MARIANA ISLANDS
RANGE COMPLEX AIRSPACE

Environmental Assessment (EA)/Overseas Environmental Assessment (OEA)

June 2013
Final EA/OEA

ENVIRONMENTAL ASSESSMENT/

OVERSEAS ENVIRONMENTAL ASSESSMENT

MARIANA ISLANDS RANGE COMPLEX AIRSPACE

Lead Agency:	Commander, United States Pacific Fleet
Title of the Proposed Action:	Mariana Islands Range Complex Airspace Modification
Affected Jurisdiction:	Mariana Islands
Designation:	Environmental Assessment/Overseas Environmental Assessment

Abstract

This Environmental Assessment (EA)/Overseas EA (OEA) has been prepared to analyze potential environmental impacts relevant to the proposed modifications to training airspace and sea space in the Mariana Islands Range Complex (MIRC). The purpose of the Proposed Action is to maximize public awareness of hazardous military training activities, and to optimize safety and training efficiency. The Proposed Action is needed in order to support training activities that involve the use of advanced weapons systems. The Navy and other services require fully capable training and testing range complexes (land, sea, and airspace) that provide realistic and controlled environments with sufficient surface Danger Zones (DZ) and Special Use Airspace vital for safety and mission success. Three alternatives have been carried forward for analysis in this EA/OEA. Under the No Action Alternative, training activities would continue as currently authorized and implemented by the 2010 MIRC Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS). Under Alternative 1, existing airspace within the MIRC would be modified to optimize public safety and training efficiency. This alternative would extend the Restricted Area (R-7201) at Farallon de Medinilla (FDM) from 3 nautical miles (nm) to 12 nm and designate the new Restricted Area as R-7201A. This alternative would also create new Warning Areas (W)—designated as W-11, W-12, and W-13—thereby replacing existing Air Traffic Control Assigned Airspace (ATCAA) 1, 2, and 3. Under Alternative 2 (Preferred Alternative), airspace within the MIRC would be modified as described under Alternative 1 and the planned 10 nm DZ around FDM (approved in the MIRC EIS/OEIS) would be expanded to 12 nm. The 12 nm DZ will only be activated during hazardous training activities. A thorough analysis of environmental resources determined that implementation of any of the alternatives would result in no significant impact on or harm to public health and safety, transportation, regional economy, and recreation.

Point of Contact: Mariana Islands Range Complex EA/OEA

Project Manager, Code EV21

Naval Facilities Engineering Command, Pacific

258 Makalapa Drive, Suite 100

Pearl Harbor, HI 96869-3134

Phone: 808-472-1402

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EXECUTIVE SUMMARY

The United States (U.S.) Department of the Navy (Navy), Commander, U.S. Pacific Fleet, proposes to modify training airspace and sea space within the Mariana Islands Range Complex (MIRC). The Navy prepared this Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) (hereafter referred to as the "MIRC Airspace EA/OEA") to comply with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [C.F.R.] Parts 1500–1508), Department of the Navy Procedures for Implementing NEPA (32 C.F.R. Part 775), and Executive Order (EO) 12114, *Environmental Effects Abroad of Major Federal Actions.* This EA/OEA satisfies the requirements of NEPA, EO 12114, and Federal Aviation Administration (FAA) Order 1050.1.

The Navy is the lead agency for the Proposed Action and is responsible for the scope and content of this EA/OEA. Cooperating agencies include the U.S. Air Force and the FAA. The U.S. Air Force is a cooperating agency because proposed airspace modifications are essential in supporting their readiness training within the MIRC system of airspace. The FAA is a cooperating agency because of its expertise and regulatory authority over the National Airspace System. This EA/OEA will support the FAA in its rulemaking and non-rulemaking processes for changes to the airspace.

The Navy's Proposed Action is to enhance training and safety requirements to implement levels of training analyzed in the MIRC Final Environmental Impact Statement (EIS)/Overseas EIS (OEIS) in order to maintain, train, and equip combat-ready military forces in accordance with Title 10, United States Code. The Proposed Action consists of modification to existing training airspace and sea space within the MIRC; however, the scope and nature of training activities associated with the Proposed Action in this EA/OEA would not differ from those activities that were considered and approved as part of the July 2010 Record of Decision (ROD) for the MIRC EIS/OEIS.

The purpose of the Proposed Action is to maximize public awareness of hazardous military training activities, and to optimize safety and training efficiency. The Proposed Action is needed in order to support training activities that involve the use of advanced weapons systems. The Navy and other services require fully capable training and testing range complexes (land, sea, and airspace) that provide realistic and controlled environments with sufficient surface Danger Zones (DZs) and Special Use Airspace vital for safety and mission success.

As required by NEPA, alternatives to the Proposed Action must be considered. However, only those alternatives determined to be reasonable relative to their ability to fulfill the need for the Proposed Action require detailed analysis. Three alternatives have been carried forward for analysis in this EA/OEA.

Under the No Action Alternative, training activities as defined by the 2010 MIRC EIS/OEIS and ROD would continue as currently implemented or authorized, with no change to the existing 3 nautical mile (nm) Restricted Area (R-7201) or the planned 10 nm surface DZ at Farallon de Medinilla (FDM).

Under Alternative 1, existing airspace within the MIRC would be modified to optimize public safety and training efficiency. Under Alternative 1, the Navy proposes to (1) extend the Restricted Area (R-7201) at FDM from 3 nm to 12 nm and designate the new restricted area as R-7201A; and (2) create new Warning Areas (W)—designated as W-11, W-12, and W-13—which, upon approval and implementation, would replace existing ATCAAs 1, 2, and 3. Under Alternative 1, designations of the airspace changes

would be mapped on aeronautical and navigation charts, thus providing a greater awareness and protection to the public. Implementation of Alternative 1 would meet the Navy's purpose and need by ensuring that activities are conducted safely in controlled areas. Under Alternative 2 (Preferred Alternative), airspace within the MIRC would be modified as described under Alternative 1. In addition, the planned 10 nm DZ around FDM (analyzed in the MIRC EIS/OEIS) would be expanded to 12 nm (congruent with proposed R-7201A). The 12 nm DZ will only be activated during hazardous training activities. Under Alternative 2, designations of the airspace changes and the danger zone would be mapped on aeronautical and navigation charts, thus providing a greater awareness and protection to the public. Implementation of Alternative 2 would meet the Navy's purpose and need by ensuring that activities are conducted safely in controlled areas.

This EA/OEA focuses on potential environmental impacts associated with proposed reconfiguration of existing training airspace which includes creation of new warning areas and expansion of the airspace around FDM from 3 nm to 12 nm. The EA/OEA also focuses on the expansion of the DZ around FDM from 10 nm to 12 nm. The level of training and testing activities that would occur within the airspace and sea space would remain the same as those assessed in the MIRC EIS/OEIS (U.S. Department of the Navy 2010a). In other words, the Proposed Action in this EA/OEA does not propose training activities that differ in scope, nature, or location from those approved in the ROD (U.S. Department of the Navy 2010b) for the MIRC EIS/OEIS.

The National Environmental Policy Act, CEQ regulations, and Navy procedures for implementing NEPA specify that an EA should focus on those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact. Those resource areas where there is potential impact as a result of the Proposed Action, or different impacts from those considered in the MIRC EIS/OEIS, are as follows: public health and safety, transportation, regional economy, and recreation. Consequently, this EA/OEA presents the analysis of those resource areas potentially impacted as a result of implementation of the No Action Alternative, Alternative 1, and Alternative 2 (Table ES 1-1).

Table ES 1-1: Summary of Potential Environmental Impacts for Each Alternative (National Environmental Policy Act/Executive Order 12114)

Resource Area	No Action Alternative	Alternative 1 Airspace Modifications	Alternative 2 (Preferred Alternative) Airspace Modifications and Danger Zone Expansion
Public Health and Safety	• No significant impacts • No significant harm	• No significant impacts • No significant harm	• No significant impacts[1] • No significant harm
Transportation Resources	• No significant impacts • No significant harm	• No significant impacts • No significant harm	• No significant impacts • No significant harm
Regional Economy	• No significant impacts	• No significant impacts	• No significant impacts
Recreation	• No significant impacts • No significant harm	• No significant impacts • No significant harm	• No significant impacts • No significant harm

[1] Public safety would be enhanced as a result of the Proposed Action.

Cumulative impacts of the Proposed Action, in combination with other past, present, and reasonably foreseeable future impacts, were analyzed. Based on the analysis, cumulative impacts within the MIRC Airspace EA/OEA Study Area would not be significant.

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ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
ARTCC	Air Route Traffic Control Center
AMDTF	Army Air and Missile Defense Task Force
ATCAA	Air Traffic Control Assigned Airspace
CEQ	Council on Environmental Quality
C.F.R.	Code of Federal Regulations
CNMI	Commonwealth of the Northern Mariana Islands
COMNAVMAR	Commander, United States Naval Forces Marianas
CZMA	Coastal Zone Management Act
DoD	Department of Defense
DZ	Danger Zone
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FDM	Farallon de Medinilla
FL	Flight Level
ft.	feet
HYDROPAC	hydrographic notice
IFR	Instrument Flight Rules
kg	kilogram(s)
km	kilometer(s)
lb.	pound(s)
LFTRC	Live-Fire Training Range Complex
m	meter(s)
MBTA	Migratory Bird Treaty Act
mi.	mile(s)
MIRC	Mariana Islands Range Complex
MITT	Mariana Islands Training and Testing
MMPA	Marine Mammal Protection Act
Navy	United States Department of the Navy
NEPA	National Environmental Policy Act
nm	nautical mile(s)
nm^2	square nautical miles
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NOTMAR	Notice to Mariners
OEA	Overseas Environmental Assessment
OEIS	Overseas Environmental Impact Statement
OPNAVINST	Office of the Chief of Naval Operations Instruction
PISFC	Pacific Islands Fisheries Science Center
R	Restricted Area
ROD	Record of Decision
SEIS	Supplemental Environmental Impact Statement
SUA	Special Use Airspace
U.S.	United States
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VFR	Visual Flight Rules
W	Warning Area
WPacFIN	Western Pacific Fisheries Information Network
WPRFMC	Western Pacific Regional Fishery Management Council

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1 PURPOSE AND NEED

1.1 INTRODUCTION

The United States (U.S.) Department of the Navy (Navy), Commander, U.S. Pacific Fleet proposes to modify training airspace and sea space within the Mariana Islands Range Complex (MIRC). The Navy prepared this Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) (hereafter referred to as the "MIRC Airspace EA/OEA") to comply with the National Environmental Policy Act (NEPA), the Council on Environmental Quality Regulations (CEQ) for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [C.F.R.] Parts 1500–1508), Department of the Navy Procedures for Implementing NEPA (32 C.F.R. Part 775), and Executive Order (EO) 12114, *Environmental Effects Abroad of Major Federal Actions.* The NEPA process ensures that environmental impacts of proposed major federal actions are considered in agency decision-making. EO 12114 requires environmental consideration for actions that may significantly harm the environment (e.g., environment outside the U.S. territorial seas). This EA/OEA satisfies the requirements of NEPA, EO 12114, and Federal Aviation Administration (FAA) Order 1050.1.

This EA/OEA focuses on potential environmental impacts associated with proposed reconfiguration of existing training airspace which includes creation of new warning areas and expansion of the airspace around Farallon de Medinilla (FDM) from 3 nautical miles (nm) to 12 nm. The EA/OEA also focuses on the expansion of the Danger Zone (DZ) around FDM from 10 nm to 12 nm. The level of training and testing activities that would occur within the airspace and sea space would remain the same as those assessed in the MIRC Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) (U.S. Department of the Navy 2010a). In other words, the Proposed Action in this EA/OEA does not propose training activities that differ in scope, nature, or location from those approved in the Record of Decision (ROD) (U.S. Department of the Navy 2010b) for the MIRC EIS/OEIS.

The Navy is the lead agency for the Proposed Action and is responsible for the scope and content of this EA/OEA. Cooperating agencies include the U.S. Air Force and the FAA. The U.S. Air Force is a cooperating agency because proposed airspace modifications are essential in supporting their readiness training within the MIRC system of airspace. The FAA is a cooperating agency because of its expertise and regulatory authority over the National Airspace System (JO 7400.2) and will use this EA/OEA in its rulemaking for designation of restricted airspace and non-rulemaking processes for changes to the airspace (establishment of warning areas). The U.S. Army Corps of Engineers has authority over the establishment of and changes to DZs within U.S. territorial waters (Rivers and Harbors Act of 1899 as amended). They will use this EA/OEA in their rulemaking process, though not as a cooperating agency, in accordance with 33 C.F.R. Part 334. Both the FAA and Army Corps of Engineers publish their findings in the *Federal Register.* FAA will issue an advisory circular for non-rulemaking decisions.

1.2 OVERVIEW OF MARIANA ISLANDS RANGE COMPLEX

The MIRC includes land training areas, ocean surface areas, and subsurface areas. These areas extend from the waters south of Guam to north of Pagan (Commonwealth of the Northern Mariana Islands [CNMI]), and from the Pacific Ocean east of the Mariana Islands to the Philippine Sea to the west, encompassing 501,873 square nautical miles (nm^2) of open ocean. The MIRC includes airspace used either by the military or co-used with civilian and commercial aircraft. Airspace in the MIRC is designated as Special Use Airspace (SUA), which is military airspace designated by the FAA as Warning Areas or Restricted Areas, or as Air Traffic Control Assigned Airspace (ATCAA). The FAA establishes ATCAAs for the purpose of providing air traffic separation between the specified activities being conducted within

the airspace and other air traffic. The MIRC Airspace EA/OEA Study Area is depicted in Figure 1.2-1 and discussed in detail in Chapter 2.

