CNMI government.

The DEIS/OEIS also reports that: "Starting in 2015, specific allocation of monitoring effort (research objectives, studies, and focus) within the Study Area will be included in a monitoring plan to be developed in cooperation with NMFS." (3.4.5.1) DCRM requests that data and reports developed through this monitoring effort be shared with DCRM.

- **Effects on Sea Turtles (§15-10-505 (c))**

The CD states that "Impacts of the Proposed Action may contribute to sea turtle mortality, injury, or short-term disturbance or behavioral modification. Mortality or injury could be caused by underwater explosions or vessel strikes." Further, "Amphibious vehicles used on Tinian during amphibious warfare activities may potentially strike sea turtles on the beach or crush buried nests." DCRM is encouraged to see that the updated CD addresses effects to sea turtles. The DEIS/OEIS does not discuss effects on nesting sea turtles on the beaches of Tinian, nor was it clear from Chapter 5 of the DEIS/OEIS what mitigation measures are in place for effects from amphibious vehicles.

The updated CD does note that "measures were not included in Chapter 5 of the Draft EIS/OEIS, but will be added to the Final EIS/OEIS once the Section 7 ESA consultation between the Navy and the U.S. Fish and Wildlife Service is completed." DCRM requests increased protection for the sea turtles on Tinian and proposes longer periods of beach

monitoring prior to implementation of training activities. The CD states that "pre-exercise surveys for presence of sea turtles no more than six hours prior to an exercise" will occur. This is not enough time to ensure that there are no nests on the beach as nests are visible only for a very short time after initial egg-laying. The incubation period for the green sea turtles is around 62 days, daily beach monitoring at least 60 days prior to the beach landing activities should be required to ensure that all nests are detected.

**Effects on Birds (§15-10-505 (c))**

The CD states that:

- "the ESA-listed species Mariana common moorhen and the Micronesian megapode, may be impacted by military training on Tinian from acoustic (explosives and weapons firing, launch and impact noise), and physical (ground disturbance, aircraft and aerial target strike, military expended materials, and wildfires) stressors"
- "The Micronesian megapode, the nightingale reed-warbler…occur in the Marpi Maneuver Area in Saipan"
- "The Navy has determined that training activities on Rota would have no effect on the ESA-listed *Serianthesnelsonii*, *Osmoxylonmariannense*, *Nesogenesrotensis*, or Rota bridled white-eye. "

DCRM is concerned with inconsistencies and the lack of up-to-date data in the DEIS/OEIS that the CD is based on. Section 3.6.1.5 states that: "Not all of the land areas within the MITT Study Area are included for analysis for potential impacts on seabirds and shorebirds…. Rota is excluded from the analysis because training activities on Rota occur in urban and developed settings, such as urban warfare exercises. Saipan is also not included in the analysis for seabirds and shorebirds, although this island supports occasional land training. The area identified for land training activities is the Marpi Maneuver Area, and it does not contain aquatic or marine habitats or terrestrial roosting habitats for seabirds or shorebirds."

The CD notes that the Micronesian megapode, listed as endangered under the US Endangered Species Act, does occur in the Marpi Maneuver Area in Saipan. More information on the effects of testing and training on the Micronesian megapode in Saipan is requested along with mitigation measures undertaken to protect this ESA listed species.

DCRM is also concerned that testing and training will negatively affect marine birds on Rota. Activities by low-flying (<3000 ft. above sea level) aircraft, including unmanned aircraft, over Rota may negatively affect nesting Mariana crows and Rota white-eyes, as a result of aircraft noise, vibration and fuel exhaust. DCRM recommends avoiding such activities on Rota.

Finally, although FDM is a federally leased island, the MITT could cause spillover effects. FDM is an important rookery location for a number of marine birds including black noddies, brown noddies, brown boobies, masked boobies, red-footed boobies, white terns, and great

frigate birds. These birds are migratory; MITT activities on FDM would likely lead to fewer birds traveling to other islands in the CNMI.

The CD notes several times that conservation measures are included in the Section 7 ESA consultation package submitted to the U.S. Fish and Wildlife Service. DCRM looks forward to seeing further mitigation in the Record of Decision for the MITT FEIS/OEIS once the Section 7 ESA consultation between the Navy and US FWS has concluded. DCRM requests that more monitoring is conducted and that data is shared with DCRM. Monitoring should include collecting population data and assessing population changes over the course of MITT activities, including an assessment of bird populations on Saipan, FDM, Tinian, and Rota.

**Effects on Marine Vegetation (§15-10-505 (c))**

The CD states: "Other marine resources, such as marine invertebrates, marine vegetation, fish, and marine habitats may be impacted by various stressors described in the MITT DEIS/OEIS. Terrestrial flora and fauna may also be impacted by the Proposed Action, which includes land training activities on Tinian, Saipan, Rota, and FDM."

Section 3.7 of the DEIS/OEIS repeatedly states that impacts to marine vegetation (including seagrasses) from increased turbidity would be minor. However, there are also potential impacts from vessel, anchor, or propeller strikes to seagrass beds. These actions could cause more serious damage through the uprooting of seagrass, with a much longer recovery period. The section even cites a study by Dawes et al. (1997) which reported recovery times of up to 10 years. A plan must be put into place to identify and address any serious damage that may occur, survey the recovery of marine vegetation, and provide mitigation for damage to seagrass beds.

**Effects on Marine Invertebrates (§15-10-505 (c))**

The CD states that: "Marine invertebrates, including corals, may be impacted by military training and testing activities in and around Tinian from multiple stressors"; however, "the incremental contribution of these stressors…was determined to be negligible". Although the increase in activities proposed under Alternative 1 may be incremental, DCRM notes that the cumulative effects on coral reefs over time may be severe. Further, although much of the proposed training occurs on federally leased lands, damaging corals on leased lands could have spillover effects, as coral reefs provide important habitat for wildlife (e.g. fish, coral larvae) that travel outside of leased lands and into the CNMI coastal zone.

Under Alternative 1 and Alternative 2, the DEIS/OEIS correctly states that "*Non-intermittent noise from testing activities (e.g., vessel noise) could mask reef noise. If this noise source overlapped with the larval settlement period, recruitment of larvae onto a reef habitat may be altered*". Disruptions in coral recruitment processes could result in population declines and shifts in community composition (Hughes and Tanner 2000), which is clearly inconsistent with a conclusion of no adverse effects of active acoustic sources on the coral species proposed for ESA listing. Military testing and training activities that may mask reef noise or otherwise create noise pollution in the vicinity of coral reefs should be limited

around annual coral mass spawning events. For Sections 3.8.3.1.2.2 and 3.8.3.3.1.2, these activities should not take place during the spawning periods for corals or soft corals.

Amphibious assaults and amphibious raids are proposed for Una Babui and Una Chulu, in the northwest of Tinian and Unai Dankulo in the northeast of Tinian. Although these beaches are on federally leased lands, damaging corals near these beaches could have damaging spillover effects, as coral reefs provide important habitat for wildlife (e.g. fish, coral larvae) that travel outside of leased lands and into the CNMI coastal zone. The near shore areas associated with these beaches are characterized by medium to medium-high habitat complexity and relatively high coral cover and diversity (Brainard et al. 2012). Baseline biological surveys need to be conducted in these areas to determine the presence and abundance of the coral species proposed for listing under the ESA. Amphibious assaults and raids should not occur in areas where these species are present or during annual coral spawning events. Near shore areas used for amphibious assaults and raids need to be monitored for acute and long term effects of increased turbidity, propeller wash, incidental strikes and other physical damage caused by vessels, bottom-crawling unmanned underwater vehicles and towed devices.

Further, the CD does not address affects to the coral reefs around FDM. Although FDM is a federally leased island, damaging the coral reefs surrounding FDM could result in spillover effects. The reefs around FDM provide habitat to fish and wildlife that travel in and out of FDM's coast. DCRM requests monitoring of coral abundance and the effect the MITT has on fish populations traveling in and out of FDM's coastal zone.

**Effects on Fish (§15-10-505 (c))**

The CD states that "Fish and fish habitats may be impacted by military training and testing in and around Tinian from multiple stressors", however, with mitigation measures "the Proposed Action is consistent to the maximum extent practicable". It is unclear from Chapter 5 of the DEIS/OEIS what these mitigation measures will be. There is no mention in the CD of how military actions will affect fish around the islands of Saipan, FDM, or Rota.

In the DEIS/OEIS, Section 3.9.4 "Summary of Potential Impacts on Fish" states that: "Navy research and monitoring efforts include data collection through conducting long-term studies in areas of Navy activity, occurrence surveys over large geographic areas, biopsy of animals occurring in areas of Navy activity, and tagging studies where animals are exposed to Navy stressors. These efforts are intended to contribute to the overall understanding of what impacts may be occurring overall to animals in these areas". The DEIS/OEIS does not state where these studies occurred, and whether they were in the study area. DCRM requests that these studies be cited and made available for review.

In light of Section 3.9.3.1.1.1 "*Direct Injury Explosives and Other Acoustic Sources*", DCRM requests that fish killed as a result of training activities are collected for sampling. This would provide local agencies with useful baseline data on species diversity and abundance within the affected areas.

In Section 3.9.3.4.2 "*Impacts from decelerators/parachutes*" the number of parachutes released is a concern. The DEIS/OEIS states that decelerators/parachutes are rare. But the number of expended parachutes would amount to greater than 5,000, which could cause hazards to fish populations including entanglement and damage to habitat.

Section 3.3.3.1.2 states near-bottom explosions in non-living essential fish habitat areas (EFHA) will be permanent but minimal. Permanent impacts should be mitigated.