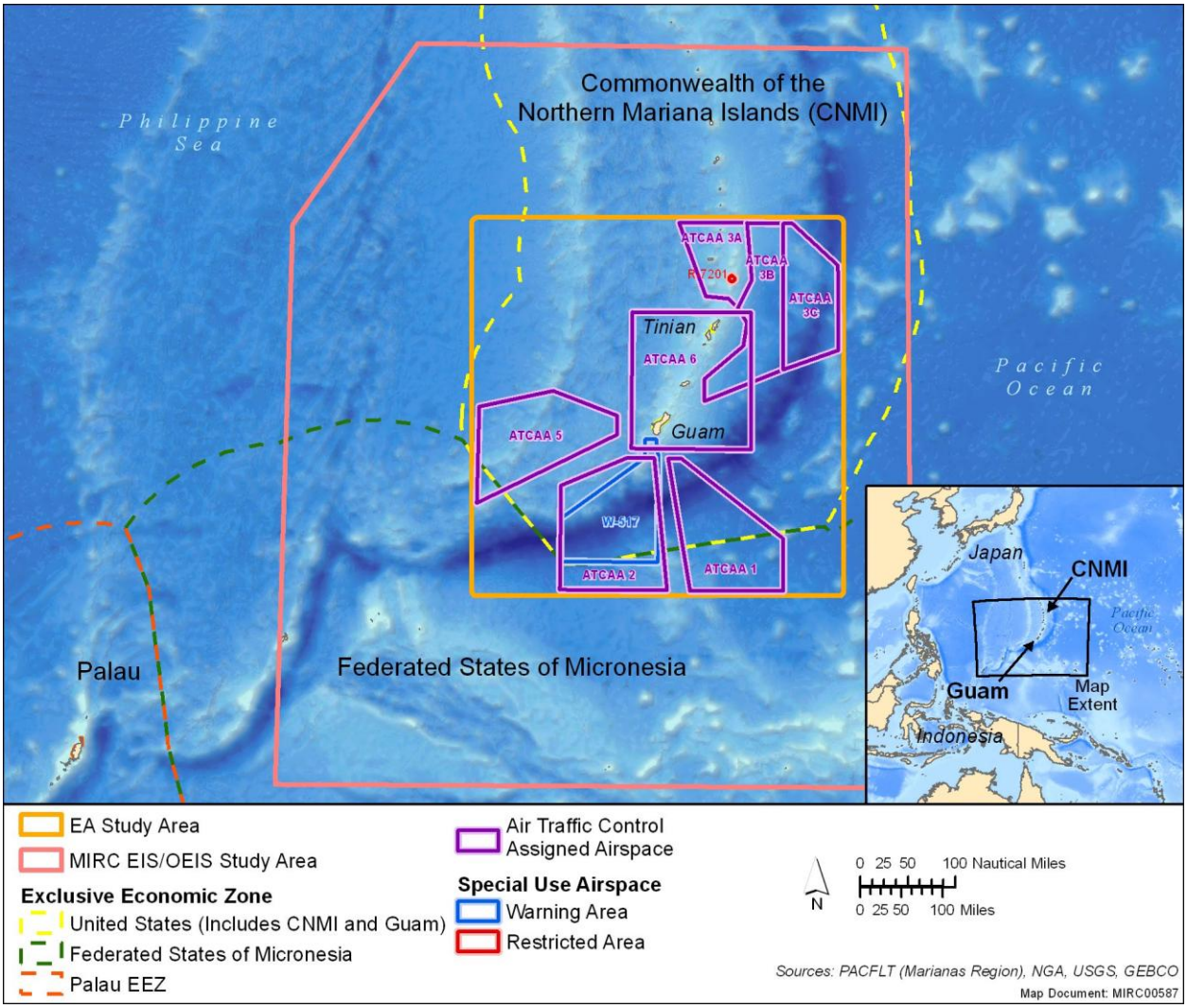

Figure 1.2-1: Mariana Islands Range Complex Airspace Environmental Assessment/Overseas Environmental Assessment Study Area

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to maximize public awareness of hazardous military training activities and to optimize safety and training efficiency. The Proposed Action is needed to support training activities that involve the use of advanced weapon systems. The Navy and other services require fully capable training and testing range complexes (land, sea, and airspace) that provide realistic and controlled environments with sufficient surface DZs and SUA vital for safety and mission success. Range complexes throughout the United States employ appropriate SUA and DZ to ensure public safety.

1.4 NATIONAL ENVIRONMENTAL POLICY ACT

Public participation included a 45-day public comment period on the Draft EA/OEA. At the conclusion of the comment period, a Final EA/OEA will be developed to address public comments received on the

Draft EA/OEA. Finally, the decision-maker will issue a Finding of No Significant Impact and Finding of No Significant Harm (if warranted) and a summary of the decision will be made public by newspaper advertisement or direct mail.

In addition, a public website is available to provide information on the development and availability of the EA/OEA at http://www.mirceaoea.com.

1.4.1 EXECUTIVE ORDER 12114

EO 12114, *Environmental Effects Abroad of Major Federal Actions*, directs federal agencies to provide for informed decision-making for major federal actions outside the U.S. territorial sea, including action within the Exclusive Economic Zone but not including action within the territorial sea of a foreign nation. For the MIRC Airspace EA/OEA, areas outside U.S. territorial seas are considered to be areas beyond 12 nm from shore. This EA/OEA satisfies the requirements of EO 12114 because it analyzes activities or impacts occurring, or proposed to occur, outside of 12 nm.

1.4.2 OTHER ENVIRONMENTAL REQUIREMENTS CONSIDERED

The military services (services) must comply with a variety of other federal environmental laws, regulations, and EOs. The scope and nature of activities associated with the Proposed Action in this EA/OEA does not differ from the existing training and testing activities in the MIRC. Therefore, there are no additional environmental requirements applicable to this EA/OEA beyond those previously analyzed in other NEPA documents (see Section 1.5 for a list of related environmental documents).

1.4.3 GOVERNMENT-TO-GOVERNMENT OUTREACH

The Navy held meetings with CNMI governmental agencies to present the Proposed Action of the EA/OEA and to initiate government-to-government outreach.

1.5 RELATED ENVIRONMENTAL DOCUMENTS

The MIRC Airspace EA/OEA assesses environmental impacts associated with the proposed changes to training airspace and sea space within the MIRC. Other relevant environmental documents completed or being prepared for actions taking place within the region include the following:

Mariana Islands Range Complex Final Environmental Impact Statement/Overseas Environmental Impact Statement (U.S. Department of the Navy 2010a). The services identified the need to support and conduct current, emerging, and future training and research, development, test, and evaluation training activities in the Study Area (see Figure 1.2-1). Alternative 1 was selected in the MIRC ROD, dated 20 July 2010, as the Preferred Alternative.

Final Environmental Impact Statement Guam and Commonwealth of the Northern Mariana Islands Military Relocation: Relocating Marines from Okinawa, Visiting Aircraft Carrier Berthing, and Air and Missile Defense Task Force (U.S. Department of the Navy and U.S. Department of the Army 2010). This EIS analyzed impacts associated with the relocation of Marines and their dependents from Okinawa, construction and modification of facilities on Guam and Tinian, and establishment of a U.S. Army ballistic missile defense task force. The EIS addressed aviation and waterfront activities, training, main encampment, family housing and associated utilities, and infrastructure improvements. The signatories of the ROD, dated September 2010, determined that the preferred alternative as stated in the EIS represent how the Navy and Army would implement the action.

Divert Activities and Exercises, Guam and Commonwealth of Northern Mariana Islands Environmental Impact Statement. This EIS is being prepared by the U.S. Air Force to assess environmental impacts associated with improving an existing airfield on U.S. territory near the Philippine Sea in support of expanding mission requirements in the western Pacific. The EIS also proposes to establish divert capabilities for current, emerging, and future training activities. The Notice of Intent was published in the Federal Register in September 2011, and the draft EIS was published in June 2012.

Mariana Islands Training and Testing Environmental Impact Statement/Overseas Environmental Impact Statement. The Navy is preparing an EIS/OEIS as a follow-on to the MIRC EIS/OEIS. The Navy's proposed action is to conduct training and testing activities (which may include use of active sonar and explosives) within the MIRC, additional areas on the high seas, and transit corridors where training and testing activities may occur. The Mariana Islands Training and Testing (MITT) EIS/OEIS will evaluate all Navy training and testing in the MIRC to obtain reauthorization of incidental takes of marine mammals under the Marine Mammal Protection Act (MMPA) and under Section 7 consultations of the Endangered Species Act (ESA). The current permits are authorized through July 2015. The Notice of Intent to complete and EIS/OEIS was published in the Federal Register in September 2011.

Guam and CNMI Military Relocation (2012 Roadmap Adjustments) Supplemental Environmental Impact Statement. The Joint Guam Program Office is preparing a Supplemental EIS to the Guam and CNMI Military Relocation EIS. The proposed action is to construct and operate a Live-Fire Training Range Complex that allows for simultaneous use of all firing ranges to support training and operations on Guam for the relocated Marines (a force of approximately 5,000 Marines and approximately 1,300 dependents) on Guam and a main cantonment area of sufficient size and layout to provide military support functions, including family housing. In addition, the Proposed Action also includes the construction of utilities and infrastructure to support the range complex, main cantonment, and housing. The Notice of Intent to complete and EIS/OEIS was published in the Federal Register in May 2012.

2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This EA/OEA focuses on potential environmental impacts associated with proposed reconfiguration of existing training airspace which includes creation of new warning areas and expansion of the airspace around FDM from 3 nm to 12 nm. The EA/OEA also focuses on the expansion of the DZ around FDM from 10 nm to 12 nm. The level of training and testing activities that would occur within the airspace and sea space would remain the same as those assessed in the MIRC EIS/OEIS.

2.1 CURRENT AIRSPACE OVERVIEW

Safety and security factors require that the use of airspace and the control of air traffic be closely regulated. The FAA owns and operates the air traffic control system of the United States and its territories; U.S. controlled airspace and SUA are managed by a system of air traffic control facilities and are operated by the using agency (e.g., the Department of Defense [DoD] for purposes of this EA/OEA). Regulations applicable to all aircraft are promulgated by the FAA to define permissible uses of designated airspace, and to control that use. These regulations are intended to accommodate the various categories of aviation, whether military, commercial, or general aviation. The system of regulations (or airspace designations) by the FAA make use of various definitions and classifications of airspace to facilitate control. “Controlled Airspace” is a generic term that covers different classes of airspace. A SUA is specially designated airspace that is used for a specific purpose and is controlled by the military unit or other organization whose activity established the requirement for the SUA. A SUA can include restricted areas and military operations areas, as well as warning, prohibited, alert, and controlled firing areas.

A SUA is an area with established boundaries where flight activities are conducted because of their sometimes hazardous nature (hazardous to non-participating aircraft); thus, commercial and general aviation may be restricted or limited for safety. A SUA is established under procedures outlined in 14 C.F.R. Part 73. The majority of SUA is established for military activities, and may be used for commercial or general aviation when not reserved for military activities. There are multiple types of SUA; each SUA designation carries varying restrictions on the types of military and nonmilitary activities that may be conducted. One type of SUA of particular relevance to the MIRC Airspace EA/OEA is a Restricted Area (R), which is described by 14 C.F.R. Part 1 as a type of SUA within which nonmilitary flight, while not wholly prohibited, is subject to restriction. Another relevant type of SUA is a Warning Area, which is defined in 14 C.F.R. Part 1 as follows:

> “A warning area is airspace of defined dimensions, extending from 3 nautical miles outward from the coast of the United States that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of potential danger. A warning area may be located over domestic or international waters or both.”

Warning areas are established to include a variety of aircraft and non-aircraft military activities, such as aerial gunnery, air and surface missile firings, bombing, aircraft carrier training activities, and naval gunfire. Warning areas include some hazardous training activities in international airspace. FAA regulations may warn against, but do not have the authority to prohibit, flight operations in the international portions of the warning area by nonparticipating aircraft when military training activities are conducted in international airspace.

Range control of the U.S. controlled airspace (SUA and warning areas) consists of scheduling with training and operational units and notifying others of that schedule via Notice to Airmen (NOTAM) and

Notice to Mariners (NOTMAR). Figure 2.1-1 depicts the current MIRC system of airspace. The types of annual training activities that occur in the MIRC are provided in Appendix A.

2.1.1 RESTRICTED AREA R-7201

R-7201 overlays FDM and the surrounding waters, extending in a 3 nm radius from the center of FDM and encompassing 28 nm^2 with altitude limits from surface to Flight Level (FL) 600 (60,000 feet [ft.]) (18,288 meters [m]) (Figure 2.1-1). R-7201 supports live-fire and engagements such as the use of explosive and non-explosive ordnance against land-based targets on FDM.

2.1.2 WARNING AREA 517

Warning Area 517 (W-517) is a SUA (approximately 14,000 nm^2) that overlays a deep, open-ocean area approximately 50 miles (mi.) (80.5 kilometers [km]) south-southwest of Guam. W-517 altitude limits are from the surface with an unlimited upper limit and support a variety of military exercises.

2.1.3 FEDERAL AVIATION ADMINISTRATION AIR TRAFFIC CONTROL ASSIGNED AIRSPACE

The ATCAAs within the MIRC are used for military training activities, from unit-level training to major joint exercises. ATCAA 1, 2, 3, 5, and 6 have been pre-configured and pre-assigned in agreements with the Guam Air Route Traffic Control Center (ARTCC) and the Joint Region Marianas, MIRC Operations. The Guam ARTCC works with MIRC Operations to modify or configure new ATCAAs as required for training events. If the pre-configured ATCAAs do not meet the need for a special event, then event-specific ATCAAs in the location, size, and altitude for the time frame needed may be requested contingent on approval by the FAA and coordination with Joint Region Marianas, MIRC Operations. Table 2.1-1 provides detailed information on the ATCAAs within the MIRC.

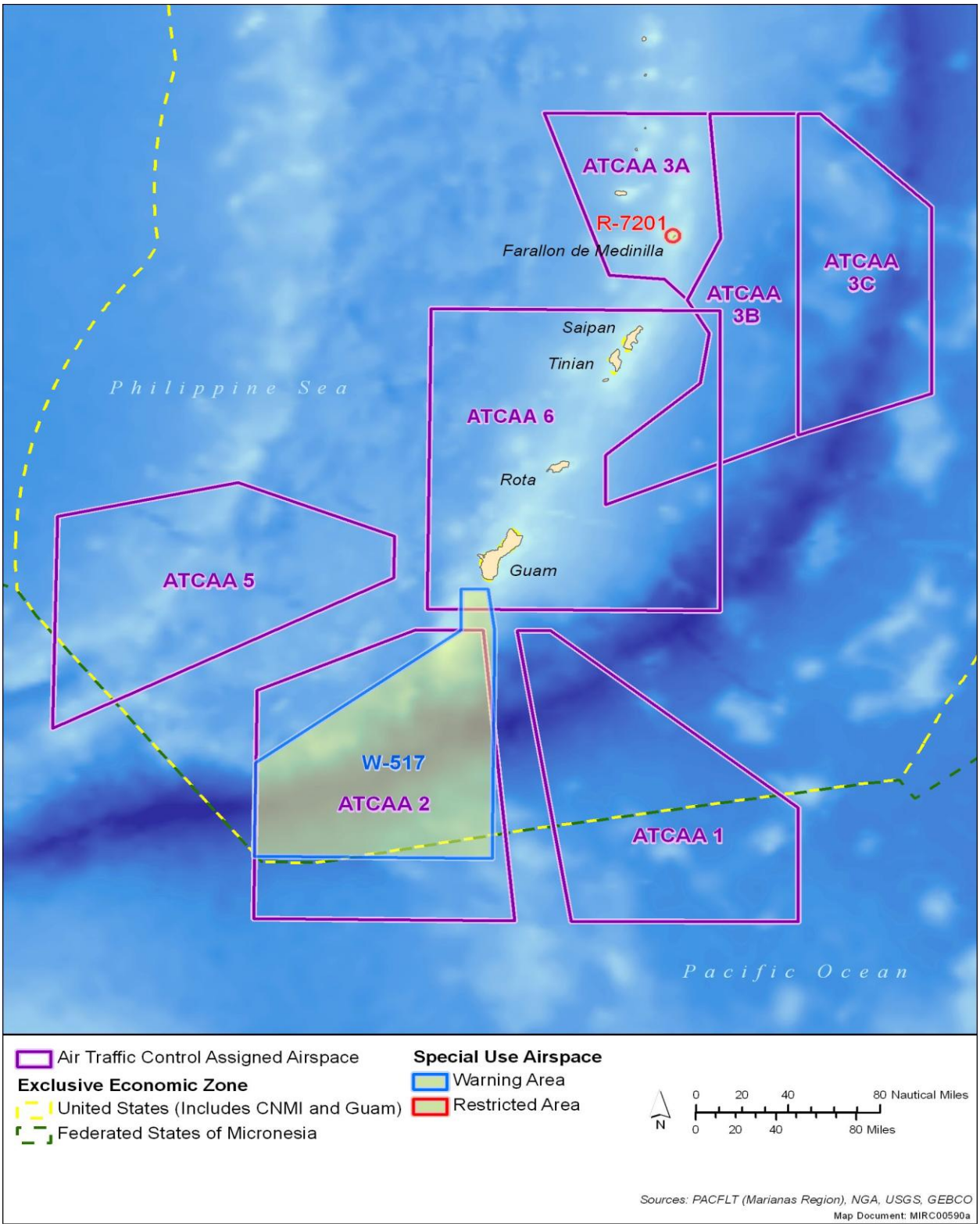

Figure 2.1-1: Mariana Islands Range Complex System of Airspace

Table 2.1-1: Federal Aviation Administration Air Traffic Control Assigned Airspace

Airspace	nm²	Lower Limit	Upper Limit[2]	Over Land
ATCAA 1	10,250	Surface	FL300	No
ATCAA 2	13,750	Surface	FL300	No
ATCAA 3A	5,000	Surface	FL300	No, except for FDM, Anatahan, and Sarigan islands.
ATCAA 3B	7,750	Surface	FL300	No
ATCAA 3C	8,000	Surface	FL300	No
ATCAA 5	10,500	Surface	FL300	No
ATCAA 6	15,300	FL390	FL410	No, except for Guam, CNMI[1]

Notes: nm^2 = square nautical miles, FDM = Farallon de Medinilla, CNMI = Commonwealth of the Northern Mariana Islands, FL = Flight Level, ATCAA = Air Traffic Control Assigned Airspace

[1] ATCAA 6 is primarily over water, but Guam, Rota, Tinian, Aguihan, and Saipan lie underneath

[2] Altitudes above FL 300 can be scheduled under the following conditions:

- Between the hours of 2100Z–0300Z, and 0800Z–1400Z only, with requested time block not to exceed two (2) hours.
- ATCAAs 1, 2, 3a, 3b, 3c, and 5, on a "real-time" basis, through Guam ARTCC.

It is expected that in all cases, altitudes above FL300 will not be requested beyond the actual time required and, the altitudes shall be returned to Guam ARTCCF when the altitude is no longer required and/or is not in use. In all cases, when operating above FL300 at least one aircraft (to be identified in the request) must continuously monitor the appropriate Guam ARTCC frequency for immediate recall of the altitude/airspace

2.2 DANGER ZONE OVERVIEW

A DZ is defined by 33 C.F.R. Part 334 as a defined water area used for hazardous operations, normally by the armed forces; a DZ may be closed to the public on a full-time or intermittent basis, as stated in the regulations. A 10 nm DZ was analyzed and approved around FDM under the 2010 MIRC EIS/OEIS in order to restrict all private and commercial vessels from entering the area only during the conduct of hazardous training activity (Figure 2.4-1).

2.3 PROPOSED ACTION

The Navy's Proposed Action is to enhance training and safety requirements to implement levels of training analyzed in the MIRC Final EIS/OEIS in order to maintain, train, and equip combat-ready military forces in accordance with Title 10, United States Code. The Proposed Action consists of modification to existing training airspace and sea space within the MIRC; however, as noted in Chapter 1, the scope and nature of training activities associated with the Proposed Action in this EA/OEA would not differ from those activities that were considered and approved as part of the July 2010 ROD for the MIRC EIS/OEIS.

2.4 ALTERNATIVES DEVELOPMENT

Federal agencies are required by NEPA to evaluate a range of reasonable alternatives to the action being proposed. All alternatives must satisfy the purpose and need for the action. This section presents the No Action Alternative and other action alternatives. In order to maximize public awareness of hazardous military activities and to optimize safety and training efficiency, the action alternatives consist of

modifications to the current training space associated with the MIRC system of airspace and the expansion of the surface DZ around FDM. As determined in the Test/Training Space Needs Statement developed by the 36th Wing at Andersen Air Force Base, Guam, there are no other feasible airspace alternatives within the region (U.S. Air Force 2012). The following alternatives are under consideration.

2.4.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, training activities as defined by the 2010 MIRC EIS/OEIS (U.S. Department of the Navy 2010a) and Record of Decision (U.S. Department of the Navy 2010b) would be continued within the existing ATCAAs and SUA (W-517 and R-7201) and planned 10 nm DZ. The No Action Alternative would not involve modifications to any training activities or training space within the MIRC (see Figure 2.1-1 and Figure 2.4-1).

2.4.2 ALTERNATIVE 1

Under Alternative 1, existing airspace within the MIRC would be modified to optimize public safety and training efficiency. A detailed description of proposed airspace modifications is provided in Table 2.4-1. Figure 2.4-2 illustrates the proposed system of airspace under Alternative 1.

The Navy proposes to

- extend the Restricted Area (R-7201) at FDM from 3 nm to 12 nm and designate the new Restricted Area as R-7201A,
- create new Warning Areas—designated as W-11, W-12, and W-13—which, upon approval and implementation, would replace existing ATCAAs 1, 2, and 3.

Under Alternative 1, designations of the airspace changes would be mapped on aeronautical and navigation charts, thus providing a greater awareness and protection to the public. Implementation of Alternative 1 would meet the Navy's purpose and need by ensuring that activities are conducted safely in controlled areas.

2.4.3 ALTERNATIVE 2 (PREFERRED ALTERNATIVE)

Under Alternative 2, airspace within the MIRC would be modified as described under Alternative 1. In addition, a 10 nm DZ around FDM (as analyzed in the MIRC EIS/OEIS) would be expanded to 12 nm (congruent with proposed R-7201A) (Figure 2.4-3). The proposed DZ expansion out to 12 nm around FDM would restrict all private and commercial vessels from entering the area when, and only when, hazardous activities are scheduled. However, in accordance with the FDM lease agreement, the proposed expansion of the DZ would not affect the continued implementation of restricted access to FDM and the waters of the Commonwealth immediately adjacent to FDM (within 3 nm).

Under Alternative 2, designations of the airspace changes and the danger zone would be mapped on aeronautical and navigation charts, thus providing a greater awareness and protection to the public. Implementation of Alternative 2 would meet the Navy's purpose and need by ensuring that activities are conducted safely in controlled areas.

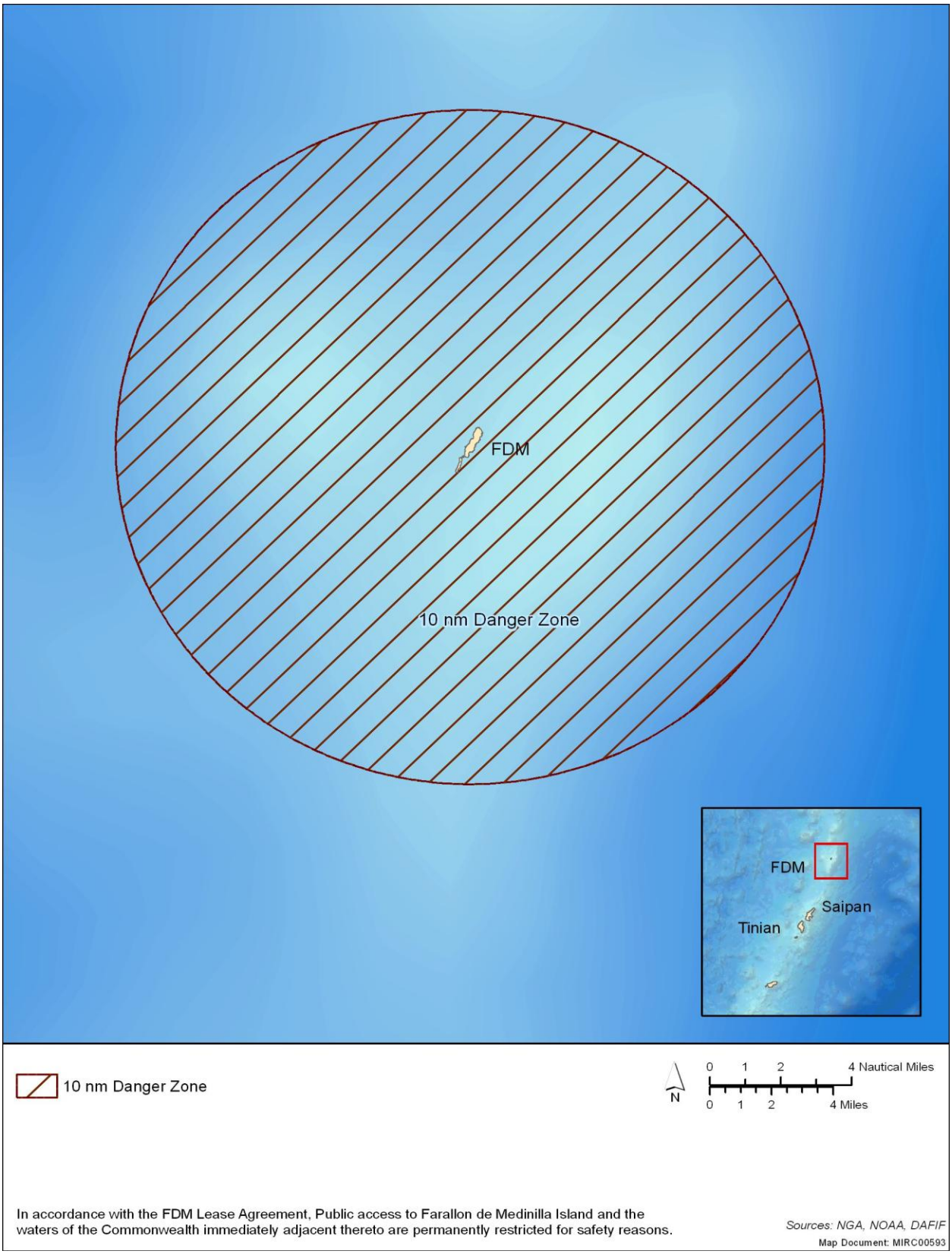

Figure 2.4-1: Farallon de Medinilla Danger Zone

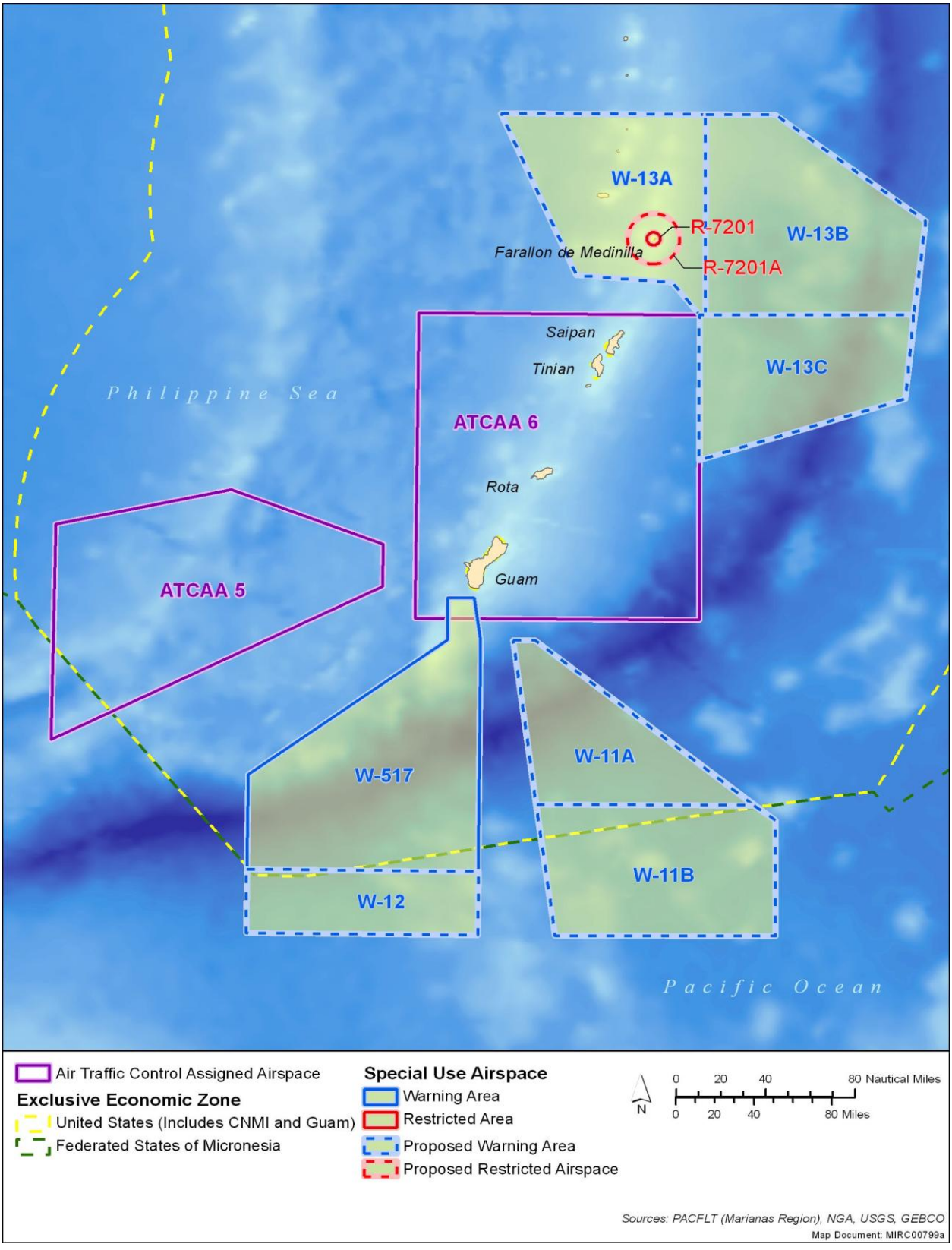

Figure 2.4-2: Proposed System of Mariana Islands Range Complex Airspace

Table 2.4-1: Current and Proposed Mariana Islands Range Complex Airspace Components

Current Airspace Configuration					Proposed Airspace Configuration					
Airspace	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Airspace**	**nm²**	**Lower Limit**	**Upper³ Limit**	**Over Land**	**Change**
ATCAA 1	10,825	Surface	FL300	No	**W-11A**	4,157	Surface	FL300	No	Under the Proposed Action, W-11A and W-11B will replace ATCAA 1. The floor and ceiling parameters of the airspace do not change.
					W-11B	6,310	Surface	FL300	No	The total amount of charted airspace is 10,467 nm^2 which is a decrease of 358 nm^2.
ATCAA 2	13,678	Surface	FL300	No	**W-517**	8,683	Surface	Unlimited	No	Under the Proposed Action, W-12 will replace the lower portion of ATCAA 2. The floor parameter of the airspace does not change. The ceiling parameter changes to "unlimited" within W-12. The total amount of charted airspace is 11,769 nm^2 which is a decrease of 1,909 nm^2.
					W-12	3,086	Surface	Unlimited	No	

Table 2.4-1: Current and Proposed Mariana Islands Range Complex Airspace Components (continued)

Current Airspace Configuration					Proposed Airspace Configuration					
Airspace	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Airspace**	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Change**
ATCAA 3A	4,759	Surface	FL300	No, except for FDM	**W-13A Low**	5,942	Surface	FL300	No, except for FDM Anatahan, and Sarigan Islands.	Under the Proposed Action, W-13A will replace ATCAA 3A. The floor parameter of the airspace does not change. The ceiling parameter of the airspace changes from "FL300" to "FL600". The total amount of charted airspace is 5,942 nm^2 which is an increase of 1,183 nm^2.
					W-13A High		FL300	FL600		

Table 2.4-1: Current and Proposed Mariana Islands Range Complex Airspace Components (continued)

Current Airspace Configuration					Proposed Airspace Configuration					
Airspace	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Airspace**	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Change**
ATCAA 3B	7,822	Surface	FL300	No	**W-13B Low**	7,727	Surface	FL300	No	Under the Proposed Action, W-13B and W-13C will replace ATTCAs 3B and 3C. The floor parameter of the airspace does not change. The ceiling parameter of the airspace that was formerly part of ATCAA 3A and 3B changes from "FL300" to "FL600." The total amount of charted airspace for W-13B and W-13C is 12,769 nm^2 which is a decrease of 2,304 nm^2 from the total airspace for ATCAAs 3B and 3C.
					W-13B High		FL300	FL600		