**Effects on Terrestrial Species (§15-10-505 (c))**

The updated CD states that on Rota: "the Navy has determined that potential acoustic impacts associated with aircraft overflights may affect, but would not adversely affect, the Mariana crow and Mariana fruit bat".

The Mariana fruit bat (*Pteropusmariannus mariannus*) is listed as threatened or endangered under the CNMI DFW regulations and as threatened under the US Endangered Species Act. The Mariana fruit bat can be found on Saipan, Tinian, FDM and Rota within the MITT study area. The Rota Mariana fruit bat population has become increasingly important for recovery as bats on Guam have nearly disappeared. DCRM is particularly concerned that testing and training on Rota could have a detrimental effect on the Mariana fruit bat population as the Mariana fruit bat is extremely sensitive to disturbance events. More evidence is needed to show that acoustic impacts would not affect the Mariana fruit bat at the population level.

*Conclusion – Inconsistent, due to effects on marine mammals, sea turtles, marine birds, vegetation, marine invertebrates, fish, and terrestrial species.*

**d) Cumulative Environmental Impact (§15-10-505)**
*The proposed project site shall be selected in order to minimize adverse primary, secondary, or cumulative environmental impacts.*

As noted above, although the DEIS/OEIS looks at the cumulative impacts of the various components of the MITT, it does not look at the cumulative impacts of the MITT with other military activities in the study area. These activities include, but are not limited to, activities described in the Guam/CNMI relocation, divert airfield, and the CJMT.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**e) Future Development Options (§15-10-505)**
*The proposed project site shall not unreasonably restrict the range of future development options in the adjacent areas.*

The CD states that "any reasonably foreseeable effects would not hinder future development in adjacent areas". The MITT could negatively affect adjacent wildlife and habitat, which in

turn, could negatively affect the tourism industry which relies heavily on the CNMI's natural resources.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**f) Mitigation of Adverse Impact (§15-10-505)**
*Whenever practicable, adverse impact of the proposed project on the environment shall be mitigated. Mitigation shall include the incorporation of management measures for control of nonpoint source pollution.*

The CD repeatedly mentions the Section 7 ESA consultation between the Navy and the U.S. Fish and Wildlife Service. DCRM looks forward to the mitigation efforts resulting from these consultations. Currently, the measures listed in Chapter 5 of the DEIS/OEIS include: lookouts to spot marine mammals and sea turtles, avoiding precision anchoring as well as mine countermeasure and neutralization activities within 350 yards of shallow coral reefs, live hard bottom, artificial reefs, and shipwrecks. These mitigation measures do not do enough to protect the habitats and wildlife within the MITT Study Area in order to comply with § 15-10-305 (d)(f) and § 15-10-505(c).

One option, previously suggested by the CNMI Governor, is the creation of habitat protection areas which will exclude portions of the MITT Study Area from training and testing activities so as to better protect wildlife. Of absolute importance is an additional effort to acquire monitoring data, and to share this data and any ensuing reports with the CNMI Government.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**g) Cultural-historic and Scenic Values (§15-10-505)**
*Consider siting alternatives that promote the Commonwealth's goals with respect to cultural-historic and scenic values.*

The CD states that training and testing activities will not occur in areas of historical and cultural significance in Saipan or Rota. On Tinian, there are resources eligible to be on the National Register of Historic places within the Military Lease Area. DCRM recognizes that these areas are in the Military Lease Area and do not fall within the CNMI's Coastal Management Program. The CNMI does appreciate continued access to these areas and hopes the military will continue to allow access to these important cultural areas.

*Conclusion: Consistent*

**h) Watershed Conservation (§15-10-505)**

*In regard to site development...avoid development, to the extent practicable, of areas that are particularly susceptible to erosion and sediment loss; preserve areas that provide important water quality benefits and/or are necessary to maintain riparian and aquatic biota and/or protect to the extent practicable the natural integrity of water bodies and natural drainage systems.*

The CD states that, "The Proposed Action does not include construction of any kind; therefore, no areas will be disturbed in the coastal zone that would be susceptible to erosion and sediment loss." Although the MITT will not include construction, DCRM is concerned that the MITT will include activities that could increase erosion and sediment loss. DCRM requests further information to ensure that there is no erosion or sediment loss due to MITT activities.

*Conclusion: Insufficient information has been provided for DCRM to agree that the MITT activities are consistent with this regulation.*

**DEQ Water Quality Standards: Classification and Establishment of Water Use Areas and Specific Water Quality Criteria (Chapter 65-130)**

The CD organizes the MITT's water quality effects into the following categories: explosives and explosive byproducts, metals, chemicals, and other materials. The CD and DEIS/OEIS rely largely on dilution and settling of contaminants to keep water quality impacts within water quality standards. DCRM is concerned about localized effects and the possibility of bio-accumulation of toxins in marine life. DCRM requests ongoing monitoring of localized effects and bio-accumulation in wildlife in order to assess these effects.

DCRM is also concerned with the effects of ordinance use on FDM on mass wasting, vegetation loss, erosion, and sedimentation. Although FDM is a federally leased island, testing and training on FDM could lead to spillover effects. Coral reefs could be negatively impacted by sedimentation. Wildlife that travel in and out of FDM and are dependent on reefs for habitat could also be affected.

In Table 4 of the CD, the Navy reports that all water quality standards will be adhered to. DCRM requests baseline and ongoing monitoring to ensure this remains true as military activities expand in the region.

*Conclusion: Inconsistent – the Navy should consider localized and long-term effects of water quality contamination, and provide baseline and ongoing monitoring data.*

## V. Conclusion

In order for the Commonwealth to reconsider its finding, the Department of the Navy will need to modify its MITT proposal to mitigate impacts on CNMI coastal resources, wildlife and

habitats. DCRM's list of suggested measures can be found in Section I, page 2 of this letter. Implementing the measures listed would bring the MITT within the enforceable policies of the CNMI. DCRM, however, remains open to discussing specific measures and alternatives proposed by the Navy. The CNMI recognizes the needs of the U.S. military and looks forward to discussing ways the MITT can become consistent with the CNMI's enforceable policies.

If you have any questions about our position, please contact Megan Jungwiwattanaporn, Federal Consistency Specialist, Division of Coastal Resources Management, at 670-664-8311 or megan.jungwi@crm.gov.mp.

Sincerely,

for Fran Castro
Director, DCRM

**References**

Brainard, R.E., Asher, J., Blyth-Skyrme, V., Coccagna, E.F., Dennis, K., Donovan, M.K., Gove, J.M., Kenyon, J., Looney, E.E., Miller, J.E., Timmers, M.A., Vargas-Ángel, B., Vroom, P.S., Vetter, O., Zgliczynski, B., Acoba, T., DesRochers, A., Dunlap, M.J., Franklin, E.C., Fisher-Pool, P.I., Braun, C.L., Richards, B.L., Schopmeyer, S.A., Schroeder, R.E., Toperoff, A., Weijerman, M., Williams, I., & Withall, R.D. 2012. Coral reef ecosystem monitoring report of the Mariana Archipelago: 2003–2007. NOAA Fisheries, Pacific Islands Fisheries Science Center, PIFSC Special Publication, SP-12-01, 1019 p.

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DEPARTMENT OF THE NAVY
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IN REPLY REFER TO:
5090
Ser N465/1301
Dec 17, 2014

Ms. Fran Castro
Director
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CNMI Bureau of Environmental and Coastal Quality
Gualo Rai Center, Suite 201F
P.O. Box 10007
Saipan, MP 96950

Dear Ms. Castro:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

In accordance with the Federal Coastal Zone Management Act (CZMA) and 15 C.F.R. § 930, this letter responds to your October 7, 2014 review of the U.S. Navy's consistency determination for military activities within the Commonwealth of the Northern Mariana Islands (CNMI) coastal zone proposed in the Mariana Islands Training and Testing (MITT) Draft Environmental Impact Statement/Overseas Impact Statement.

In your letter, you found that the proposed MITT activities are not consistent with the enforceable policies of the CNMI Coastal Management Program and provided notice of your objection to the Director for the Office of Coastal Management under 15 C.F.R. § 930.43(c). Although the 90-day notice period expired on December 9, 2014, we have appreciated working with your office in that time and would like to continue to resolve our differences under 15 C.F.R. §930.43(d).

In the Navy's consistency determination, the MITT Proposed Action was analyzed in reference to the enforceable policies of the CNMI Coastal Management Program and the Navy concluded the Proposed Action is consistent to the maximum extent practicable with those policies. The additional information provided in Enclosure 1 should effectuate CNMI's concurrence with that

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

determination. Please provide your response to the enclosed information by January 15, 2015.

We appreciate your continued support. If you have any questions on this matter, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil.

Sincerely,

L. M. FOSTER
By direction

Enclosure: 1. Supplemental information to Support CZMA Consistency Determination for CNMI

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**Frank M. Rabauliman**
Administrator

**Frances A. Castro**
Director

January 20, 2015

Mr. John Van Name
Naval Facilities Engineering Command, Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

**Re. Federal Consistency Determination for Mariana Islands Training and Testing (MITT) Study Area (5090 Ser N465/1301)**

Dear Mr. Van Name:

The Commonwealth of the Northern Mariana Islands (CNMI) has completed its review of your December 17, 2014 letter providing additional information on the proposed activities in the Marianas Islands Training and Testing (MITT) study area. The CNMI previously found the activities of the MITT to be inconsistent with the enforceable policies of the CNMI Coastal Management Program. In light of the new information received, the CNMI is issuing a conditional concurrence for the MITT military activities.

The Department of the Navy submitted its final Federal Consistency Determination (CD) on September 11, 2014, and the CNMI replied on October 7, 2014 - finding that the MITT, as then described, was inconsistent with the enforceable policies of the CNMI. After receiving the Navy's December 17, 2014 letter, the CNMI and the Navy continued discussions to resolve our differences and agreed upon a January 20, 2015 due date for the CNMI's decision. The CNMI has appreciated working with the Navy over this time and the efforts the Navy has taken to explain the MITT.