Table 2.4-1: Current and Proposed Mariana Islands Range Complex Airspace Components (continued)

Current Airspace Configuration					Proposed Airspace Configuration					
Airspace	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Airspace**	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Change**
ATCAA 3C	7,278	Surface	FL300	No	**W-13C Low**	5,069	Surface	FL300	No	The total amount of charted airspace for W-13B and W-13C is 12,769 nm^2 which is a decrease of 2,304 nm^2 from the total airspace for ATCAAs 3B and 3C.
					W-13C High		FL300	FL600		
ATCAA 5	10,474	Surface	FL300	No	No change from current configuration					
ATCAA 6	18,230	FL390	FL410	No	No change from current configuration					
W-517	8,683	Surface	Unlimited	No	No change from current configuration					

Table 2.4-1: Current and Proposed Mariana Islands Range Complex Airspace Components (continued)

Current Airspace Configuration					Proposed Airspace Configuration					
Airspace	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Airspace**	**nm²**	**Lower Limit**	**Upper Limit**	**Over Land**	**Change**
R-7201	28	Surface	FL600	FDM	**R-7201**	28	Surface	FL600	FDM	Under Alternative 1, R-7201A extends from the 3 nm boundary of R-7201 out to 12 nm. The floor parameters of the airspace do not change. The total amount of charted airspace is 452 nm^2 which is an increase of 424 nm^2.
					R-7201A	452	Surface	FL600	No	

Notes: (1) CNMI = Commonwealth of the Northern Mariana Islands, FDM = Farallon de Medinilla, nm^2 = square nautical miles, ATCAA = Air Traffic Control Assigned Airspace; (2) The Guam Federal Aviation Administration (FAA) enacted a Letter of Procedure, effective June 2, 2011 that outlines interagency coordination procedures for W-517, R-7201, and ATCAAs located exclusively within the Guam Control Area. MIRC Operations is designated as the agency that deconflicts Department of Defense requests; FAA Guam Air Route Traffic Control Center is designated as the Controlling Agency, and is designated as the agency responsible for initiating all NOTAM action on training activities within the airspace. The FAA can modify ATCAA configuration as needed and they were modified slightly upon the effective date of the Letter of Procedure; therefore, the ATCAA configuration deviates slightly from what was analyzed in the MIRC EIS. Modification to ATCAA 3B was accomplished October 2010; (3) Altitudes above FL300 can be scheduled under the following conditions: Between the hours of 2100Z–0300Z, and 0800Z–1400Z only, with requested time block not to exceed two hours and ATCAAs 1, 2, 3a, 3b, 3c, and 5, on a "real-time" basis, through Guam ARTCC. It is expected that in all cases, altitudes above FL300 will not be requested beyond the actual time required and, the altitudes shall be returned to Guam ARTCCF when the altitude is no longer required and/or is not in use. Guam ARTCCF when the altitude is no longer required and/or is not in use. In all cases, when operating above FL300 at least one aircraft (to be identified in the request) must continuously monitor the appropriate Guam ARTCC frequency for immediate recall of the altitude/airspace.

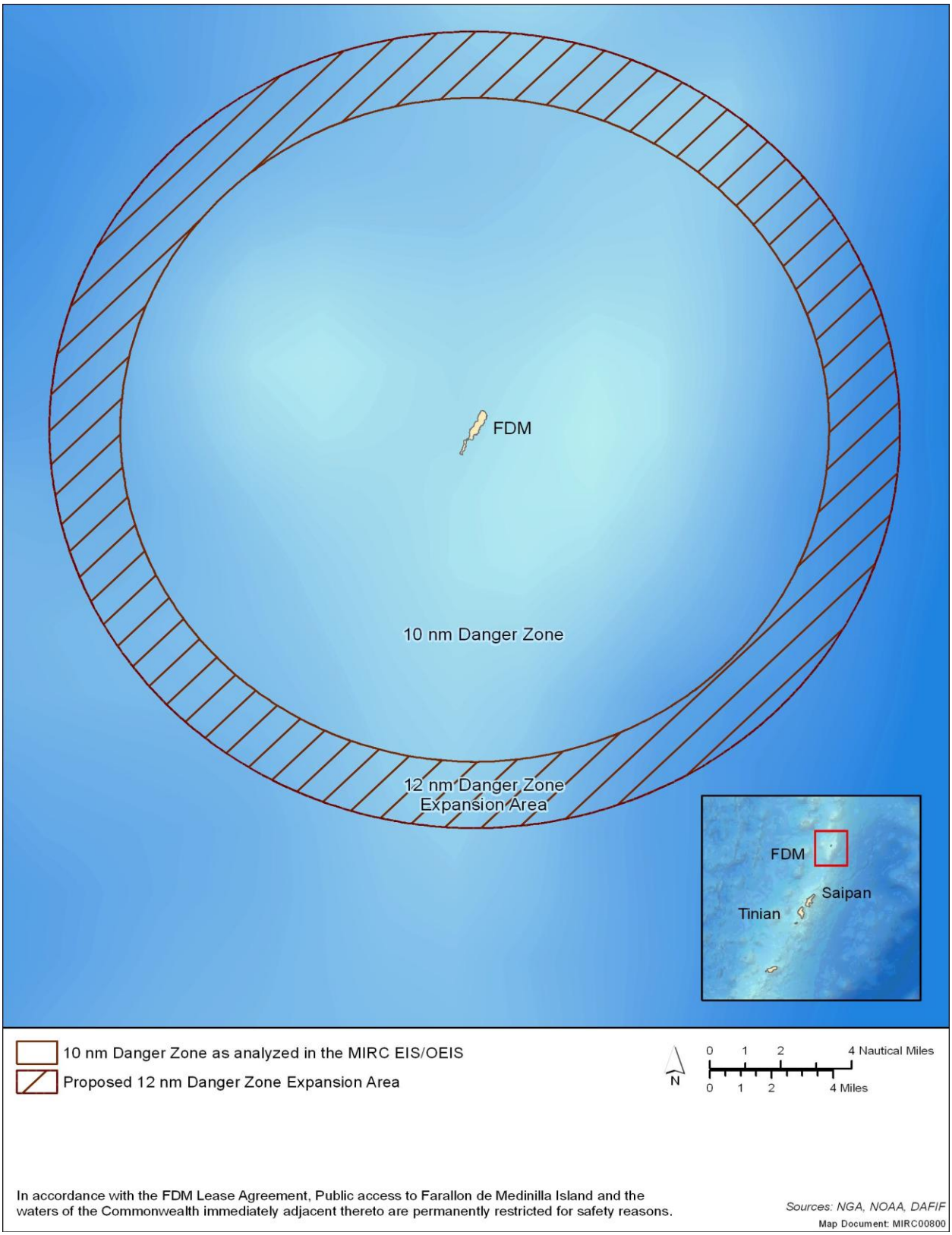

Figure 2.4-3: Farallon de Medinilla Current and Proposed Danger Zone

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3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.0 INTRODUCTION

The National Environmental Policy Act requires that an environmental impact analysis of the resources and areas potentially affected by the Proposed Action be done by federal agencies. However, while all resources must be considered, those resources that will not be affected by the Proposed Action, or impacts that were analyzed in a broader environmental impact statement (i.e., tiering[1]), need not be analyzed in detail or may be incorporated by reference.

This EA/OEA tiers from the MIRC EIS/OEIS (U.S. Department of the Navy 2010a). Thus, this EA/OEA focuses on potential environmental impacts associated with proposed reconfiguration of existing training airspace which includes creation of new warning areas and expansion of the airspace around FDM from 3 nm to 12 nm. The EA/OEA also focuses on the expansion of the DZ around FDM from 10 nm to 12 nm. The types of training and testing activities will remain the same as those assessed in the MIRC EIS/OEIS and are not proposed to change. In other words, the Proposed Action does not propose training activities that differ in scope, nature, or location from those approved in the MIRC EIS/OEIS.

Any impacts associated with this Proposed Action that would vary from those considered in the MIRC EIS/OEIS are addressed in the various resource sections of this EA/OEA. The resource areas where there is potential impact from the Proposed Action, or different impacts from those considered in the MIRC EIS/OEIS, are as follows: public health and safety, transportation, regional economy, and recreation.

This EA/OEA complies with FAA Order 1050.1E, Appendix A (Analysis of Environmental Impact Categories). Table 3.0-1 summarizes the resources evaluated and indicates which of the resources are analyzed based on Navy and FAA resource categories. Table 3.0-1 also includes the rationale for why resources were not carried forward. FAA and Navy resource categories to be evaluated in NEPA documents are generally distinct, but they have been combined where feasible for evaluation purposes.

[1] 43 Federal Register 56003, Section 1508.28 states "Tiering" refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared.

Table 3.0-1: Navy and Federal Aviation Administration Environmental Resources Analyzed in the Environmental Assessment/Overseas Environmental Assessment

Navy	FAA		
Resource Analyzed in the MIRC EIS/OEIS	**FAA Order 1050.1E, Appendix A Resource Analysis Requirement**	**Carried Forward for Detailed Analysis in the MIRC Airspace EA/OEA**	**Rationale**
Geology, Soils, and Bathymetry	Coastal Resources, Compatible Land Use, Construction Impacts	No	The Proposed Action would occur entirely over open ocean and above ground level. The Proposed Action does not include construction or ground disturbing activities. As there is no change in the level of training activities, these resources were not carried forward for detailed analysis.
Hazardous Materials	Hazardous Materials, Pollution Prevention, and Solid Waste	No	The Proposed Action would occur entirely over open ocean and above ground level. The Proposed Action would not generate any hazardous materials or waste or solid waste. Therefore, this resource area was not carried forward for detailed analysis.
Water Quality	Water Quality, Natural Resources and Energy Supply, Floodplains, Wetlands, Wild and Scenic Rivers	No	The Proposed Action would occur entirely over open ocean and above ground level. The Proposed Action would not impound, divert, drain, control, or otherwise modify the waters of any stream or other body of water. In addition, the Proposed Action would not impact energy supply. Therefore, this resource area was not carried forward for detailed analysis.
Air Quality	Air Quality	No	Proposed modifications to the airspace and expansion of the DZ would not result in a change in total annual emissions because training activities would not differ in scope, nature, or location from those approved in the MIRC EIS/OEIS. The MIRC EIS/OEIS determined that no significant impact on air quality would occur because all training events analyzed are within areas designated by the U.S. Environmental Protection Agency as being in attainment for all criteria pollutants or in nonattainment areas for SO^2 where the associated total annual emissions are less than the *de minimis* thresholds for General Conformity determination. In addition, the majority of training activities (sorties) occurs more than 12 nm from the shore and above 3,000 ft. Because of the distances from land, these activities would have no impact on local air quality. Therefore, this resource area was not carried forward for detailed analysis.

Table 3.0-1: Navy and Federal Aviation Administration Environmental Resources Analyzed in the Environmental Assessment/Overseas Environmental Assessment (continued)

Navy	FAA		
Resource Analyzed in the MIRC EIS/OEIS	**FAA Order 1050.1E, Appendix A Resource Analysis Requirement**	**Carried Forward for Detailed Analysis in the MIRC Airspace EA/OEA**	**Rationale**
Airborne Noise	Noise	No	Proposed modifications to the airspace and expansion of the sea space, or DZ, would not result in training activities that differ in scope, nature, or location from those approved in the MIRC EIS/OEIS. The MIRC EIS/OEIS determined that airborne noise generated by training and testing activities would have no substantial environmental effects on human sensitive receptors because noise from training activities in the MIRC would be dispersed and intermittent, so it would not contribute to public long-term noise levels; and training areas on FDM are remote and isolated from the general public, so no sensitive receptors (non-participants) would be exposed to noise events occurring on FDM. As there is no change to these activities, this resource area was not carried forward for additional analysis.
Marine Communities	Coastal Resources, Fish, Wildlife, and Plants	No	The Proposed Action would not change the manner of use or quality of land, water, or other coastal resources or limit the range of their uses as those analyzed in the MIRC EIS/OEIS. Therefore, this resource area was not carried forward for detailed analysis.
Fish and Essential Fish Habitat		No	

Table 3.0-1: Navy and Federal Aviation Administration Environmental Resources Analyzed in the Environmental Assessment/Overseas Environmental Assessment (continued)

Navy	FAA		
Resource Analyzed in the MIRC EIS/OEIS	**FAA Order 1050.1E, Appendix A Resource Analysis Requirement**	**Carried Forward for Detailed Analysis in the MIRC Airspace EA/OEA**	**Rationale**
Marine Mammals	Coastal Resources, Fish, Wildlife, and Plants	No	Proposed modifications to the airspace and expansion of the sea space, or DZ, would not result in a change in the level of training activities and they would not differ in scope, nature, or location from those approved in the MIRC EIS/OEIS. The MIRC EIS/OEIS determined that no significant impact on these species would occur because aircraft overflights would occur over marine environments at elevations in excess of 3,000 ft (914 m) above sea level and beyond 3 nm. Based on the analysis presented in the MIRC EIS/OEIS for aircraft overflights, marine mammals, sea turtles, seabirds and shorebirds, and terrestrial species would likely exhibit no response, or may change their behavior to avoid the disturbance. Any behavioral avoidance reaction would be short-term and would not permanently displace animals or result in physical harm. Overflights would not be expected to result in chronic stress to these species, because it is extremely unlikely that individuals of each of these species would be repeatedly exposed to low-altitude overflights. Mitigation measures to avoid or minimize impacts would continue to be conducted in accordance with established policies and restrictions to conserve and protect resources. Therefore, as there is no change to overflight activities from those analyzed in the MIRC EIS/OEIS, this resource area was not carried forward for detailed analysis.
Sea Turtles		No	
Seabirds and Shorebirds		No	
Terrestrial Species and Habitats (Mariana fruit bat and Micronesian megapode only)		No	

Table 3.0-1: Navy and Federal Aviation Administration Environmental Resources Analyzed in the Environmental Assessment/Overseas Environmental Assessment (continued)

Navy	FAA		
Resource Analyzed in the MIRC EIS/OEIS	**FAA Order 1050.1E, Appendix A Resource Analysis Requirement**	**Carried Forward for Detailed Analysis in the MIRC Airspace EA/OEA**	**Rationale**
Land Use	Compatible Land Use, Construction, Farmlands, Light Emissions, and Visual Impacts	No	The Proposed Action would not change the manner of use or quality of land, land encroachments, or land forms and soil from those analyzed in the MIRC EIS/OEIS. The Proposed Action does not include construction or ground disturbing activities. Proposed modifications to the airspace and expansion of the DZ would not result in a change in land use because training activities would not differ in scope, nature, or location from those approved in the MIRC EIS/OEIS around or on FDM. The MIRC EIS/OEIS determined that no significant impact to land use would occur because training activities analyzed occur more than 12 nm from the shore and above 3,000 ft and would have no impact on land use. Therefore, this resource area was not carried forward for detailed analysis.
Cultural Resources	Historical, Architectural, Archeological, and Cultural Resources	No	There are no historic properties in the area of potential effect (APE). There are also no ground disturbing activities proposed in this EA/OEA. Thus, there will be no effect to historic properties/cultural resources, as none have been identified in the APE and those issues related to this resource have been addressed in the MIRC Cultural Resources Programmatic Agreement and analyzed in the MIRC EIS/OEIS. The 2009 Programmatic Agreement for the MIRC is applicable for purposes of this EA. Therefore, consultation with the State Historic Preservation Office is not required, and this resource area was not carried forward for detailed analysis.
Transportation (airspace and vessel traffic only)	Department of Transportation Act Section 4(f)	Yes	Detailed analysis provided in Section 3.2 (Transportation Resources). Military flight operations or designation of airspace for such operations are not considered as a transportation program or project for purposes of compliance with Section 303(c) of Title 49, United States Code (formerly known as Section 4(f)).

Table 3.0-1: Navy and Federal Aviation Administration Environmental Resources Analyzed in the Environmental Assessment/Overseas Environmental Assessment (continued)

Navy	FAA		
Resource Analyzed in the MIRC EIS/OEIS	**FAA Order 1050.1E, Appendix A Resource Analysis Requirement**	**Carried Forward for Detailed Analysis in the MIRC Airspace EA/OEA**	**Rationale**
Demographics	Socioeconomic Impacts	No	The Proposed Action would occur entirely over open ocean and above ground level and away from populated areas; therefore, demographics and environmental justice and protection of children have been eliminated from further consideration. Refer to the analysis conducted in the MIRC EIS/OEIS for these resources. Therefore, this resource area was not carried forward for detailed analysis.
Environmental Justice and Protection of Children	Environmental Justice and Children Health and Safety Risk	No	
Regional Economy (commercial and recreational fishing only)	Socioeconomic Impacts	Yes	Detailed analyses provided in Section 3.1 (Public Health and Safety), Section 3.2 (Transportation Resources), Section 3.3 (Regional Economy), Section 3.4 (Recreation).
Recreation (recreational fishing only)		Yes	
Public Health and Safety		Yes	

Notes: APE = Area of Potential Effect, EA = Environmental Assessment, EIS = Environmental Impact Statement, MIRC = Mariana Islands Range Complex, OEA = Overseas Environmental Assessment, OEIS = Overseas Environmental Impact Statement

3.1 PUBLIC HEALTH AND SAFETY

This section focuses on potential impacts on public health and safety in the Study Area. It examines potential effects on public health and safety as a result of modifying the airspace under Alternative 1 and expanding a 10 nm DZ around FDM to 12 nm under Alternative 2. When applicable, the EA/OEA incorporates by reference the analyses presented in Section 3.19, Public Health and Safety, of the MIRC EIS/OEIS (U.S. Department of the Navy 2010a). This EA/OEA does not consider the effects on public health and safety on land because there are no proposed activities affecting land accessible to the public. The establishment of clearly defined SUA (warning and restricted areas) and DZs enhances the public's awareness that hazardous activities occur in these areas. The increased public awareness results in increased public safety.

3.1.1 AFFECTED ENVIRONMENT

The portion of the Study Area for assessing potential impacts on public health and safety is the SUA and underlying sea space within U.S. territorial waters (within 12 nm of shore), including ATCAAs, R-7201, and W-517. As described in the MIRC EIS/OEIS (U.S. Department of the Navy 2010a), hazardous military activities (such as missile exercises) occur in these areas, which require limiting access for public health and safety.

The existing conditions for the SUA in the Study Area include the following designations and provisions for protecting public health and safety:

- The 3 nm restricted airspace around FDM is designated on an FAA aeronautical chart.
    - Public access to FDM and within 3 nm radius is permanently restricted for safety reasons.
- The ATCAAs are not designated on FAA aeronautical charts.
- W-517 is designated on an FAA aeronautical chart.
- NOTMARs are issued by the U.S. Coast Guard.
- NOTAMs are issued by the FAA.
- NOTAMs and NOTMARs are issued at least 72 hours in advance of potentially hazardous activity.
- The average number of NOTMARs recorded by the Navy in 2010 and 2011 was 37 at FDM and 36 at W-517. The number of hours specified in the NOTMARs resulted in limiting public access for an average of 138 days at FDM and 144 days at W-517.

In accordance with the 1976 lease agreement for military purposes between CNMI and the United States, FDM and its nearshore area have since been off limits because of unexploded ordnance concerns. No commercial or recreational activities are permitted on or near the island; aircraft and marine vessels are restricted from entering within 3 nm around FDM. NOTMARs and NOTAMs are issued at least 72 hours in advance of potentially hazardous FDM range events and may advise restrictions beyond 3 nm from FDM for certain training events.

The proposed changes to the MIRC airspace and underlying sea space designations involve regulatory coordination with FAA and U.S. Army Corps of Engineers to implement the changes. The FAA rule making procedures and U.S. Army Corps of Engineers public notification process provide mechanisms to protect public health and safety. The following paragraphs describe the notices and processes that are used to protect public health and safety.

Sea Space. In accordance with Title 33 C.F.R. 72, the U.S. Army Corps of Engineers publishes marine information pertaining to sea space (i.e., all sea space, including DZs). As described in 33 C.F.R. Part 334, Danger Zone and Restricted Area Regulations, a DZ is a defined water area (or areas) used for target practice, bombing, rocket firing or other especially hazardous operations, normally for the armed forces. The DZ may be closed to the public on a full-time or intermittent basis, as stated in the regulations. A restricted area is a defined water area for the purpose of prohibiting or limiting public access for safety.

As specified in Title 33 C.F.R. 72.01, the U.S. Coast Guard issues NOTMARs that include advisories for public safety. There are two categories of NOTMARs: local and broadcast. Local NOTMARs are published and issued weekly by each U.S. Coast Guard district, or more often if there is a need to notify mariners of local waterway information. In addition, the U.S. Navy Hydrographic Office in the Pacific issues a hydrographic notice (a special type of NOTMAR known as a HYDROPAC), which is a warning of navigational danger, prior to conducting any hazardous training activity (e.g., training activity using explosives).

The U.S. Coast Guard broadcasts NOTMARs on its Radio Channel 16, via Rescue 21, or on U.S. Navy radio stations to report navigational warnings on safety of navigation of vessels. Radio stations broadcasting marine information are listed in National Geospatial-Intelligence Agency Publication 117, Radio Navigational Aids and United States Coast Pilots (National Ocean Service charts and publications). The Coast Guard's Rescue 21 System allows for communication out to 20 mi. from the coastline. Broadcast NOTMARs are published weekly by the National Imagery and Mapping Agency and are prepared by the U.S. Coast Guard, National Ocean Service, and National Imagery and Mapping Agency. These navigational warnings provide information about duration and location of closures due to activities that are hazardous to surface vessels. Civilian vessels are responsible for being aware of designated danger areas in surface waters and any NOTMARs that are in effect. Operators of recreational and commercial vessels have a duty to abide by maritime regulations administered by the U.S. Coast Guard.

Airspace. Most of the airspace in the Study Area is accessible to general aviation (recreational, private, corporate) and commercial aircraft; however, like waterways, some areas are temporarily off limits to civilian and commercial use. The FAA issues NOTAMs to disseminate information on upcoming or ongoing military exercises with resulting airspace restrictions. Civilian aircraft are responsible for being aware of restricted areas in airspace and any NOTAMs that are in effect. Pilots have a duty to abide by aviation rules as administered by the FAA.

The FAA has established SUA that refers to airspace of defined dimensions wherein activities must be confined (intended to limit activities of non-participants) because of their nature or wherein limitations may be imposed upon aircraft operations that are not part of those activities (U.S. Department of Transportation Federal Aviation Administration 2011). The FAA also coordinates ATCAAs, which is of defined vertical and lateral limits, to provide air traffic separation between the specified activities being conducted within the airspace and other air traffic. The procedures governing operations within these areas are specified in letters of agreement between local military authorities and the Air Traffic Control facility (FAA Order JO 7400.8U).

SUA categories in MIRC include restricted areas and warning areas. A restricted area is regulatory airspace established under 14 C.F.R. Part 73 provisions, within which the flight of aircraft is subject to restriction (Chapter 23, Procedures for Handling Airspace Matters, FAA Order JO 7400.2). Temporary restricted areas may be designated when necessary to accommodate hazardous activities associated with military exercises. FAA rule-making procedures and formal amendment to 14 C.F.R. Part 73 are

required to designate or implement changes in restricted areas. A warning area is designated airspace extending from 3 nm outward from the coast of the United States that contains activity that may be hazardous to non-participating aircraft (Chapter 24, Procedures for Handling Airspace Matters, FAA Order JO 7400.2). The purpose of designating warning areas is to warn non-participating pilots of the potential danger. A warning area may be over domestic or international waters or both (14 C.F.R. Parts 1 and 73).

In accordance with FAA Order JO 7610.4, Chapter 9 (Military Operations Requirements), the controlling agency for SUA is the FAA Air Traffic Control facility that exercises control of the airspace when a SUA area is not activated. The Fleet Area Control and Surveillance Facility Pearl Harbor is the Regional Airspace Coordinator for Naval Forces Marianas. Guam ARTCC is the control facility for the FAA Western-Pacific Region. A military Air Traffic Control facility may be assigned as the controlling agency. MIRC Operations is the controlling agency for joint-use of the SUA. In accordance with Section 21-1-15 of FAA Order (JO 7400.2), SUA areas must be depicted on aeronautical charts and published as required in aeronautical publications.

The Controlling Agency may authorize transit through or flight within the SUA in accordance with a joint use letter issued under 14 C.F.R. Part 73. Designation of the controlling agency in restricted and warning area airspace is for Air Traffic Control purposes only and applies only during the period when the area is released to FAA or military Air Traffic Control facility. Such designation does not negate, compromise, or modify military control or use of the area.

The using agency is the military unit or other organization whose activity established the requirement for the SUA. The using agency is responsible for ensuring that the following occur:

- The airspace is used only for its designated purpose.
- Proper scheduling procedures are established and used.
- The controlling agency is kept informed of changes in scheduled activity, to include the completion of activities for the day.
- A point of contact is made available to enable the controlling agency to verify schedules, and coordinate access for emergencies, weather diversions, and other considerations.

Joint Region Marianas is the Navy command that provides scheduling and control of all air, surface, and subsurface activities within the Study Area. The facility administers services to support the coexistence of military, government, and non-government agencies consistent with national priorities (Office of the Chief of Naval Operations Instruction 3770.20K).

Military, commercial, institutional, and recreational activities take place simultaneously in the Study Area and have coexisted safely for decades because there are DoD and Navy policies and practices for safe use and operation of ranges. The Navy implements a wide range of rules and practices for safe military use in sea space and airspace (U.S. Department of the Navy 2010a). Training and testing hazards and associated safety procedures are discussed in detail for assessment of public health and safety (Office of the Chief of Naval Operations Instruction 3770.2K, and Military Handbook 1027/3B).

3.1.2 ENVIRONMENTAL CONSEQUENCES

This section examines potential impacts associated with public health and safety under each alternative. The alternatives were evaluated based on two factors: (1) the potential that a training or testing activity could affect public health, and (2) safety and the degree to which those activities could have an impact.

The likelihood that the public would be near a training or testing activity determines the potential for exposure to the activity. If the potential for exposure exists, the degree of the potential impacts on public health and safety was determined. If the potential for exposure does not exist, there would be no impacts related to public health and safety.

3.1.2.1 No Action Alternative

The No Action Alternative is to continue training activities as defined by the 2010 MIRC EIS/OEIS (U.S. Department of the Navy 2010a) and ROD (U.S. Department of the Navy 2010b) within the existing ATCAAs and SUA (W-517 and R-7201), and planned 10 nm DZ. The No Action Alternative would not involve modifications to any training space within the MIRC (see Figure 2.1-1 and Figure 2.4-1).

Safety rules and procedures would continue to be implemented, such as the following:

- Request to conduct ordnance operations will be submitted to Joint Region Marianas MIRC Operations Office at least 2 weeks in advance.
- Changes will be permitted 1 week prior to the event.
- The Guam Homeland Security Office of Civil Defense and the CNMI Emergency Management Office will be notified 1 week in advance of pending ordnance operations.
- Safety notifications will be made through broadcast NOTMARs or NOTAMs, as described in Section 3.1.1, issued by U. S. Coast Guard Sector Guam Official Message Traffic and FAA Defense Internet NOTAMs.

These precautions minimize the potential for interaction between military and civilian activities by communicating hazardous training and testing activities to all vessels, aircraft, and operators. Safely conducting activities in the controlled training and testing areas is ensured through implementation of the Navy's safety policies and procedures that include but are not limited to the following:

- Issuing NOTMARs and NOTAMs
- Abiding by Visual Flight Rules (VFR) and Instrument Flight Rules (IFR)
- Scheduling activities through the Fleet Area Control and Surveillance Facilities
- Ensuring that the entire hazard zone is clear before commencing hazardous activities
- Coordinating with Range Safety Officers or Test Safety Officers prior to expending ordnance
- Ensuring clearance of appropriate safety zones
- Using sensors and other devices (e.g., radar and big eye binoculars) to ensure public health and safety while conducting training and testing activities
- Coordinating MIRC Operations with FAA, Naval Base Guam Security, and 36th Wing Operations Group (Andersen Air Force Base)
- Complying with Chief of Naval Operations Instruction 3770.2K, Airspace Procedures and Planning Manual
- Complying with DoD Directive 4540.1, Use of Airspace by U.S. Military Aircraft and Firings Over the High Seas
- Complying with Chief of Naval Operations Instruction 3770.4A, Use of Airspace by U.S. Military Aircraft and Firing Over the High Seas
- Using inertial navigational charts for submarine safety
- Using trained and qualified Navy Lookouts aboard surface vessels
- Complying with Naval Sea Systems Command Instruction 3150.2, Appendix 1A, Safe Diving Distances from Transmitting Sonar

- Using personnel with laser safety training
- Complying with in DoD Instruction 6055.11, Protecting Personnel from Electromagnetic Fields and Military Standard 464A, Electromagnetic Environmental Effects: Requirements for Systems

The advanced planning and issuance of advisories at least 72 hours in advance of training and testing activities provides the public sufficient time to plan their activities accordingly to minimize interference with military activities. Therefore, military activity conducted in the Study Area would have no significant impact on public health and safety under the No Action Alternative.

3.1.2.2 Alternative 1

The restricted area at FDM, R-7201, would be extended from 3 nm to 12 nm (creation of R-7201 A), and new warning areas (W-11, W-12, and W-13) would be created on existing ATCAAs (see Figure 2.4-2). The restricted area extension would be established under 14 C.F.R. Part 73 provisions and would be designated on FAA aeronautical charts. Proposed warning areas would be displayed on FAA aeronautical charts and U.S. Coast Guard navigation charts as locations of potential dangers to navigation. The number and type of training and testing activities and geographical locations in which they are conducted, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modifications. FAA and U.S. Coast Guard designations of the airspace changes on aeronautical and navigation charts would provide greater awareness and protection to the public. As indicated for the No Action Alternative, the Navy's safety policies and procedures would ensure that activities are conducted safely in the controlled training and testing areas. These same Navy policies and procedures would be in effect for Alternative 1. Therefore, no significant impact on public health and safety would occur as a result of implementation of Alternative 1.

3.1.2.3 Alternative 2 (Preferred Alternative)

The airspace within the Study Area would be modified as described under Alternative 1. In addition, a 10 nm DZ around FDM that was analyzed in the MIRC EIS/OEIS (U.S. Department of the Navy 2010a) would be expanded to 12 nm to be congruent with R-7201A (see Figure 2.4-3). The DZ would be established under the U.S. Army Corps of Engineers rule-making procedures. The U.S. Coast Guard would chart the DZ and continue to broadcast NOTMARs for training and testing activities. The number and type of training and testing activities and geographical locations in which they are conducted, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modification and DZ expansion out to 12 nm. The DZ around FDM would provide a greater level of public health and safety by increasing the geographic extent of restrictions to all private and commercial vessels during hazardous training and testing activities. As indicated for the No Action Alternative, the Navy's safety policies and procedures would ensure that activities are conducted safely in the controlled training and testing areas. These same Navy policies and procedures would be in effect for Alternative 2. Therefore, no significant impact on public health and safety would occur as a result of implementation of Alternative 2.