The Navy is currently consulting with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) under Section 7 of the ESA. The Navy references these consultations several times in its CD and in its December 17 reply. The Section 7 consultations are a process separate from the Federal Consistency process and the promise of future conservation measures under a separate federal law do not necessarily fulfill federal consistency requirements. However, the CNMI recognizes that for the threatened and endangered species on

and around Saipan, Rota, Tinian, and FDM, the federal consultation process is likely to provide sufficient protection for the purposes the CNMI's Coastal Management Program.

During its discussions with the Navy, the CNMI also raised concerns regarding military activities on Saipan, Tinian, and Rota. The Navy addressed the following concerns:

- **Military activities on Saipan:**
  The CNMI was concerned that military activities on Saipan could negatively affect local lifestyles, tourism, and wildlife habitats. Marpi is public land, not leased to the military, and the CNMI was concerned that military activities could hinder access and damage habitat. However, given the small size of the planned trainings and the Navy's willingness to coordinate with local authorities, DCRM believes MITT trainings on Saipan could be conducted with minimal impact.

  The Navy clarified that military activities on Saipan would occur in the "Cowtown" area of Marpi, and would involve one to two dozen individuals training at a time. "Urban warfare training" would consist of maneuvering in the existing environment with no construction or clearing taking place. There would be no use of helicopters in the Marpi area. All activities would be coordinated with local authorities and notice would be given to the public ahead of time. Limestone forests would be avoided to limit effects to sensitive bird species in the Marpi area.

  *Condition:* Training on Saipan will be limited to the area around Cowtown and trainings will not significantly exceed two dozen individuals at a time. Helicopters will not be used in Marpi and no construction will occur. As outlined in the CD, trainings on Saipan will be coordinated with local authorities. Given these conditions the Navy will be consistent with § 15-10-505 (c)(e)(f) of the Northern Mariana Islands Administrative Code (NMIAC).

- **Military activities on Rota:**
  The CNMI was concerned about the impact military trainings would have on Rota. The Navy reiterated that amphibious raids on Rota would not involve amphibious assault vehicles. Rather, landings would involve swimming or rubber craft (similar to zodiacs). The Navy reiterated that trainings would be infrequent and would be coordinated with local authorities. The Navy further explained that Section 7 talks with USFWS could include no-go areas to protect the Marianas fruit bat.

  *Condition:* Given successful Section 7 negotiations with USFWS and continued consultations with local authorities prior to trainings, DCRM considers the Navy consistent with §15-10-310 of the NMIAC.

- **Coral Spawning:**

A mass coral spawning event occurs near Tinian after the July full moon for 7-10 days each year. This is an important time for coral reproduction and coral health in the CNMI. The Navy stated in its December 17, 2014 letter that "Training schedules are based on deployment schedules and evolving events. Training schedules cannot be tailored to avoid seasonal coral spawning." This is not sufficient reason to negatively impact coral health in the CNMI. However, in follow-up discussions the Navy further explained that any training occurring during the mass coral spawning would have a negligible effect. The Navy has indicated that the primary activity occurring during the coral spawning will be landings of combat swimmer and inflatable boats.

*Condition*: Navy trainings must not significantly affect the mass coral spawning event off of Tinian. In accordance with § 65-130-530(b)(3) of the NMIAC, activities creating sediment plumes that could adversely affect coral reproduction are to be stopped for the duration of the coral spawning. If Navy activities do not create a significant sediment plume, then there will be no need for a stoppage period. However, if the Navy determines activities will generate a significant sediment plume, the Navy should inform the CNMI so a work stoppage can be implemented. Care should also be taken to avoid significant acoustic affects to the coral during the spawning period.

- **Sea Turtles on Tinian**:
  The Navy had previously proposed using amphibious vehicles for amphibious warfare activities on several of Tinian's sea turtle nesting beaches. The CNMI was concerned that amphibious landings would crush sea turtle nests and affect local sea turtle populations. The Navy has since informed the CNMI that the beaches on Tinian are ill suited for mechanized landings under the MITT, and that there will be no tracked vehicles landing on Tinian's beaches under the MITT.

  *Condition*: There will be no mechanized tracked vehicles on Tinian's beaches under the MITT. Given this condition the Navy will be consistent with §15-10-505(c).

- **Historical Sites on Tinian:**
  The CNMI is concerned that increased military activity on Tinian could lead to a decrease in public access to popular beaches and historical sites, including the atomic bomb pits and Able Runway. The Navy assured the CNMI that under the MITT there would not be a significant increase in closures as compared to the past few years. The Navy further stated that closures of beaches and historical sites would be avoided as much as practicable and that closures would be conducted in cooperation with local authorities. The CNMI remains concerned that increased military activities on Tinian, including the upcoming CJMT, could affect public access to historical sites. However, this concern is addressed by the Navy's assurances that closures will not increase from the historical level of closures.

*Condition*: There will be no significant increase in closures of popular beaches and historical sites, including the atomic bomb pits and Able Runway, under the MITT. As stated in the CD, closures will be conducted in cooperation with local authorities. Given these conditions the Navy will be consistent with §15-10-305(h).

The CNMI appreciates the additional information provided by the Navy in its December 17, 2014 letter and in follow-up conversations thereafter. Given that the Section 7 ESA consultations are successful, and that the above conditions are met, the CNMI considers the MITT to be consistent with the CNMI's enforceable policies.

The Government of the CNMI recognizes the needs of the U.S. military and the importance of military training. Pursuant to 15 C.F.R. § 930.4 a conditional concurrence automatically becomes an objection if the conditions are not agreed to. The CNMI hopes the statements in this letter accurately reflect the discussions held with the U.S. Navy. We appreciate the time the Navy has taken to discuss the MITT and resolve our differences under 15 C.F.R. § 930.43(d).

If you have any questions about our position, please contact Megan Jungwiwattanaporn, Division of Coastal Resources Management, at 670-664-8311 or megan.jungwi@crm.gov.mp.

Sincerely,

Fran Castro
Director, DCRM

Cc:

| | |
|---|---|
| Jeffrey Payne | Acting Director Office for Coastal Management, NOAA |
| Eloy Inos | Governor, CNMI |
| J.P. San Nicolas | Mayor, Tinian |
| Mertie Kani | Acting Director, Historic Preservation Office |
| Richard Seman | Acting Secretary, Department of Lands and Natural Resources |
| Patricia Rasa | Acting Secretary, Department of Public Lands |
| Frank Rabauliman | Administrator, Bureau of Environmental and Coastal Quality |

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IN REPLY REFER TO:
5090
Ser N465/0244
Mar 12, 2015

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Dear Ms. Castro:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

In accordance with the Federal Coastal Zone Management Act (CZMA) and 15 C.F.R. § 930, this letter responds to your January 20, 2015 Conditional Concurrence of the U.S. Navy's consistency determination (CD) for military readiness activities within the CNMI coastal zone proposed in the Mariana Islands Training and Testing (MITT) Draft Environmental Impact Statement/Overseas Impact Statement (DEIS/OEIS).

The Navy concluded that the MITT Proposed Action is fully consistent with the enforceable policies of the CNMI Coastal Management Program. We have appreciated working with your office throughout this process. In light of Mr. John Van Name's conversation on March 4, 2015, and subsequent email with Ms. Megan Jungwiwattanaporn on March 6, 2015, we understand that your office concurs that the proposed MITT activities as clarified below are consistent with the enforceable policies.

**Condition that Section 7 Consultations be Complete:**

We will complete consultation with US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) before MITT activities commence.

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

**Conditions for Military Activities on Saipan:**

*"Training on Saipan will be limited to the area around "Cowtown" and trainings will not significantly exceed two dozen individuals at a time. Helicopters will not be used in Marpi and no construction will occur. As outlined in the CD, trainings on Saipan will be coordinated with local authorities. Given these conditions the Navy will be consistent with § 15-10-505(c)(e)(f) of the Northern Mariana Islands Administrative Code (NMIAC)."*

There is no intention to conduct construction activities or use helicopters during training activities within Marpi. If these activities are contemplated in the future, appropriate ESA consultation would be required. While training will be limited to the area around "Cowtown", the Saipan Army National Guard could have a requirement to train greater than "two dozen" individuals at a time. However, regardless of the exact number of individuals involved, all training activities will be conducted in accordance with the protective measures set forth in issued USFWS Biological Opinion, will be coordinated with local authorities, and will remain consistent with § 15-10-505.

**Conditions for Military Activities on Rota:**

*"Given successful Section 7 negotiations with USFWS and continued consultations with local authorities prior to trainings, DCRM considers the Navy consistent with § 15-10-310 of the NMIAC"*

Agree. As discussed above, Section 7 ESA consultation with USFWS will be completed, and we will continue to coordinate all training activities with local authorities.

**Conditions for Coral Spawning on Tinian:**

*"Navy trainings must not significantly affect the mass coral spawning event off of Tinian. In accordance with § 65-130-530(b)(3) of the NMIAC, activities creating sediment plumes that could adversely affect coral reproduction are to be stopped for the duration of the coral spawning. If Navy activities do not*

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

*create a significant sediment plume, then there will be no need for a stoppage period. However, if the Navy determines activities will generate a significant sediment plume, the Navy should inform the CNMI so a work stoppage can be implemented. Care should also be taken to avoid significant acoustic affects to the coral during the spawning period."*

As discussed, Navy analysis determined that training events on and around Tinian and the physical and acoustic stressors related to those activities, including the generation of turbidity, will only have a negligible impact on coral spawning. As ESA Section 7 consultation with NMFS is not yet complete, Navy will revisit its conclusion if the pending Biological Opinion determines otherwise. However, the Navy has received no indication that NMFS analysis will contradict the Navy's findings.