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3.2 TRANSPORTATION RESOURCES

This section focuses on air traffic within the Study Area and vessel traffic in the area around FDM. This EA/OEA only examines potential effects associated with air traffic as a result of modifying the airspace under Alternative 1 and vessel traffic as a result of expanding a 10 nm DZ around FDM to 12 nm under Alternative 2. When applicable, this EA/OEA incorporates by reference the analysis presented in Section 3.14 of the MIRC EIS/OEIS.

3.2.1 AFFECTED ENVIRONMENT

Ocean Traffic. Ocean traffic is the transit of commercial, private, or military vessels at sea, including submarines. Ocean traffic flow in congested waters, especially near coastlines, is controlled by the use of directional shipping lanes for large vessels (cargo, container ships, and tankers) (Figure 3.2-1). Most shipping lanes are located close to the coast; but those that are trans-oceanic start and end to the northwest of Guam. Traffic flow controls are also implemented to ensure that harbors and ports-of-entry remain as uncongested as possible. There is less control on ocean traffic involving recreational boating, sport fishing, and commercial fishing. In most cases, the factors that govern shipping or boating traffic include the following: adequate depth of water, weather conditions (primarily affecting recreational vessels), availability of fish of recreational or commercial value, and water temperature (higher water temperatures increase recreational boat traffic and diving activities).

In the western Pacific Ocean, four commercially used waterways link Guam and CNMI with major ports to both the east and west. These navigable waterways are utilized by commercial vessels. Figure 3.2-1 generally depicts the commercially used waterways and their relation within MIRC. Guam has one commercial port located within Apra Harbor (Port Authority of Guam 2011). There are three ports within CNMI: Rota, Tinian, and Saipan.

Air Traffic. Air traffic refers to movements of aircraft through airspace. Safety and security factors dictate that use of airspace and control of air traffic is closely regulated. Accordingly, regulations applicable to all aircraft are regulated by the FAA to define permissible uses of designated airspace, and to control that use. These regulations are intended to accommodate the various categories of aviation, whether military, commercial, or general aviation. The regulatory scheme for airspace and air traffic control varies from highly controlled to uncontrolled. Less controlled situations include flight under VFR or flight outside of U.S. controlled airspace (e.g., flight over international waters). Examples of highly-controlled air traffic situations are flights in the vicinity of airports where aircraft are in critical phases of flight, either takeoff or landing, and flight under IFR, particularly flights on high- or low-altitude airways. An overview of airspace is provided in Section 2.1 of Chapter 2 of this EA/OEA.

The Navy conducts training and testing inside ATCAAs and SUA (see Figure 2.1-1 in Chapter 2). Commander, U.S. Naval Forces Marianas (COMNAVMAR) or Joint Regions Marianas is the scheduling authority for Navy-controlled SUA training areas (warning areas and restricted areas) and the FAA is the controlling authority for the use of airspace in the Study Area (U.S. Department of the Navy 2011). Commercial airways are shown in relation to proposed airspace within the Study Area in Figure 3.2-2.

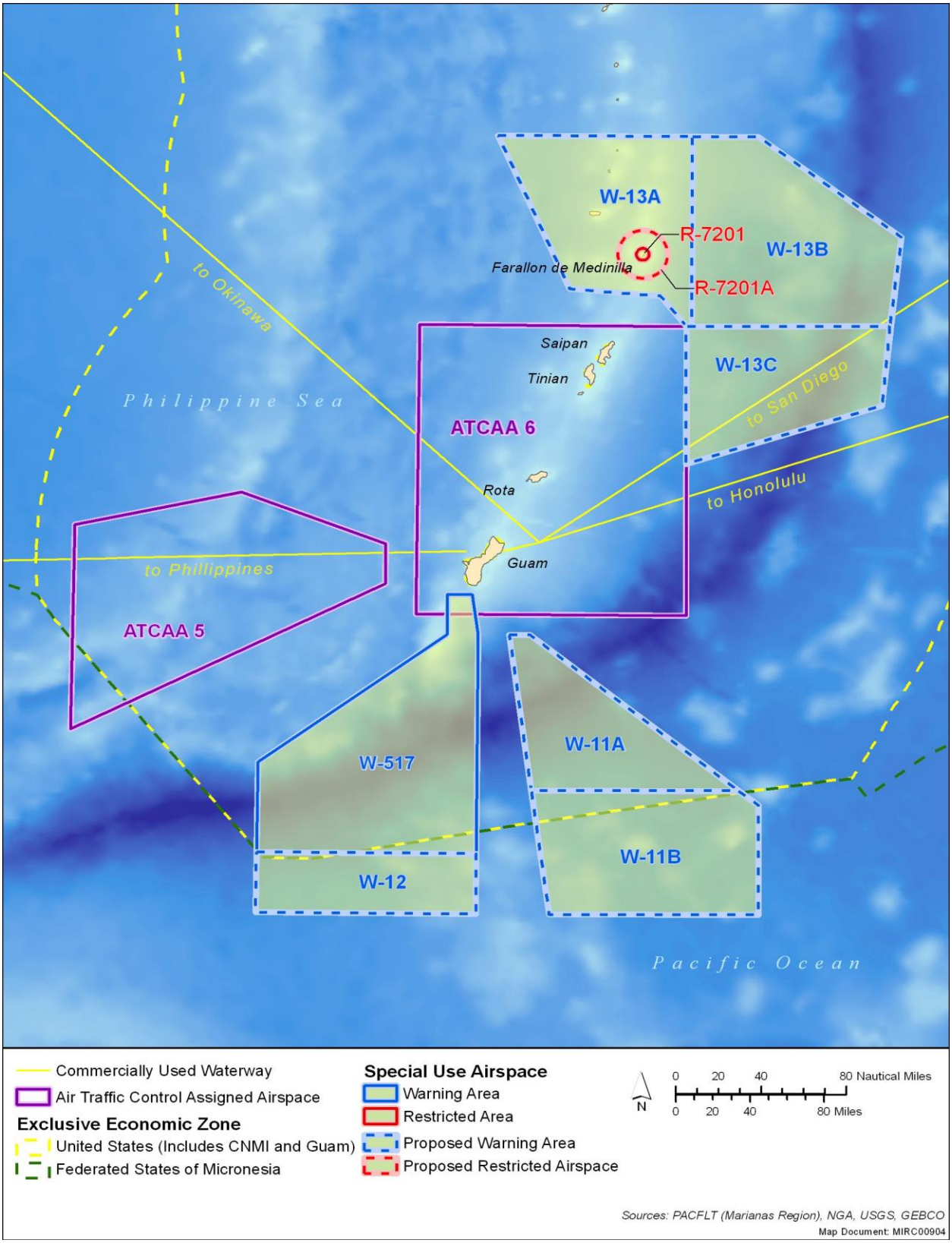

Figure 3.2-1: Commercially Used Waterways within the Mariana Islands Range Complex

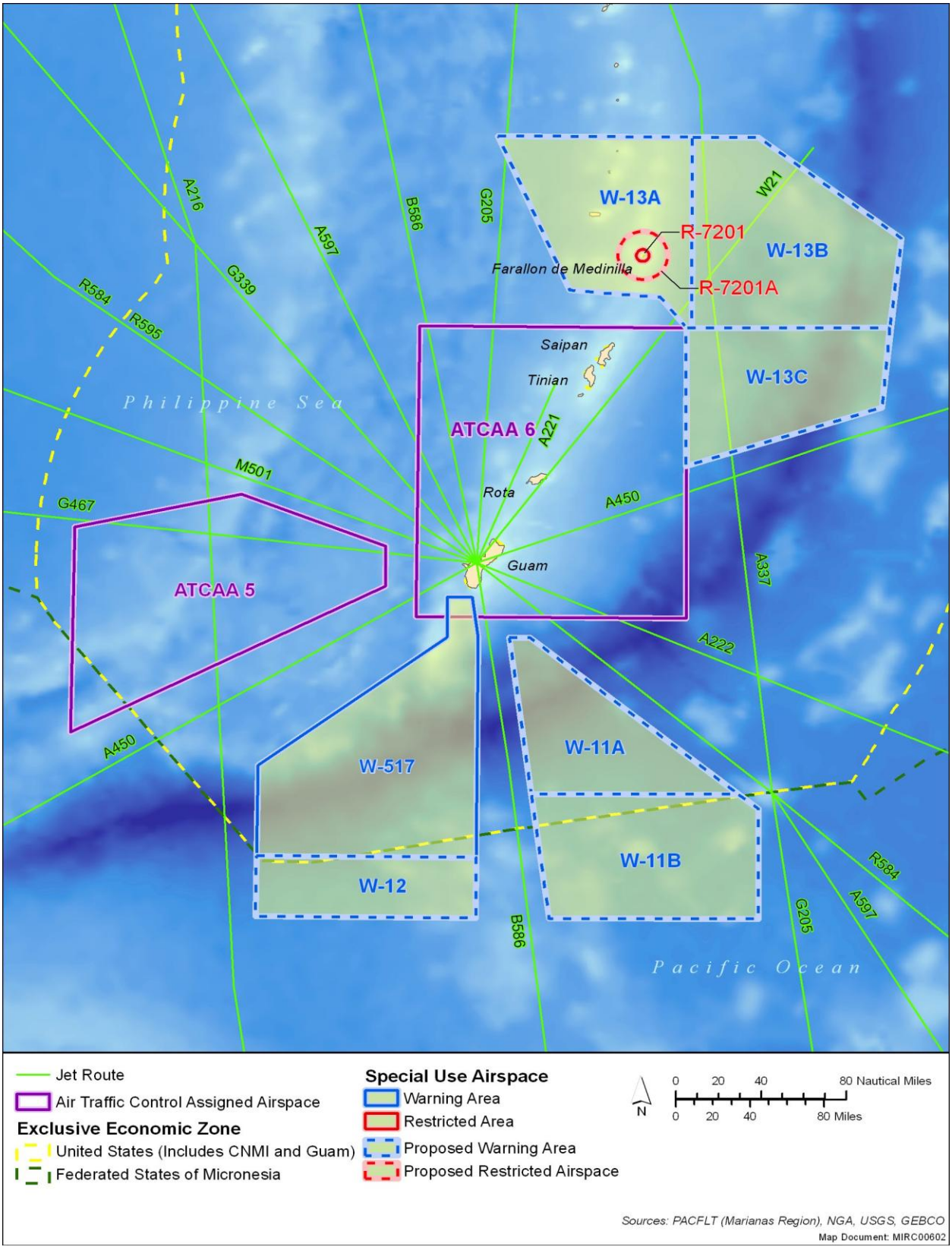

Figure 3.2-2: Commercial Airways within the Mariana Islands Range Complex Airspace

When military aircraft are conducting training activities that are not compatible with commercial or recreational transportation (e.g., hazardous weapons firing), they are typically scheduled to occur in SUA and ATCAAs. Joint Region Marianas MIRC Operations is the final approval authority for all submitted training requests. Prior to granting approval of any training activity, Joint Region Marianas MIRC Operations will ensure all mandatory safety notifications are satisfied to include issuance of NOTAM and NOTMAR as applicable; within 72 hours prior to the commencement of training (U.S. Department of the Navy 2011). NOTMARs are issued by the U.S. Coast Guard and NOTAMs are issued by the FAA (see Section 3.1.1.). In addition, the U.S. Navy Hydrographic Office in the Pacific issues a hydrographic notice (a special type of NOTMAR known as a HYDROPAC), which is a warning of navigational danger, prior to conducting any hazardous training activity (e.g., training activity using explosives).

3.2.1.1 Guam

W-517 is an area that overlays deep ocean water located approximately 50 mi. (80.5 km) south-southwest of Guam and provides a large SUA area from surface to unlimited altitude. It is constrained by commercial air traffic lanes to the east and west.

ATCAAs within the MIRC are used for military training activities. ATCAAs 1, 2, 3, 5, and 6 as depicted in Figure 2.1-1 have been pre-assigned in agreements with the Guam ARTCC, COMNAVMAR, and the Commander, 36th Wing. The Guam ARTCC works with COMNAVMAR and 36th Wing to modify or configure new ATCAA as required for training events. Preconfigured ATCAAs encompass 63,000 nm^2 from south of Guam to north-northeast of FDM, from the surface to FL 300 or unlimited, as depicted in Table 2.1-1. ATCAAs are activated for short periods to cover the time frames of training activities. COMNAVMAR coordinates ATCAA requests with the FAA and 36th Wing. If the preconfigured ATCAAs 1, 2, 3 A/B/C, 5, or 6 do not meet the need for a special event, then event-specific ATCAAs in the location, size, and altitude for the time frame needed may be requested contingent on agreement of the FAA and coordination with COMNAVMAR and 36th Wing. Range control consists of scheduling SUA with operational units and notifying military and civilian stakeholders of SUA schedules via NOTAMs and NOTMARs. NOTAMs are available on the Internet at https://www.notams.jcs.mil and NOTMARs can be found on the Internet at www.nga.mil/portal/site/maritime. Figure 2.1-1 depicts the location of W-517; ATCAAs 1, 2, 3, 5, and 6; and R-7201.

3.2.1.2 Farallon de Medinilla

R-7201 is a restricted area with a 3 nm radius surrounding FDM, although the published NOTAMs/NOTMARs usually advise that a 10 nm radius is to be observed. With altitude limits from surface to FL 600 (60,000 ft.), R-7201 supports live-fire and engagements such as the use of explosive and non-explosive ordnance against land based targets on FDM.

FDM and the nearshore waters are leased to the United States for military purposes, specifically for use as a live-fire training range for the use of explosive and non-explosive ordnance against land based targets for training. FDM and its nearshore area are and have always been an off-limits area to all personnel, both military and civilian, due to unexploded ordnance concerns, unless accompanied by explosive ordnance personnel with Commander, Joint Region Marianas authorization. On an event necessary basis, approval for ground operations must be requested and approved through the JRM Operations Officer (U.S. Department of the Navy 2011).The lease agreement between CNMI and the United States states in pertinent part, at Article 12 of the lease, “c. Farallon de Medinilla: Public access to Farallon de Medinilla Islands and the waters of the Commonwealth immediately adjacent thereto shall be permanently restricted for safety reasons.” (Commonwealth of the Northern Mariana Islands 1983).

The MIRC EIS/OEIS analyzed establishment of a 10 nm surface DZ to restrict all private and commercial vessels from entering the area during the conduct of hazardous training activity. The analyzed DZ was intended to designate a surface safety zone of 10 nm radius surrounding FDM. The creation of the proposed DZ would not affect the continued implementation of restricted access as indicated in the lease agreement. Public access to FDM would remain strictly prohibited and there would be no commercial or recreational activities on or near the island. NOTMARs and NOTAMs will continue to be issued at least 72 hours in advance of potentially hazardous FDM range events and may advise restrictions for certain training events.

3.2.2 ENVIRONMENTAL CONSEQUENCES

This section examines potential impacts on commercial and recreational vessel and aircraft transportation as a result of proposed airspace modifications and DZ expansion from 10 to 12 nm. The analysis focuses on the potential for existing or proposed military traffic to affect civilian transportation patterns and conditions. Impacts on traffic are assessed with respect to the potential for disruption of transportation pattern and systems and changes in existing levels of transportation safety.

3.2.2.1 No Action Alternative

Under the No Action Alternative, the Services would continue training activities as defined by the 2010 MIRC EIS/OEIS (U.S. Department of the Navy 2010a) and ROD (U.S. Department of the Navy 2010b) within the existing ATCAAs and SUA (W-517 and R-7201), and planned 10 nm DZ. The No Action Alternative would not involve modifications to any training space within the MIRC (see Figure 2.1-1 and Figure 2.4-1).

Based on the analysis presented in the MIRC EIS/OEIS, no significant impacts on transportation resources would occur because military activities are either scheduled or announced ahead of execution or take place in an area that is designated for the exclusive use of military activities. Therefore, no significant impacts would occur on transportation resources in territorial waters under the No Action Alternative. In addition, no significant harm to transportation resources in non-territorial waters would occur under the No Action Alternative.

3.2.2.2 Alternative 1

The restricted area at FDM, R-7201, would be extended from 3 nm to 12 nm, and new warning areas (W-11, W-12, and W-13) will be created on existing ATCAAs. Under Alternative 1, existing airspace within the MIRC would be modified to maximize public awareness of hazardous military training activities, and to optimize safety and training efficiency (see Figure 2.4-2). Under Alternative 1, events and activities associated with military training and testing would not increase from the No Action Alternative levels. The Navy would continue to retain control of warning areas and restricted areas while the FAA would continue to maintain control of the overall airspace system (i.e., the Navy closely coordinates ATCAA requests with the FAA) (U.S. Department of the Navy 2011).

As analyzed in the Airspace Feasibility Assessment (Federal Aviation Administration 2011), the following outlines potential impacts associated with proposed airspace modifications under Alternative 1:

- R-7201A: Under Alternative 1, the expansion of R-7201 from 3 nm to 12 nm would not conflict with any air traffic service routes.
- W-11A/B and W-12: Under Alternative 1, W-11A/B and W-12 would not overlay any existing civilian routes.

- W-13A/B/C: Under Alternative 1, portions of the proposed W-13 would overlay existing civilian routes. If necessary, civilian aircraft would be vectored or rerouted to avoid the area.

The FAA completed an air traffic analysis over a 7-day period from September 16 to 22, 2012, for IFR traffic within the Guam ARTCC airspace. Table 3.2-1 provides the total number of military and civilian/commercial air traffic tracks and a summary of potential air traffic conflicts.

Based on Table 3.2-1, W-13A/B/C would be the only area of proposed airspace with the potential to affect civilian/commercial jet routes as a result of military training activities. The vast majority of civilian/commercial air traffic occurs along the northwest corner of W-13A on or parallel to jet route G206 (see Figure 3.2-2). In addition, there are only a few flights that occur within W-13B/C (along jet route A337) that would have the potential to conflict with military training activities.

Table 3.2-1 Summary of 7-Day IFR Traffic Analysis for Marianas SUA (16–22 September 2012)

Airspace	Altitude	Military Tracks	Civilian/ Commercial Tracks	Impact Analysis
W-11A	SFC - FL300	96	5	• No significant impact expected due to low traffic volume and ease of rerouting traffic to existing jet routes to the east and west of W-11A boundaries.
W-11B	SFC - FL300	49	0	• No impact expected due to lack of traffic and absence of established jet routes in W-11B.
W-12	SFC - FL600	13	23	• No significant impact since most civilian/commercial tracks run north and south parallel to jet routes and just outside of W-12. In addition, these flights are above FL350. Most military tracks are below FL300. • If needed, civilian/commercial air traffic can be rerouted to adjacent jet routes without significant impact. • Military traffic below FL350 would have no significant impact on civilian/commercial air traffic.
W-13A/B/C HI	FL300 - FL600	2	80	• There are a total of 62 commercial tracks that occur on or parallel to Jet Route G205 along the far western edge or northwest corner of W-13A. If necessary, during military training activities, civilian/commercial air traffic could be rerouted slightly west to avoid W-13A without significant impact to air traffic patterns. There are a total of 18 tracks that occur within W-13B/C, 8 of which occur between the time period of 2200 and 0200 local time. For these flights, any conflicts would be avoided through scheduling. The other 10 civilian/commercial tracks within W-13B/C could be affected by military training activities; however, these flights generally occur in a north/south orientation (on or parallel to route A337) and could be rerouted to the east or west with very minimal impact to air traffic patterns.
W-13A/B/C LO	SFC - FL300	38	2	• No significant impact expected due to low traffic volume.
R-7201/7201A	SFC - FL600	8	1	• No significant impact expected due to low traffic volume.

During military training activities in W-13A/B/C, civilian/commercial air traffic would be rerouted to adjacent jets routes slightly to the west or to the east as necessary, with minimal disruption in air traffic. Given a projection of 80 flights per week within W-13A/B/C, depending on the military training activity occurring at that time, a maximum of 2 to 3 flights a day would be affected by rerouting. They would only be affected if military activities were being conducted at the same time. However, any rerouting of civilian/commercial aircraft would be minor and would not significantly impact overall flight time. In addition, close coordination of scheduling between the military and FAA control centers will ensure that any conflicts are minimized.

Based on the analysis presented above, airspace modifications (R-7201A, W-11A/B, and W-12) proposed under Alternative 1 would not conflict with existing air traffic service or civilian routes. Modifications of the airspace would result in an overall increase in safety in the MIRC by clearly designating airspace for its intended use. While proposed modifications associated with W-13A/B/C would overlap with existing civilian routes, any conflicts would be minimized as a result of close coordination between the Navy and FAA. Therefore, no significant impacts on transportation would occur as a result of implementation of Alternative 1. Similarly, Alternative 1 would not cause significant harm to transportation resources in non-territorial waters.

3.2.2.3 Alternative 2 (Preferred Alternative)

Under Alternative 2, airspace within the MIRC would be modified as described under Alternative 1 (see Figure 2.4-2and Table 2.4-1). In addition, a 10 nm DZ around FDM would be expanded to 12 nm to be congruent with R-7201A (see Figure 2.4-3). Under Alternative 2, the number and type of training activities and geographical locations in which they are conducted, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modification and DZ expansion from 10 nm to 12 nm. The expansion of the DZ around FDM would restrict all private and commercial vessels from entering the area out to 12 nm (rather than out to 10 nm) to increase public safety during the conduct of hazardous training activity. Modification of the airspace and extension of a 10 nm DZ to 12 nm would increase safety in the Study Area by providing a permanently charted and published DZ that maximizes public awareness, enhances training efficiency by limiting opportunities for access conflict, and ensures public notification of the use of the airspace and associated surface areas. Therefore, no significant impacts on transportation (vessel and aircraft traffic) would occur as a result of implementation of Alternative 2. In addition, Alternative 2 would not cause significant harm to transportation resources in non-territorial waters.

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3.3 REGIONAL ECONOMY

This section focuses on potential impacts on the regional economy that are associated with modifying the airspace under Alternative 1 and expanding a 10 nm DZ around FDM to 12 nm under Alternative 2. This EA/OEA does not reassess the training or testing events analyzed in the MIRC EIS/OEIS because there is no change to the scope, nature, or location of those training activities approved in the MIRC EIS/OEIS. This EA/OEA incorporates by reference (where applicable) the analyses presented in Section 3.16, Regional Economy, of the MIRC EIS/OEIS and only examines potential effects on the regional economy from the alternatives to the Proposed Action. This EA/OEA section analyzes those potential impacts on the regional economy that relate to economic impacts on commercial and recreational fishing because the Proposed Action does not affect land or beach areas, or the populations residing therein.

3.3.1 AFFECTED ENVIRONMENT

Commercial fishing occurs throughout the Study Area from nearshore waters adjacent to Guam and the CNMI, as well as offshore banks. Sport or recreational fishing also occurs at various times throughout the year when popular sport fish, including blue marlin, mahi-mahi, yellowfin, and skipjack tuna, are most abundant (Schultz 2000).

Commercial fishermen in Guam and the CNMI typically fish in waters that are less than 500 ft. (152.4 m) deep and target the red-gilled emperor (Western Fishery Management Council 2012). Commercial fishing peaks in summer when sea conditions are calm, but occurs year round in some locations (e.g., leeward side of the islands) where conditions are usually calmer. Some small-scale commercial fishing takes place in waters deeper than 500 ft. (152.4 m) and focuses on snapper and grouper species (Western Pacific Regional Fishery Management Council 2008).

Commercial and recreational fishing within the Study Area are divided into three types: bottom fishing, coral reef fishing, and open-ocean fishing.

Bottom Fishing. Guam and CNMI bottom fishing is a combination of subsistence, recreation, and commercial fishing. The majority of vessels used for bottom fishing are less than 25 ft. (7.6 m) long and operate in shallow waters (<500 ft.) (<152.4 m). Bottom fishing is conducted in two areas: shallow water (<500 ft.) (<152.4 m) and deepwater (>500 ft.) (>152.4 m). Smaller operator-owned boats tend to target shallow water, while the commercial fishermen usually target the deeper water. Less than 20 percent of shallow water harvests are taken outside 3 miles mi. (4.8 km). This is largely due to deeper water and stronger currents farther out to sea (Western Pacific Regional Fishery Management Council 2009). Bottom fishing charters account for 15 to 20 percent of bottom fishing trips since 1995 and they have increasingly become catch-and-release activities (Western Pacific Regional Fishery Management Council 2009).

Around CNMI, bottom fishing occurs around the island sand banks from Rota Island to Zealandia Bank north of Sarigan and is primarily commercial in both the shallow water (<500 ft. [<152.4 m]) and the deep water (>500 ft. [>152.4 m]) fishing zones. Some recreational fishing does occur in the shallow water. In 2004, the Division of Fish and Wildlife reported only 43 vessels (these included both large and small vessels) that recorded fishing in the bottomfish fishery; only eight of these vessels were reported to be commercial vessels, and Western Pacific Regional Fishery Management Council (WPRFMC) reported in 2005 that only four were presently active. The small vessels or skiffs are generally less than

24 ft. (7.3 m) in length and restricted because of their size to use during daylight hours within a 30 mi. (48.3 km) radius of Saipan (Western Pacific Regional Fishery Management Council 2005).

Coral Reef Fishing. Fishing for the crustacean fishery occurs for subsistence and recreation in inshore territorial waters. Shore-based fishing accounts for most of the fish and invertebrate harvest from coral reefs. More than 100 species of fish are available in the waters around Guam. However, many of the nearshore reefs around Guam appear to have been badly degraded due to sedimentation, tourist overuse, and overharvesting (Western Pacific Regional Fishery Management Council 2005).

Open-Ocean Fishing. The five most common fish caught in open-ocean waters are mahi-mahi, wahoo, skipjack tuna, yellowfin tuna, and Pacific blue marlin. The open-ocean fishing fleet numbered 386 boats in 2006 (Allen and Bartram 2008). Approximately 7 percent of this fleet is comprised of charter boats with the remainder comprised of Guam residents using owner-operated boats, mostly towed to launch sites, as opposed to semi-permanent marina docking (Allen and Bartram 2008). The charter industry is most widely used by tourists and U.S. military personnel. Charter trips totaled roughly 2,000 in 2006, with an estimated 67,000 pounds (lb.) (3039.1 kilograms [kg]) of catch with mahi-mahi, skipjack, and wahoo accounting for the top three species (Allen and Bartram 2008).

For the CNMI, the Pacific Islands Fisheries Science Center (PISFC) published data for the latest year in 2008 that was then compiled by the Guam Division of Fish and Wildlife and the Western Pacific Fisheries Information Network (WPacFIN) in August 2010. The Division of Fish and Wildlife collected data through a dealer invoicing system on a monthly basis. Estimates since 1982 indicate that more than 90 percent of the commercial landings have been recorded in Saipan; although the data represents 100 percent coverage (Guam Division of Aquatic and Wildlife Resources and the Western Pacific Fishery Information Network 2010). In order to commercially fish in the CNMI's exclusive economic zone in a 25 to 50 ft. (7.6 to 15.2 m) boat (over 5 net tons), a commercial fishing license is required and issued annually. The National Oceanic and Atmospheric Administration (NOAA) PISFC issues approximately four commercial fishing licenses on an annual basis (Pacific Islands Fisheries Science Center 2011).

Fishery Catches. Fishery catches over the last 5 years were relatively stable; however, associated revenues have been steadily decreasing. Within the last 5 years of data, the CNMI produced a low of 313,581 lb. (142,238.1 kg) worth $668,042, and a high of 536,724 lb. (247,453.9 kg) worth $1,058,804. The resultant average over this 5-year period was 436,440 lb. (197,965.8 kg) worth an average of $882,926.

From year to year, there are large fluctuations in the number of species caught as open-ocean fish tend to be highly migratory and suffer depredation from other species further out to sea. Annual commercial landings data for all fish types in Guam from 2005 to 2009 shows a large fluctuation in the amount of pounds caught, and subsequently the revenue generated from these commercial fishing activities (see Table 3.3-1). The PISFC released an administrative report in 2008 titled *Guam as a Fishing Community* that notes that, although in some cases commercial fishing contributes substantially to household income, nearly all of Guam's domestic fishermen hold jobs outside the fishery (Myers 1993; Allen and Bartram 2008). Commercial fisheries generate a relatively minor contribution to Guam's economy. According to WPacFIN, between 1980 and 2009 the ex-vessel value of domestic commercial landings ranged from about $179,000 in 1980 to $1.33 million in the year 2000 (Western Pacific Fisheries Information Network 2010). Since the late 1970s, the most important commercial fisheries activity in Guam has been the territory's role as a major regional fish transshipment center and resupply base for domestic and foreign tuna fishing fleets.

Table 3.3-1: Guam Commercial Fishery Landings

Year	Pounds	Value
2005	357,965	$748,036
2006	334,729	$726,296
2007	422,153	$889,221
2008	287,213	$692,809
2009	270,922	$711,463
TOTAL	**1,672,982**	**$3,767,825**

Sources: Western Pacific Regional Fishery Management Council 2008; Western Pacific Regional Fishery Management Council 2009; Western Pacific Fisheries Information Network 2011; Western Pacific Fisheries Information Network 2011

3.3.2 ENVIRONMENTAL CONSEQUENCES

This section examines potential impacts on the regional economy from the Proposed Action; in other words, this section analyzes only the potential impacts of modifying the airspace under Alternative 1 and expanding a 10 nm DZ around FDM to 12 nm under Alternative 2. Regional economy impacts would be considered significant if the alternative chosen for implementation resulted in a substantial shift in regional employment and spending or earning patterns as a result of impacts on commercial and recreational fishing (i.e., persons or money moved from one specialization or industry [fishing] to another because of impacts caused by, in this case, the modification of the airspace and sea space). Potential impacts to regional economy are not analyzed beyond 12 nm from shore, because EO 12114, which establishes environmental policy beyond 12 nm, does not apply.

3.3.2.1 No Action Alternative

Training activities would continue as defined and analyzed by the 2010 MIRC EIS/OEIS (U.S. Department of the Navy 2010a) and ROD (U.S. Department of the Navy 2010b) and be conducted within the existing MIRC system of airspace as shown in Figure 2.1-1 and described in Table 2.4-1.

Commercial and recreational fishing activities contribute to the overall economy and cultural heritage in the CNMI and on Guam. The military does not limit fishing activities from occurring in areas of the Study Area that are not being used by the Navy during training activities. The military has been conducting training activities within the Study Area for decades, and has taken and will continue to take measures to prevent interruption of commercial and recreational fishing activities.