In addition, § 65-130-530(b)(3) of the NMIAC applies to mixing zones and associated conditions relevant to "dredging activities, the discharge of dredged or fill material, or other in-water, construction-related activities". As the military is not proposing any dredging or construction-related activities under the MITT, § 65-130-530(b)(3) of the NMIAC is not applicable. The proposed MITT activities are consistent with the applicable enforceable policies of CNMI.

**Conditions for Sea Turtles on Tinian:**

*"There will be no mechanized tracked vehicles on Tinian's beaches under the MITT. Given this condition the Navy will be consistent with§ 15-10-505(c)."*

Concur. The utilization of mechanized tracked vehicles during amphibious beach landings under the MITT has been deferred. Appropriate consultations will be initiated to support any future plans to conduct this activity, if such a need arises.

**Conditions for Historical Sites on Tinian:**

*"There will be no significant increase in closures of popular beaches and historical sites, including the atomic bomb pits and Able Runway, under the MITT. As stated in the CD,*

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING ACTIVITIES WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

*closures will be conducted in cooperation with local authorities. Given these conditions the Navy will be consistent with § 15-1 0-305(h)."*

Concur. The military will continue to coordinate with local authorities to minimize public access restrictions to Tinian beaches and historic sites.

Per our discussions with your office on March 4, 2015, we are confident that DCRM agrees that, with clarification regarding the numbers of Reservists within Marpi and the non-applicability of § 65-130-530, the MITT is consistent to the maximum extent practicable with the CNMI's enforceable policies.

We appreciate your continued support. If you have any questions on this matter, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil.

Sincerely,

L. M. FOSTER
By direction

Copy to (w/o encl):
CNO (N454)
COMNAVAIRSYSCOM PATUXENT RIVER, MD (AIR-1.6)
COMNAVSEASYSCOM WASHINGTON, DC (SEA 04)
ONR 3220A
NAVFAC PAC (EV)
COMMANDER, JOINT REGION MARIANAS

4

# D.3 2020 MITT SEIS/OEIS

## D.3.1 GUAM

### D.3.1.1 Navy Consistency Determination Notice Letter

DEPARTMENT OF THE NAVY
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N465/1462
December 09, 2019

Mr. Tyrone J. Taitano
Director
Bureau of Statistics and Plans
P.O. Box 2950
Hagatna, Guam 96932

Dear Mr. Taitano:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING WITHIN THE GUAM COASTAL ZONE

In accordance with the Federal Coastal Zone Management Act (CZMA) and 15 C.F.R. Part 930, the U.S. Navy submits the enclosed Federal Consistency Determination (CD) for proposed activities in the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable coastal effects on the coastal use or resources of Guam.

Based on the enclosed consistency determination and the activities and analysis contained in the enclosed Draft Supplemental Environmental Impact Statement/Overseas Impact Statement (DSEIS/OEIS), the Navy finds that the proposed military training and testing activities presented in Alternative 2 are consistent to the maximum extent practicable with the enforceable policies of the Guam Coastal Management Program.

We look forward to your timely review of and concurrence with the Navy's determination. If you have any questions, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil or Ms. Suzanne Smith at (808) 471-4696 or suzanne.smith3@navy.mil.

Sincerely,

DANIEL McNAIR
Director, Fleet Environmental Readiness
By direction of the Commander

Enclosures: (1) CD for Guam
(2) CDROM – MITT DSEIS/OEIS

Copy to: COMNAVREGMARIANAS (w/o enclosure)
OPNAV N45 (w/o enclosure)

### D.3.1.2 Government of Guam Response Letter

Lourdes A. Leon Guerrero
Governor of Guam

Joshua F. Tenorio
Lieutenant Governor

BUREAU OF STATISTICS & PLANS
SAGAN PLANU SIHA YAN EMFOTMASION
Government of Guam
P.O. Box 2950 Hagåtña, Guam 96932
Tel: (671) 472-4201/3
Fax: (671) 477-1812

Tyrone J. Taitano
Director
Matthew Santos
Deputy Director

MAR 0 6 2020

John C. Aquilino
Commander
United States Pacific Fleet
Department of the Navy
250 Makalapa Drive
Pearl Harbor, Hawaii 96860

RE: Coastal Zone Management Act (CZMA) Federal Consistency Review for Department of the Navy's proposed activities in Mariana Islands Training and Testing (MITT) Study Area *(GCMP FC No. 2020-0001)*

*Hafa adai!* The Guam Coastal Management Program of the Bureau of Statistics and Plans (Bureau) has completed its review of the Federal Consistency Determination by the Department of the Navy received on January 8, 2020. The Department of the Navy ("the federal agency") has submitted its consistency determination relative to its proposed activities in Mariana Islands Training and Testing (MITT) Study Area.

The Bureau coordinated this review with partnering agencies, provided Public Notice, and received comments from Senator Sabina F. Perez, the Guam Environmental Protection Agency (GEPA), the Guam Waterworks Authority, the Department of Agriculture, and the Department of Parks and Recreation. Furthermore, the Bureau hereby concurs with the federal agency's determination that the proposal is consistent with the enforceable policies of the Bureau's Guam Coastal Management Program (GCMP) based upon the following comments and conditions:

**Resource Policy. Conservation of Natural Resources—Overall Policy.** *The value of Guam's natural resources as recreational areas, critical marine and wildlife habitats, the major source of drinking water, and the foundation of the island's economy shall be protected through policies and programs affecting such resources.*

According to the Draft Supplemental EIS/OEIS, the proposed activity is expected to result in the equivalent of at least 151,918 metric tons of carbon dioxide emissions per year (which would total 759,590 metric tons of carbon dioxide equivalent emissions over 5 years). As climate change is expected to result in sea level rises, potentially more damaging tropical storms, a reduction in the recharge rate of the Northern Guam Lens Aquifer, and other environmental and societal

impacts, substantial increases in greenhouse gas emissions provide impacts in several of the different elements of this policy for the conservation of natural resources.

Pursuant to this resource policy, the federal agency is hereby advised to consider mitigation strategies to reduce the net carbon dioxide equivalent emissions of the proposed action, to the maximum extent practicable, which could include methods of reducing carbon dioxide equivalent emissions or methods of capturing carbon dioxide equivalent emissions through natural or other processes.

**Resource Policy 1. Air Quality.** ***All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality.***

The federal agency's proposed actions are estimated to increase annual emissions from criteria pollutants within the study area of 77 tons per year for nitrogen oxide and 78 tons per year for carbon monoxide under Alternative 1 or 78 tons per year for nitrogen oxide and 79 tons per year for carbon monoxide under Alternative 2, both compared to baseline emissions. These are under the 250 ton per year prevention of significant deterioration (PSD) thresholds. Other criteria pollutants have significantly lower additional output under both alternatives. The federal agency further finds that the quantities of hazardous pollutants released would result in negligible quantities of hazardous air pollutants in localized areas not publicly accessible. According to the Draft Supplemental EIS/OEIS, the proposed activity is expected to result in the equivalent of at least 151,918 metric tons of carbon dioxide emissions per year (which would total 759,590 metric tons of carbon dioxide equivalent emissions over 5 years).

The conclusion based upon the detailed stressor analysis in the Draft Supplemental EIS/OEIS that air pollution is minimal, intermittent and short-term does not adequately address cumulative impacts of repeated exposure of the population to criteria air or hazardous pollutants and the potential health impacts. Moreover, the analysis does not adequately evaluate cascading and cumulative impacts of the deposition of air pollutants on land, water, terrestrial and aquatic organisms and the ecosystem.

Pursuant to Resource Policy 1, Air Quality, the federal agency shall, to the maximum extent practicable:

(1) be advised to establish an empirical baseline for the health of the population which are in or near the most likely areas to experience effects from repeated exposure to air pollution due to the proposed activities in or near the coastal zone and conduct occasional monitoring of the health of the population within the likely affected areas. If findings indicate significant deterioration of the health of the most likely affected populations, the federal agency should coordinate its response with local agencies.

(2) be advised to establish an empirical baseline for the health of terrestrial and aquatic species which are in or near the most likely areas to

experience effects from repeated exposure to air pollution due to the proposed activities in or near the coastal zone and conduct occasional monitoring of the health of such species within the likely affected areas. If findings indicate significant deterioration of the health of terrestrial or aquatic species, the federal agency should coordinate its response with local agencies.

**Resource Policy 2. Water Quality.** *Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuarine, reef and aquifer areas.*

The federal agency stated in its consistency determination that activities including the use of explosives and explosion byproducts, military materials with metal components, and chemicals other than explosives would occur in federally owned submerged land, or more than 3 NM offshore, thus outside of Guam's coastal zone. Impacted sediments and water quality would only be immediately adjacent to the munitions, hence activities would have no significant effect on sediments and water quality within Guam's coastal zone. Furthermore, the Navy concluded that neither state nor federal standards or guidelines would be violated by the chemical, physical, or biological changes in sediment or water quality measurable at the detonation site.

The federal agency should continue to conduct water quality impact analysis to determine that explosives and explosive byproducts, metals and other materials expended during training and testing described in the MITT Final Supplemental EIS/OEIS would not exceed regulatory thresholds and guidelines [Sediment characterization methods in Guam Water Quality Standards (2017) and USEPA established criteria for concentrations of explosives, explosive byproducts and metal in saltwater] established for measuring impacts on sediment and water quality.

GEPA has expressed its concern that there was no discussion of marine debris cleanup as a result of the MITT activities once completed. The MITT Final EIS/OES 2015 (p. 3.1-55) discusses other materials as follows: Other military expended materials include plastics, marine markers, flares, and chaff. Some expended plastics from training and testing activities are unavoidable because they are used in ordnance or targets. (Although plastics are resistant to degradation, they do gradually break down into smaller particles because of sunlight and mechanical wear [Law et al. 2010]. Thompson et al, [2004] found that microscopic particles were common in marine sediments at 18 beaches around the United Kingdom. They noted that such particles were ingested by small filter and deposit feeders, with unknown effects.) Targets, however, would typically be recovered following training and testing activities. Chaff fibers are composed of nonreactive metals and glass, and would be dispersed by ocean currents as they float and slowly sink toward the bottom. The fine, neutrally buoyant chaff streamers would act like particulates in water, temporarily increasing the turbidity of the ocean's surface. The chaff fibers could quickly disperse, and turbidity readings would return to normal.

Section 2 of the 2019 MITT Draft Supplemental EIS/OEIS describes the annual Proposed Action and Alternatives. However, the MITT has a five-year term. Cumulative impacts of the Range activities, in terms of the amount of Ordnance (or other expended items, if any) should be considered over five years, on-going versus Alternative 1 and Alternative 2. Tables 2.5-1 and 2.5-2 compare the proposed SEIS/OEIS action alternatives with on-going training and testing activities. Each table describes the activities in terms of the activity name and where in the Study Area the federal agency proposes to conduct it. The next two columns show the annual occurrence and ordnance or other expended items (if any) involved in the activity as is currently ongoing (under the heading "2015 MITT EIS/OEIS Ongoing Activities"). The final two pairs of columns present the same information (annual occurrence and ordnance/items) as the activities are analyzed in the 2019 Supplemental EIS/OEIS for Alternative 1 and Alternative 2, respectively. As an example, page 2-33 has a Surface Warfare range activity located 12 NM from land. Ongoing activities list 242 events per year (1,210 over 5 years) and 48,040 small caliber rounds annually (or 240,200 small caliber rounds over 5 years) The number of rounds increases in the Alternative 1 & 2 scenarios by 128,400 small caliber rounds annually or 642,000 small caliber rounds over 5 years. The narrative in Section 4.4.1, Sediment and Water Quality, concludes that proposed changes in training and testing activities under Alternative 1 or Alternative 2 would be negligible.

In the 2019 Supplemental MITT, Section 3.1.2.3 Other Materials explains that detonations, explosions, and other activities may result in dispersal of glass, carbon fibers, plastics, rubber, steel, iron, concrete, etc. There is no discussion of any effort to clean up the marine debris as a result of the proposed activities.

In the 2019 Supplemental MITT, Section 5.1.2.2.1.1 Adaptive Management states that the adaptive management process is to help the federal agency have better knowledge of ecological systems. The process involves technical review meetings and ongoing discussions between the Department of the Navy, National Marine Fisheries Service, the Marine Mammal Commission, and other experts in the scientific community.

Pursuant to Resource Policy 2, Water Quality, the federal agency shall, to the maximum extent practicable:

(1) be advised to provide a map delineating the proposed Agat Bay and Piti underwater Mine Warfare detonation sites to the Bureau and Guam Environmental Protection Agency to clarify that those sites are outside of Guam's coastal zone, as represented.

(2) continue to conduct water quality impact analysis to determine that explosives and explosive byproducts, metals and other materials expended during training and testing described in the MITT Final Supplemental EIS/OEIS would not exceed regulatory thresholds and guidelines [Sediment characterization methods in Guam Water Quality Standards (2017) and USEPA established criteria for concentrations of explosives, explosive byproducts and metal in saltwater] established for measuring impacts on sediment and water quality.

(3) be advised to provide information on planned cleanup activities, if any, for marine debris to the Bureau and GEPA.
(4) be advised to include local stakeholders or local natural resource managers such as GEPA, Guam Department of Agriculture, and the Bureau.

**Resource Policy 3. Fragile Areas.** *Development in the following types of fragile areas shall be regulated to protect their unique character.*

- *historical and archeological sites*
- *wildlife habitats*
- *pristine marine and terrestrial communities*

As stated in the 2019 MITT Draft Supplemental EIS/OEIS, activities involving vessels and in-water devices are not intended to contact the seafloor. This would include amphibious and expeditionary events such as Amphibious Assaults, Amphibious Raids, Personnel, Insertion/Extraction/ and Underwater Surveys, which are proposed to continue in this SEIS/OEIS. As is current practice, coral and other hard bottom habitats would continue to be avoided to the greatest extent practical under the Proposed Action (see Section 2.3.3, Standard Operating Procedures and Chapter 5 – Mitigation). However, combat swimmers and Marines may be required to walk through nearshore areas during these activities. For example, as the boat approaches a beach, Marines may be required to exit the boat, stand up, and walk through the shallow water habitats. GEPA noted that in previous assaults on Guam, it has been observed that physical damages, including corals crushed or turned over, from these training activities occurred. As discussed in Section 5.4.1 (Mitigation Areas for Seafloor Resources), the Navy will implement mitigation to avoid or reduce impacts from precision anchoring and military expended materials on seafloor resources in mitigation areas throughout the Study Area.

Portions of the study area include marine communities. The Guam Department of Agriculture's Division of Aquatic and Wildlife Resources (DAWR) is the responsible local agency with the responsibility for protecting aquatic and wildlife resources, including marine preserves and sensitive areas.

Pursuant to Resource Policy 3, Fragile Areas, the federal agency shall, to the maximum extent practicable:

(1) be advised that any and all construction that is related to the proposed activities may be subject to permitting by GEPA and such permitted activity shall meet all relevant requirements of GEPA regulations and permitting by U.S. Army Corps of Engineers and subject to further federal consistency review.
(2) be advised to instruct swimmers and Marines to exercise caution when interacting with sensitive marine environments.
(3) be advised to communicate with DAWR in regards to planned activities involving sensitive areas.
(4) be advised to establish a coral damage response plan, which includes triage, restoration, and subsequent monitoring.

**Resource Policy 4. Living Marine Resources.** *All living resources within the territorial waters of Guam, particularly corals and fish, shall be protected from over harvesting and, in the case of marine mammals, from any taking whatsoever.*

GEPA finds that the proposed federal agency activities are consistent with the GCMP resource policies for marine invertebrates. Benthic invertebrates of the reef crest or flat, such as crabs, clams, and polychaete worms, within the disturbed area could be displaced, injured, or killed during amphibious operations. GEPA notes that the federal agency notifies local regulatory agencies of upcoming underwater Mine Detonation activities within Outer Apra Harbor and Agat Bay. Neither the public nor the regulatory agencies receive any form of after-action reporting on the outcome of these activities, specifically if any environmental damages occurred. There is not a current mechanism to evaluate whether the activities, quantities, and reported impacts met or exceeded the anticipated levels.

The Department of Agriculture finds that the presence of ESA-listed sperm whales is well-documented within 3-5 NM offshore in the Agat area. Recently there have been multiple instances of whale strandings, raising the concern that additional explosive impacts or sonar activities may result in an intensification of similar occurrences. Increased boat activity greatly increases the potential for boat strike of sperm whales. Navy lookouts undergo extensive training in order to qualify as a watch stander. The effectiveness of watch standers should be evaluated.

The Department of Agriculture is concerned about the impact of landing craft exercises on the dolphins that reside in Agat Bay. The federal agency has contended that there are unavoidable impacts and recognizes the common occurrence of spinner dolphins within Agat Bay and developed mitigation measures in consultation with the National Marine Fisheries Service under provisions of the Marine Mammal Protection Act. Beachmasters are shore-based observers with binoculars whose sole purpose is to ensure the safety of craft including avoidance of marine and terrestrial animals. Beachmasters are to work with environmental monitors and natural resource managers. The effectiveness of beachmasters should be evaluated.

While there is discussion of metals which will be introduced into the natural aquatic environment as a result of activities as well as bioaccumulation of pollutants in aquatic species, the possibility of biomagnification is not introduced into the discussion of potential impacts. Bioaccumulation is the accumulation of toxic chemicals in the tissues of an organism, while biomagnification is the increasing concentration of toxic chemicals for animals which are higher on the "food chain." This tends to mean that the highest concentrations of toxic chemicals which are capable of bioaccumulation may occur in aquatic animals that are apex predators. For this reason, one may expect that where bioaccumulation occurs that higher concentrations might be found in predatory fish such as mahi, various species of tuna, etc.

Pursuant to Resource Policy 4, Living Marine Resources, the federal agency shall, to the maximum extent practicable:

(1) be advised to provide some form of report outlining Mine Detonation activities and highlighting any issues regarding water quality, fish kills, protected species sightings, and marine debris to the public and/or local regulatory agencies.

(2) be advised to establish a standard operating procedure to resume, at least biannually, pre-coordination meetings on Mine Detonation activities with regulatory agencies.

(3) be advised to produce an annual report summarizing activities identified in the MITT to indicate whether activities and quantities reported in the MITT are met or exceeded and reporting on environmental impacts of such activities.

(4) refrain from taking any non-pelagic fishes within the Piti Marine Preserve Area.

(5) be advised to clarify and analyze the potential effects to marine animals and habitats from underwater demolition, including habitat mapping in a more detailed manner, identification of the cetacean species that utilize the proposed area, and include impacts to sea turtles.

(6) not engage in any takings of endangered species.

(7) be advised to evaluate the effectiveness of watch standers and beachmasters in their ability to detect marine mammals, such as sperm whales.

(8) be advised to investigate whether there is a connection between military training activities conducted in or near Guam and whale strandings. If there is found to be a likely connection between training and whale strandings, then the federal agency is advised to adjust its standard operating procedures to reduce the likelihood of continued adverse impacts to whales in the waters around Guam.

(9) be advised to establish an empirical baseline for the health of aquatic species for which biomagnification cause higher concentrations of toxic chemicals, especially those which are commonly used for fishing purposes. If findings indicate significant increases in toxic chemicals in the species of aquatic species, the federal agency should coordinate its response with local agencies.

**Resource Policy 7. Public Access.** *The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all territorial recreation areas, parks, scenic overlooks, designated conservation areas and their public lands; and agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.*

Previous proposed military activities have indicated the closure of fishing areas such as Ritidian and Pati Point. Further restrictions on access to fishing areas within territorial waters, whether by actions inside or outside of the coastal zone, due to training activities within territorial waters must be mitigated. Other boaters, including divers and other recreational users frequent many areas within the MITT study area. There is no clear indication of how extensive closures will be.

Access to reefs and seashore areas can sometimes be accomplished merely by passage within the coastal zone, but sometimes passage over federally owned submerged lands, including surface danger zones, may be required due to the freeflowing nature of the coastal marine environment and the impracticality of passage outside of the 3 or more NM contour, as the case may be, in order to access territorial waters for the purpose or recreation, fishing, or for other reasons.

Pursuant to Resource Policy 7, Public Access, the federal agency shall, to the maximum extent practicable:

(1) clarify the period lengths of time for which closure of access to territorial waters may occur and to propose mitigation to compensate for loss of access.
(2) establish standard operating procedures that will avoid, where possible, or minimize, where unavoidable, disruption of public access to reefs and seashore areas.
(3) propose one or more mitigation measures to compensate for unavoidable disruption of public access to reefs and seashore areas, whether for fishing or for other purposes.

Therefore, based on the conditional concurrence stated above and the Bureau's review of all other information submitted, we find the application to be consistent with the approved development and resource policies of the Guam Coastal Management Program (GCMP), in accordance with the Coastal Zone Management Act of 1972, (P.L. 92-583) as amended, (P.L. 94-370). The Federal Consistency concurrence, however, does not preclude the need for securing other federal and Government of Guam permits, clearances and approvals prior to the start of this project.

Per 15 CFR §930.4(b), if the requirements for conditional concurrences specified in 15 CFR §930.4(a), (1) through (3), are not met, then all parties shall treat this conditional concurrence letter as an objection pursuant to 15 CFR Part 930 subpart D. Furthermore, if an objection is determined, you are hereby notified that, pursuant to 15 CFR §930.63(e) and 15 CFR Part 930, subpart H, you have the opportunity to appeal an objection resulting from not meeting the requirements of 15 CFR §930.4(a), (1) through (3), to the Secretary of Commerce within 30 days after receiving this conditional concurrence letter, or 30 days after receiving notice from the Federal agency that your application will not be approved as amended by the conditions required by this concurrence.

The proposed action shall be operated and completed as represented in the Coastal Zone Management (CZM) federal consistency determination. Significant changes to the subject proposal shall be submitted to the Bureau for review and approval and may require a full CZM federal consistency review, including publication of a public notice and provision for public review and comment. This condition is necessary to ensure that the proposed actions are implemented as reviewed for consistency with the enforceable policies of GCMP. Guam Land Use

policies (E.O. 78-37), are the federally approved enforceable policies of GCMP that applies to this condition.

Please do not hesitate to contact Mr. Julian Janssen, Federal Consistency Coordinator at 475-9664 or email julian.janssen@bsp.guam.gov or Mr. Edwin Reyes, Coastal Program Administrator at 475-9672 or email edwin.reyes@bsp.guam.gov. *Si Yu'os Ma'ase'.*

Sincerely,

TYRONE TAITANO
Director

Attachments

Cc: NOAA-OCM
GEPA
GWA
DoAgr-DAWR
DLM
DPR-SHPO
DPW

## D.3.2 COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

### D.3.2.1 Navy Consistency Determination Notice Letter

**DEPARTMENT OF THE NAVY**
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N465/1491
December 16, 2019

Mr. Arthur Charsauros
Director
Division of Coastal Resources Management
Bureau of Environmental and Coastal Quality
P.O. Box 501304, Saipan, MP 96950

Dear Mr. Charsauros:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

In accordance with the Federal Coastal Zone Management Act and 15 C.F.R. § 930, the U.S. Navy submits the enclosed Federal Consistency Determination (CD) for proposed activities in the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable coastal effects on the coastal zone of the Commonwealth of the Northern Mariana Islands (CNMI).

Based on the enclosed consistency assessment and the activities and analysis contained in the enclosed Draft Supplemental Environmental Impact Statement/Overseas Impact Statement (DSEIS/OEIS), the Navy finds that the proposed military training and testing activities presented in Alternative 2 are consistent to the maximum extent practicable with the enforceable policies of the CNMI Coastal Resource Management Program.

If you have any questions, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil or Ms. Suzanne Smith at (808) 471-4696 or suzanne.smith3@navy.mil.

Sincerely,

DANIEL McNAIR
Director, Fleet Environmental Readiness
By direction of the Commander

Enclosures: 1. CD for the CNMI
2. CDROM – MITT DSEIS/OEIS

Copy to:
COMNAVREGMARIANAS (w/o enclosure)
OPNAV N45 (w/o enclosure)
MS. GLENNA SP REYES, DIRECTOR, BUREAU OF MILITARY AFFAIRS, OFFICE OF THE GOVERNOR COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS, JUAN A. SABLAN MEMORIAL BUILDING, CALLER BOX 10007, SAIPAN, MP 96950 (w/enclosures)

DEPARTMENT OF THE NAVY
COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N465/1492
December 16, 2019

Ms. Glenna SP Reyes
Director, Bureau of Military Affairs
Office of the Governor
Commonwealth of the Northern Mariana Islands
Juan A. Sablan Memorial Building
Caller Box 10007
Saipan, MP 96950

Dear Ms. Reyes:

SUBJECT: CONSISTENCY DETERMINATION FOR MILITARY TRAINING AND TESTING WITHIN THE COASTAL ZONE OF THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

In accordance with the Federal Coastal Zone Management Act and 15 C.F.R. § 930, the U.S. Navy submits the enclosed Federal Consistency Determination (CD) for proposed activities in the Mariana Islands Training and Testing (MITT) Study Area that have reasonably foreseeable coastal effects on the coastal zone of the Commonwealth of the Northern Mariana Islands (CNMI).

Based on the enclosed consistency assessment and the activities and analysis contained in the enclosed Draft Supplemental Environmental Impact Statement/Overseas Impact Statement (DSEIS/OEIS), the Navy finds that the proposed military training and testing activities presented in Alternative 2 are consistent to the maximum extent practicable with the enforceable policies of the CNMI Coastal Resource Management Program.

If you have any questions, please contact Mr. John Van Name at (808) 471-1714 or john.vanname@navy.mil or Ms. Suzanne Smith at (808) 471-4696 or suzanne.smith3@navy.mil.

Sincerely,

DANIEL McNAIR
Director, Fleet Environmental Readiness
By direction of the Commander

Enclosures: 1. CD for the CNMI
2. CDROM - MITT DSEIS/OEIS

Copy to:
COMNAVREGMARIANAS (w/o enclosure)
OPNAV N45 (w/o enclosure)
MR. ARTHUR CHARSAUROS, DIRECTOR, DIVISION OF COASTAL RESOURCES MANAGEMENT
BUREAU OF ENVIRONMENTAL AND COASTAL QUALITY, P.O. BOX 501304, SAIPAN, MP 96950
(w/enclosures)

### D.3.2.2 Commonwealth of the Northern Mariana Islands Response Letter

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March 9, 2020

Mr. John Van Name & Ms. Suzanne Smith
Environmental Program Manager, United States Pacific Fleet
Department of the Navy
250 Makalapa Drive
Pearl Harbor, HI 96860-3131

**Re: Consistency Determination for Military Training and Testing Within the Coastal Zone of the Commonwealth of the Northern Marianas Islands (CNMI)**

Dear Mr. Van Name and Ms. Smith,

The Commonwealth of the Northern Mariana Islands' (CNMI) Division of Coastal Resources Management (DCRM) has reviewed the U.S. Department of the Navy's Federal Consistency Determination (CD) submitted and received by our office on December 17, 2019 for the proposed activities in the Marianas Islands Training and Testing (MITT) Study Area within the Coastal Zone of the CNMI.

After carefully reviewing this CD, and as outlined further herein, DCRM finds that the proposed MITT activities as reflected in Alternative 2 of the Draft Supplemental Environmental Impact Statement / Overseas Impact Statement (DSEIS/OEIS) are not consistent with the enforceable policies of the CNMI Coastal Management Program. Therefore, DCRM recommends the Department of the Navy revise its CD to address data gaps, including inconsistencies and lack of up-to-date data, as well as detail and include further mitigation of potential effects on the CNMI's coastal resources.

To support DCRM's CD response, comments from both divisions under the Bureau of Environmental and Coastal Quality (BECQ) as well as the public comments received during the extended public commenting period of 30 days are enclosed and incorporated by reference here. Comments raised concerns that DCRM shares regarding the lack of inclusion of land-based training activities in this CD as it appears from the draft Environmental Impact Statement (DEIS) that changes in land-based training are indeed proposed.

The government of the CNMI recognizes the important training needs of the U.S. Military and hopes to accommodate those needs in a manner that is consistent with the federally approved coastal management policies of the CNMI Coastal Management Program. We look forward to the opportunity to discuss our concerns and how consistency with the policies of the CNMI Coastal Management Program can be achieved to the greatest extent practicable.

As detailed further herein, DCRM finds that the current DEIS/OEIS MITT proposal is not consistent with the enforceable policies of the CNMI Coastal Management Program as the submitted information is not sufficient for a complete and adequate analysis. In fact, it is not entirely evident from current submissions what mitigation measures are being proposed for review. Although Section 930.37 of Federal Consistency regulations provide for use of a DEIS to support a consistency determination, "a Federal agency's federal consistency obligations under the Act are independent of those required under NEPA and are not necessarily fulfilled by the NEPA document." As such, references to mitigation measures or conservation recommendations that will be implemented as results from initiated Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) consultations cannot be considered as part of this CD as they have not yet been completed.

In order for MITT activities to achieve consistency with CNMI's enforceable policies, it is essential that the Navy clearly outline existing conditions, rigorously assess effects, and detail what monitoring and mitigation efforts will be implemented. It is encouraged that critical data gaps including lack of baseline information relating to water quality, species diversity and abundance within the training areas including wildlife populations around Saipan, Farallon de Medinilla (FDM), Tinian, and Rota be addressed through additional studies designed if not implemented in coordination with CNMI and that resulting data be shared in a timely manner to support review. As outlined in the Consistency with Enforceable Policies section of this letter, additional information is needed on the following items in order to assess the consistency of the MITT with the CNMI enforceable policies:

**NMIAC § 15-10**

- **Part 300 - Standards for CRM Permit Issuance**
  **§ 15-10-301, General Standards for all CRM Permits**
  **§ 15-10-305, Standards for DCRM Permit Issuance General Criteria**
  **§ 15-10-315, Specific Criteria; Areas of Particular Concern; Lagoons and Reefs**
  **§ 15-10-325, Specific Criteria; Areas of Particular Concern; Coral Reefs**
  **§ 15-10-335, Specific Criteria; Areas of Particular Concern; Shorelines**
  **§ 15-10-340, Specific Criteria; Areas of Particular Concern; Ports and Industrial Areas:**

  Provide substantial details as to why each of these Areas of Particular Concern (APC) will not be affected by the direct, indirect, or cumulative effects from the proposed activities including analysis of potential spillover impacts.

- **Part 500 - Standards for Determining Major Siting**
  **§ 15-10-501, Determination of Major Siting**
  **§ 15-10-505, Specific Criteria for Major Siting**

  **Part 600 - CRM Permit Conditions**

  Provide substantial details as to why the Navy's Proposed Action does not meet the criteria for a Major Siting, and analysis regarding how the Proposed Action would

otherwise not have the potential to directly and significantly impact CNMI coastal resources with the potential for significant adverse effects .

**Division of Environmental Quality (DEQ) Water Quality Standards: Classification and Establishment of Water Use Areas and Specific Water Quality Criteria**

Data has not been provided to confirm baseline water quality in areas of proposed activities or to substantiate statements that there are no reasonably foreseeable effects. To achieve consistency please provide literature cited in the CD as well as any recent scientific studies which contain current and accurate scientific data and clear impacts criteria for direct and cumulative impacts incorporated into the CD analysis on water quality. If such data is lacking for activities in the study area, reasonable efforts to conduct such data collection and assessments to demonstrate that CNMI waters are kept "shall be free from toxic pollutants in concentrations that are lethal to, or that produce detrimental physiological responses in human, plant, or animal life" should be undertaken.

**CNMI Public Law No. 3-47; Policy Elements 4, 10, 11, 12, 13, 15, 16, 17 & 21:**

Provide a timeline, detailed analysis, and sufficient data for the discussion of mitigation measures outlined throughout these policy elements. To be consistent with enforceable policies of the CNMI, the Navy needs to specify monitoring and mitigation – including providing reasonable details regarding *how and when* impacts will be mitigated – and provide implementation timelines to ensure impacts of these activities are in fact being avoided, minimized, and mitigated to the greatest extent practicable.

Provide current detailed analysis and sufficient data for all applicable coastal resources, particularly coral and algae diversity, cover, and structural complexity; especially for ESA-listed corals in critical areas such as those listed in MITT Draft Supplemental EIS/OEIS Vol. 2 sites on Tinian (Unai Babui, Unai Dankulu, and Unai Chulu), and where training areas will overlap with nearshore habitats.

Provide current data or modeling that determines that emissions from the proposed activity will not lead to a violation of National Ambient Air Quality standards (NAAQS) in the coastal zones of Saipan, Tinian, and Rota. Please see attached BECQ comments for an in-depth description of these policy elements.

It is also critical that the Navy takes steps to provide meaningful analysis of data and standards of DCRM's enforceable policies. Details and analysis deficiencies noted in received comments that DCRM hopes the Navy can remedy include the following:

- **Policy Element 4** – "Plan for and manage any use or activity with the potential for causing a direct and significant impact on coastal resources. Significant adverse impacts shall be mitigated to the extent practicable."

  The Coastal Zone Management Act broadly defines the environment. Instead of considering impacts of increased activities to the people of the CNMI and the coastal

resources that comprise our home, the CD narrowly discusses potential impacts to marine mammals, coral, and fishes in water and does not reassess impacts of land-based activities on Saipan, Tinian, and Rota or FDM, stating that no changes in these activities are proposed. As previously mentioned, FDM activities appear to be significantly increasing, and mitigation measures proposed by DCRM to ensure consistency with land-based operations in the 2015 MITT do not appear to have been implemented regularly – particularly as they pertain to early coordination and data sharing with CNMI. It is unclear why the Navy states that mitigation measures are outside of the scope of this SEIS/OEIS (CD enclosure pg. 23), especially given the fact that the 2014 CD correspondence from DCRM noted that "[i]n order to comply with the enforceable polices of the CNMI, further measures are needed to protect the wildlife and habitats of the CNMI."

Similarly, in this CD request like the 2014 submission, the basis for finding that the MITT is consistent to the maximum extent practicable has not been established. The Navy must show how its proposed actions are fully consistent by providing data, not speculative conclusions such as that potential effects to endangered species will be addressed through pending biological opinions. As also noted previously, the statement that the "Navy's Proposed Action provides special protection to coastal resources and mitigates adverse impacts" is inadequate to demonstrate consistency as the SEIS/OEIS does not actually commit to mitigation measures or timelines for implementation of mitigation, making these assurances rather hollow and unenforceable. If the Navy plans to rely on the suite of mitigation options discussed in the Draft SEIS/OEIS to demonstrate compliance with CNMI's enforceable policies including the requirement of mitigation of adverse impacts, meaningful and enforceable commitments and timelines for implementation should be developed as part of this CD correspondence.

- **Policy Element 10** – "Maintain or improve coastal water quality through control of erosion, sedimentation, runoff, siltation, sewage and other discharges."

  Assessment of this policy element and supporting regulations is inadequate and this analysis should be revised to support DCRM's review of this CD request.

- **Policy Elements 11 and 12** – Impacts to cultural resources.

  Although Section 106 consultations are ongoing to support the reissuance of the expired Programmatic Agreement, the analysis of impacts to cultural resources referenced in Section 3.11 of the draft SEIS/OEIS does not include sufficient data to make any determination regarding likely significant impacts to cultural resources within CNMI waters and on FDM. Absence of evidence is not evidence of absence and the DoD has an obligation to implement reasonable assessment of resources that are likely to be impacted by MITT activities. Lacking that data, there is therefore no basis for the Navy's conclusion that this proposed action is consistent with these policy elements. Data gaps should be remedied to ensure consistency with these policies and the CNMI's significant and compelling interest to protect and preserve our cultural resources.

- **Policy Element 13** – "Require compliance with all local air and water quality laws and regulations and any applicable federal air and water quality standards."

  Data must be provided to support the conclusory statements that air emissions will be minimal on Saipan and Rota and will be "intermittent and short term, resulting in minimal impact on the air quality of Tinian". Models are available to assess these activities for compliance with local and federal air quality standards and should be included for review in this submission. Comments regarding water quality standards are incorporated by reference here.

- **Policy Elements 15 and 16** – Management of marine resources and consistency with other policies.

  As noted in the response to Policy Element 4, the Navy's analysis of impacts to coastal resources is overly narrow and does not meaningfully address impacts to the human environment. This is especially true regarding impacts to the integrity of our reefs and wildlife habitat (Policy 15) and the management and development of our local subsistence, sport, and commercial fisheries (Policy 16). The draft SEIS/OEIS contains insufficient assessment of the potential impacts to these resources and the "analysis" under Policy Element 4 does not address potential impacts to human uses such as fishing and traditional access to important fishing areas. Thus, it is unclear how the Navy can conclude their proposed actions are consistent when analysis is completely lacking. An updated CD should address this gap, preferably through a revised SEIS that provides meaningful analysis of impacts to these important coastal resources.

- **Policy Element 17** – "Protect all coastal resources, particularly sand, coral and fish from taking beyond sustainable levels and in the case of marine mammals and any species on the Commonwealth endangered species list, from any taking whatsoever."

  The Navy explains that "the Proposed Action has the potential to take marine mammals and species on the Commonwealth endangered species list" and that "[a]ny take occurring as a result of the Proposed Action would be incidental to, and not the purpose of, the Navy's otherwise lawful training and testing activities" and notes that protective measures intended to avoid and minimize the "take" of endangered species will be updated as appropriate upon completion of the Section 7 consultation. As noted previously, past promises of mitigation and monitoring have not been executed, or, if they have been, have not been shared with the CNMI, therefore, it is encouraged that any monitoring and mitigation agreements that are the basis for a consistency determination include timebound deliverables so that consistency can be demonstrated.

- **Policy Element 21** – "Encourage the preservation of traditional rights of public access to and along the shorelines consistent with the rights of private property owners."

  Contrary to the Navy's statement that the "MITT Draft Supplemental EIS/OEIS does not propose any change to the public access normally allowed on federally leased lands including FDM, which would remain restricted for security and safety reasons" and that

the "MITT Draft Supplemental EIS/OEIS does not propose a change to the ocean areas currently used by both the Navy and the public", increases in the intensity and use of CNMI lands and waters is more likely than not to have significant impacts to public access of shorelines and traditional fishing areas. Already, three nautical miles (nm) surrounding the abundant fishery surrounding FDM is periodically restricted and this SEIS proposes to extend that "danger zone" to 12 nm and increase the frequency of restricted use in this area. These restrictions can have direct and significant impacts to boaters and the fishing community by increasing travel time and forcing seagoing vessels to travel well out of their traditional navigation routes. Similarly, periodic exercises on Tinian significantly restrict community access to forests and shorelines that have been traditionally used for subsistence and commercial activities. The frequency and timing of these restrictions should be discussed further with the CNMI in order to maximize access for users of these ocean resources while ensuring the Navy can meet its training objectives. Given that assessment of impacts and commitment to reasonable mitigation measures are lacking in the SEIS/OEIS, meaningful commitments should be articulated in supplemental analysis in a revised CD in order to ensure consistency with this enforceable policy.

**Consistency with Enforceable Policies**

The CNMI has determined the MITT is inconsistent with the enforceable policies of the CNMI Coastal Management Program in the following ways:

**NMIAC § 15-10 Part 300 - Standards for CRM Permit Issuance**
**§ 15-10-301, General Standards for all CRM Permits**
**§ 15-10- 305, Standards for DCRM Permit Issuance General Criteria**

As stated in the CD, "Not Applicable. The Navy's Proposed Action does not include applying for permits with the CNMI". However, if these sections are not applicable, further details explaining why these proposed actions do not apply should be outlined to frame discussion regarding their applicability to DCRMs enforceable policies.

**NMIAC § 15-10 Part 300 - Standards for CRM Permit Issuance**
**§ 15-10-315, Specific Criteria; Areas of Particular Concern; Lagoons and Reefs**
**§ 15-10-325, Specific Criteria; Areas of Particular Concern; Coral Reefs**
**§ 15-10-335, Specific Criteria; Areas of Particular Concern; Shorelines**
**§ 15-10-340, Specific Criteria; Areas of Particular Concern; Ports and Industrial Areas**

The information stated in the CD does not provide substantial details as to why these Areas of Particular Concern (APC) will not be affected by the direct, indirect, or cumulative effects from the proposed action. DCRM has previously commented on portions of the Draft Supplemental Environmental Impact Statement/Overseas Impact Statement (DSEIS/OEIS), requesting best available scientific data and clear impacts criteria for direct, indirect and cumulative impact analysis. The current data outlined in the CD does not support meaningful analysis of the impacts and possible mitigation of these impacts.

**NMIAC § 15-10 Part 500 - Standards for Determining Major Siting**
**§ 15-10-501: Determination of Major Siting**
**§ 15-10-505: Specific Criteria for Major Sitings**

**NMIAC § 15-10 Part 600 - CRM Permit Conditions**

As stated in the CD, "Not Applicable. The Navy's Proposed Action does not meet the criteria for a major siting." Under the CNMI's enforceable policies, a "major siting" is defined as "any proposed project which has the potential to directly and significantly impact coastal resources" including "proposed projects with potential for significant adverse effects on submerged lands,…reefs, wetlands, beaches and lakes…and endangered or threatened species or marine mammal habitats" (§15-10-020(uu)(4)). Consistency with major siting standards of §15-10-505 should be assessed, especially in terms of how training and testing activities will affect the broadly defined coastal environment including fish and wildlife habitat, cultural resources, and the natural integrity of CNMI water bodies and what mitigation responses will be implement to ensure impacts are avoided, minimized, and mitigated. Moreover, based on the lack of data, substantive details, and meaningful analysis in the CD regarding the impacts to these coastal resources, DCRM believes the proposed MITT activities are likely to have significant adverse effects on the CNMI's coastal resources. Meaningful analysis of data and standards of enforceable policies are necessary to support a review of proposed activities to ensure consistency and should be included in revised documentation to facilitate this effort.

**DEQ Water Quality Standards: Classification and Establishment of Water Use Areas and Specific Water Quality Criteria**

The information stated in the CD does not provide critical details to adequately address DEQ Water Quality Standards. The literature cited is not included in full detail in the CD, and it appears that DoD has collected no water quality sampling, monitoring, or analysis within the Marianas Islands Range Complex. Additionally, information cited from the previous MITT does not provide current and accurate scientific data and clear impacts criteria for direct and cumulative impacts related to water quality. To ensure consistency, it is recommended that the Navy develop and implement a monitoring plan to ensure water quality stays within CNMI standards. To provide baseline data necessary to substantiate the conclusion that activities have had and will continue to have "no effects" on water quality, it is strongly encouraged that the Navy take reasonable steps to provide additional data on bio-accumulation of toxins associated with ordinance in marine life and localized effects within the monitoring plan, including assessment of fish and filter-feeding invertebrates around Saipan, FDM, Tinian, and Rota.

**CNMI Public Law No. 3-47; Policy Elements 4, 10, 11, 12, 13, 15, 16, 17 & 21:**

The information stated in the CD does not provide substantial details and data to adequately address Policy Elements 4, 10, 11, 12, 13, 15, 16, 17 & 21. Currently the CD does not look at the combined impacts of the MITT with other military activities in the study area and therefore does not present adequate information on direct, indirect, or cumulative impacts. There is also limited information regarding the duration, temporal, and spatial context of proposed activities, and

whether activities will occur in separate or simultaneous locations and times – critical details when discussing the context and intensity and therefore the "significance" of a proposed action and its effects. DCRM holds that additional information regarding proposed activities and mitigation measures are needed in order to comply with the enforceable policies of the CNMI.

**Review Standards for Federal Consistency**

Under the Coastal Zone Management Act (CZMA) of 1972, 16 USC § § 1451-1465, § 1456(c)(1), and Federal Consistency regulations, 15 CFR § § 930.30-930.46, Federal agency activities with reasonably foreseeable effects on the State's coastal zone must be consistent to the maximum extent practicable with the enforceable policies of the States' federally approved CZMA programs. Under 15 CFR §930.32(a)(1), the standard for "consistent to the maximum extent practicable" means fully consistent with the enforceable policies of the CNMI's management programs unless full consistency is prohibited by existing law applicable to the Federal agency. Thus, the Navy must show how existing law prohibits full consistency with the CNMI's Coastal Management Program. However, the Navy has not provided any description of any statutory provisions, legislative history, or other legal authority which limits the Navy's discretion to be fully consistent with the enforceable policies of CNMI's management program.

Furthermore, 15 CFR §930.32(a)(2) details that 16 USC § 1456(e), "construction with other laws", or "Section 307(e) of the Act does not relieve Federal agencies of the consistency requirements under the Act. The Act was intended to cause substantive changes in Federal agency decision making within the context of the discretionary powers residing in such agencies. Accordingly, ***whenever legally permissible, Federal agencies shall consider the enforceable policies of management programs as requirements to be adhered to in addition to existing Federal agency statutory mandates***. If a Federal agency asserts that full consistency with the management program is prohibited, it shall clearly describe, in writing, to the State agency the statutory provisions, legislative history, or other legal authority which limits the Federal agency's discretion to be fully consistent with the enforceable policies of the management program" (emphasis added).

As such, if there are impediments to achieving consistency as outlined here, DCRM encourages the Navy to work with the CNMI through the Bureau of Military Affairs and our office to discuss and remedy these challenges. Lacking such restraints, CNMI encourages the Navy to provide the requisite details to demonstrate full consistency with all applicable DCRM enforceable policies including:

- Full consistency with local permitting considerations;
- Application of CD analysis to all relevant enforceable policies;
- Reasonable collection and analysis of relevant data and standards to support assessment of impacts; and
- Time-bound commitments to proposed mitigation measures that will be implemented to ensure consistency to the maximum extent practicable.

In conclusion, insufficient information has been provided in this CD for DCRM to agree that the MITT activities are consistent with the CNMI's rules and regulations. Given these challenges, it would seem prudent that the Navy consider coordinating with the CNMI to address data gaps

further and submitting a revised Consistency Determination Request after an updated Final Supplemental EIS has been circulated and comments have been received and reviewed. The Coastal Zone Management Act does provide for flexibility in timelines to support robust review of impacts to coastal resources, and DCRM would welcome the opportunity to discuss a mutually agreeable timeline for revisions or resubmission of this determination request when a preferred alternative has been selected.

To achieve consistency with CNMI's enforceable policies, the Department of the Navy will need to modify its MITT proposal to provide reasonably sufficient details to support analysis as to why each of these sets of proposed actions will not cause significant direct, indirect, and/or cumulative effects including spillover impacts on the CNMI's coastal resources. Additionally, DCRM would welcome further clarification and discussion of specific mitigation measures and alternatives proposed by the Navy to support your timelines and ensure adverse impacts are being appropriately mitigated. The CNMI recognizes the critical mission and ongoing training needs of the U.S. Military and looks forward to discussing ways the MITT can become consistent with the CNMI's enforceable policies.

Please note the included comments from CNMI Bureau of Environmental and Coastal Quality, as well as public comments which are attached to this consistency determination. Should you have any questions or require further information, please contact (670) 664-8308 or fedcon@dcrm.gov.mp.

Sincerely,

JANICE E. CASTRO
Director
Division of Coastal Resources Management

Enclosures: Comments from BECQ-DCRM
Comments from BECQ-DEQ
Comments from Kathy Yuknavage
Comments from the CNMI Office of the Governor

cc: Jeffrey L. Payne, Director, Office for Coastal Management, NOAA
Ralph DLG. Torres, Governor, CNMI
Arnold I. Palacios, Lieutenant Governor, CNMI
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CRM Agency Board

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