These measures include the following:

- Range control consists of scheduling SUA with operational units and notifying military and civilian stakeholders of SUA schedules via NOTAMs and NOTMARs. NOTAMs are available on the Internet at https://www.notams.jcs.mil and NOTMARs can be found on the Internet at www.nga.mil/portal/site/maritime. NOTAMs and NOTMARs are issued at least 72 hours in advance to minimize potential military/civilian interactions. This process is implemented to ensure that commercial and recreational users are aware of the military's plans and allow users to plan their activities to avoid scheduled training activities. Therefore, decreases in the frequency of fishing trips or in the availability of desirable fishing locations due to military activities is not expected.
- Notifying the public via NOTMARs (broadcast via radio Channel 16, U.S. Coast Guard Rescue 21 system, or on U.S. Navy radio stations) of upcoming activities requiring a temporary exclusion

zone. This provides mariners with advance notice of areas being used by the military for hazardous training activities, and allows mariners to plan accordingly by selecting an alternate destination without appreciable effect to their activities. The Coast Guard's Rescue 21 system allows for communication out to 20 mi.—and not only from Guam, but also Rota, Saipan, and Tinian.

In addition to the measures above, when an exclusion zone is established, temporarily limiting commercial and recreational fishing in that specific area, other areas in the Study Area remain open to commercial and recreational fishing. Upon completion of training activities, any restriction on certain areas is lifted and fishermen are able to return to fish and transit through the area.

Based on the analysis presented in the MIRC EIS/OEIS, including measures to prevent interruption of commercial and recreational fishing as summarized above, no significant impacts would occur on the regional economy. Under the No Action Alternative, there is no substantial shift in regional employment and spending or earning patterns as a result of training activities within the Study Area, as analyzed in the MIRC EIS/OEIS. No significant impacts on the regional economy occur given the extensive size of the training area, the notification process via NOTMARs, and the limited number of commercial fishing vessels within the Study Area.

3.3.2.2 Alternative 1

The restricted area at FDM, R-7201, would be extended from 3 nm to 12 nm (creation of R-7201 A), and new warning areas (W-11, W-12, and W-13) will be created on existing ATCAAs (see Figure 2.4-2). Under Alternative 1, the scope, type, and location of current training activities, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modifications.

The modification of the airspace would not result in a change from the current practice of issuing NOTMARs when hazardous training activities are being conducted. Similarly, the current practice of allowing fishing activities to operate in areas of the Study Area that are not being used by the Navy and other Services during training activities would also continue. The military would continue to take measures to prevent interruption of commercial and recreational fishing activities, as described under the No Action Alternative.

Therefore, potential impacts on the regional economy (commercial and recreational fishing) from implementation of Alternative 1 would be the same as those described under the No Action Alternative. There would be no substantial shift in regional employment and spending or earning patterns as a result of implementation of Alternative 1. No significant impacts on the regional economy would occur given the extensive size of the training area, the notification process via NOTMARs, and the limited number of commercial fishing vessels.

3.3.2.3 Alternative 2 (Preferred Alternative)

Under Alternative 2, airspace within the MIRC would be modified as described under Alternative 1. In addition, a 10 nm DZ around FDM would be expanded to 12 nm to be congruent with R-7201A (Figure 2.4-3). Under this alternative, the scope, type, and location of current training activities, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modifications and expansion of the DZ out to 12 nm.

The DZ expansion from 10 to 12 nm would not change the commercial or recreational fishing use of the area or have an impact on the regional economy because displacement of commercial and recreational

fishing is temporary and fishing in the general area is not precluded, especially during peak fishing seasons.

The DZ around FDM would provide a greater level of public health and safety by increasing the geographic extent of restrictions to all private and commercial vessels during hazardous training and testing activities. As indicated for the No Action Alternative, the Navy's safety policies and procedures would ensure that activities are conducted safely in the controlled training and testing areas. These same Navy policies and procedures would be in effect for Alternative 2. Areas that are not being used by the Navy and other Services for training purposes within the Study Area will continue to be accessible and available for fishing activities under Alternative 2. The military would maintain its measures to prevent interruption of commercial and recreational fishing activities, as described under the No Action Alternative. Thus, current measures and protocols would be used for the DZ expansion from 10 to 12 nm to allow commercial and recreational fishing boats to select an alternate destination without substantially affecting their activities.

Therefore, potential impacts on the regional economy (commercial and recreational fishing) from implementation of Alternative 2 would not change as a result of the proposed airspace modification and DZ expansion out to 12 nm and would be the same as those described under the No Action Alternative. There would be no significant shift in regional employment and spending or earning patterns as a result of implementation of Alternative 2. No significant impacts on the regional economy would occur given the extensive size of the training area, the notification process via NOTMARs, and the limited number of commercial fishing vessels.

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3.4 RECREATION

This section focuses on potential impacts on recreational fishing in the Study Area. It examines potential effects on recreational fishing as a result of modifying the airspace and expanding a 10 nm DZ around FDM to 12 nm. When applicable, the EA/OEA incorporates by reference the analyses presented in Section 3.17, Recreation, of the MIRC EIS/OEIS (U.S. Department of the Navy 2010a). Establishing clearly delineated SUA (warning and restricted areas) and DZs enhance the public's awareness that hazardous activities occur in these areas. The increased public awareness results in increased public safety and less impact on recreational fishing. This EA/OEA does not consider the effects of the Proposed Action on land-based recreational activities because the Proposed Action does not affect land or beach areas accessible to the public.

3.4.1 AFFECTED ENVIRONMENT

The waters underlying the SUA in the Study Area, including ATCAAs, R-7201, and W-517 are the areas analyzed for potential impacts on recreational fishing. These areas cover the sea space in U.S. territorial (within 12 nm of shore) and outside territorial waters of the MIRC.

Both CNMI and Guam are categorized as “fishing communities” by the WPRFMC, with the majority of the population fishing for subsistence. CNMI generally has small fishing fleets composed of small-scale subsistence and recreational vessels. CNMI’s Department of Fish and Wildlife reported that 150 vessels were used for subsistence fishing (Western Pacific Regional Fishery Management Council 2005). Some fishing trips last more than a day, but most subsistence and recreational fishers are limited to single-day, daylight trips. Most of the recreational fishing occurs within 3 nm of shore. Lobsters are harvested within 3 nm of shore using scuba or diving gear for personal consumption. Saipan is 45 nm from FDM and is the nearest island to the military restricted area.

Like CNMI, Guam has a combination of subsistence and recreational fishing. Most vessels are less than 25 ft. (7.6 m) long and operate in water depths less than 500 ft. (152 m). Rough seas limit small boats during most of the year and limit subsistence and recreational fishing to summer months, when the sea conditions are calm. Charter fishing has accounted for 15 to 20 percent of all fishing trips (Western Pacific Regional Fishery Management Council 2005). These trips are generally to the same areas, 2 to 4 hours per day, with the majority of the catch released back to the ocean. Lobster harvest occurs in inshore territorial waters for recreational and subsistence purposes.

There is no fringing reef or shallow coastal zone at FDM because deepwater surrounds much of the island (Western Pacific Regional Fishery Management Council 2005). The CNMI fishery management plan does not contain data on recreational fishing as far out as FDM because most of the recreational and subsistence fishing occurs within 3 nm of shore at Guam and Saipan.

FDM has been a bombing range for more than 40 years and contains unexploded ordnance. In accordance with the CNMI and DoD lease agreement, public access to FDM and the waters immediately adjacent thereto are permanently restricted for safety reasons. There are no commercial or recreational activities on or near the island; aircraft and marine vessels are restricted from entering within a 3 nm radius of FDM. The permanently restricted area around FDM is congruent with R-7201, which is established in accordance with 33 C.F.R. §334.1. The U.S. Army Corps of Engineers promulgates regulations restricting commercial, public, and private vessels from entering R-7201 to protect public health and safety.

As described in Section 3.1 (Public Health and Safety), NOTMARs are issued to protect the public, including fishermen, during training and testing activities. The advanced planning and advisory notices allow recreational fishermen time to plan their activities accordingly to minimize interference with military activities.

3.4.2 ENVIRONMENTAL CONSEQUENCES

This section examines potential impacts on recreational fishing under each alternative. Impacts on recreational fishing were assessed in terms of anticipated restrictions to current levels of access to recreational areas. Impacts could arise from physical restriction of recreational areas for exclusive use of military training and testing activities. Factors used to assess the significance of impacts on recreational fishing include consideration of an alternative's potential to cause a serious disruption of civilian recreational activities.

3.4.2.1 No Action Alternative

Under the No Action Alternative, training activities would continue as defined by the 2010 MIRC EIS/OEIS (U.S. Department of the Navy 2010a) and Record of Decision (U.S. Department of the Navy 2010b) within the existing ATCAAs and SUA (W-517 and R-7201), and planned 10 nm DZ. The No Action Alternative would not involve modifications to any training space within the MIRC (see Figure 2.1-1 and Figure 2.4-1).The number and type of training and testing activities and geographical locations in which they are conducted, as analyzed in the MIRC EIS/OEIS, would also not change.

The Navy has performed military training activities in the region for decades; the Navy would continue to schedule activities at times so as to not preclude recreational fishing in the Study Area, especially during peak fishing seasons.

The Navy would continue to minimize the potential for interaction between military and civilian activities by communicating hazardous training and testing activities to all vessels, aircraft, and operators. Hazardous training and testing events are communicated to all vessels and operators by NOTMARs (see Section 3.1.1 for more information on the NOTMAR/NOTAM process). Furthermore, in accordance with the 1976 lease agreement for military purposes between CNMI and the United States, FDM and its nearshore areas have always been off limits because of unexploded ordnance concerns. No commercial or recreational activities are permitted on or near the island; aircraft and marine vessels are restricted from entering within 3 nm around FDM. NOTMARs and NOTAMs are issued at least 72 hours in advance of potentially hazardous FDM range events and may advise restrictions beyond 3 nm from FDM for certain training events.

The advanced planning and issuance of advisories at least 72 hours in advance of training and testing activities provides the public sufficient time to plan their activities accordingly to minimize interference with military activities. Therefore, military activity conducted in the Study Area would have no significant impact on recreational fishing under the No Action Alternative.

3.4.2.2 Alternative 1

The restricted area at FDM, R-7201, would be extended from 3 nm to 12 nm (creation of 7201 A), and new warning areas (W-11, W-12, and W-13) will be created on existing ATCAAs (see Figure 2.4-2). Under Alternative 1, the restricted area would be extended to restrict all non-participating vessels and aircraft from entering the area during hazardous training activity. The proposed extension would not affect the continued implementation of restricted access around FDM and its nearshore areas in accordance with

the CNMI DoD lease agreement. Public access to FDM would remain strictly prohibited, and there would continue to be no commercial or recreational activities on or near the island.

As under the No Action Alternative, it is unlikely that military activities would interfere often with recreational fishing. The number and type of training and testing activities and geographical locations in which they are conducted, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modifications. In accordance with Navy procedures, NOTMARs would continue to be implemented when hazardous military activities are conducted. Implementation of the proposed airspace modifications under Alternative 1 would not change existing recreational fishing or restrictions within the Study Area. As under the No Action Alternative, temporary clearance procedures would not significantly affect recreational fishing activities because displacement is temporary and fishing or recreational use in the Study Area is not precluded, even during peak fishing seasons. Therefore, there would be no significant impact on recreational fishing as a result of implementation of Alternative 1. In addition, there would be no significant harm to recreational fishing in non-territorial waters as a result of implementation of Alternative 1.

3.4.2.3 Alternative 2 (Preferred Alternative)

Under Alternative 2, airspace within the Study Area would be modified as described under Alternative 1. In addition, a 10 nm DZ around FDM that was analyzed in the MIRC EIS/OEIS (U.S. Department of the Navy 2010a) would be expanded to 12 nm to be congruent with R-7201A (see Figure 2.4-3). The number and type of training and testing activities and geographical locations in which they are conducted, as analyzed in the MIRC EIS/OEIS, would not change as a result of the proposed airspace modification and DZ expansion to 12 nm. As described in Section 3.1, the DZ designation would increase provisions for public health and safety and Navy procedures (e.g., NOTMARs) would continue to be implemented when hazardous military activities are being conducted. Implementation of the proposed airspace modifications and expansion of the DZ from 10 nm to 12 nm would not affect recreational fishing within the Study Area because most recreational fishing primarily occurs within 3 miles (4.8 km) from shore at Guam and Saipan. In addition, the proposed restriction out to 12 nm around FDM would not preclude recreational fishing from occurring in other areas within the Study Area.

The boating distance from Saipan (nearest island) to FDM is 45 nm, which is greater than the normal boating distance of 3 nm for most recreational fishing (Western Pacific Regional Fishery Management Council 2005). Similar to the MIRC EIS/OEIS (U.S. Department of the Navy 2010a) conclusion regarding the establishment of a 10 nm DZ around FDM, the DZ expansion from 10 to 12 nm would not change the recreational fishing use of the area. The MIRC EIS/OEIS (U.S. Department of the Navy 2010a) analyzed the DZ out to 10 nm and found no impact from training and testing activities because displacement was temporary and fishing or recreational use was not precluded, even during peak fishing seasons. In addition, the issuance of NOTMARs in advance of any hazardous activity being conducted would continue to allow boats to select an alternate destination without substantially affecting their activities. Consequently, no additional impact would be expected by expanding the DZ to 12 nm. Therefore, there would be no significant impact on recreational fishing as a result of implementation of Alternative 2. In addition, there would be no significant harm to recreational fishing in non-territorial waters as a result of implementation of Alternative 2.

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4 CUMULATIVE IMPACTS

4.0 INTRODUCTION

The assessment of cumulative impacts (or cumulative effects[2]) in the Study Area follows the objectives of the NEPA of 1969, CEQ regulations, and CEQ guidance. Council on Environmental Quality regulations (40 C.F.R. Parts 1500-1508) provide the implementing procedures for NEPA as

> … the impact on the environment which results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 C.F.R. §1508.7).

While a single project may have minor impacts, overall impacts may be collectively significant when the project is considered together with other projects on a regional scale[3]. The CEQ provides guidance on cumulative impacts analysis in *Considering Cumulative Effects Under the National Environmental Policy Act* (Council on Environmental Quality 1997) and identifies cumulative effects as those environmental effects resulting "from spatial and temporal crowding of environmental perturbations."

This EA/OEA examines cumulative effects as a result of modifying the airspace under Alternative 1 and expanding the existing DZ around FDM to 12 nm under Alternative 2. The scope and nature of activities associated with the Proposed Action would not change from existing training and testing activities (as defined in the MIRC EIS/OEIS); no additional cumulative analysis is required beyond what is presented in this chapter.

4.1 APPROACH TO ANALYSIS

The cumulative impacts analysis in this EA/OEA focused on impacts that are "truly meaningful," in accordance with CEQ guidance (Council on Environmental Quality 1997). The level of analysis for each resource was commensurate with the intensity of the impacts. Variable geographic boundaries were used for analyses of cumulative impacts, depending on the resource being evaluated. The current impacts of past and present actions and the potential impacts of reasonably foreseeable future actions were analyzed, to the extent they may be additive to impacts of the Proposed Action. The cumulative impacts analysis was not limited by a specific timeframe; however, this EA/OEA and the MIRC EIS/OEIS dismissed from further analysis the actions and environmental considerations that were considered highly speculative. Section 4.3 presents the other actions analyzed for cumulative impacts. Section 4.4 summarizes those effects and makes a determination of the level of significance.

4.1.1 ANALYSIS INCLUDED IN THE MARIANA ISLANDS RANGE COMPLEX ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT

Table 4-1 summarizes the cumulative impacts analysis presented in Chapter 6, Cumulative Impacts, of the MIRC EIS/OEIS (U.S. Department of the Navy 2010a) for each resource area based on past, present, and reasonably foreseeable actions. As these actions are ongoing and were cumulatively analyzed in a

[2] CEQ regulations consider the terms "cumulative impacts" and "cumulative effects" as synonymous (40 C.F.R. § 1508.8[b]); the terms are used interchangeably.
[3] A cumulative impact is the additive effect of all projects in the geographic area.

previous NEPA document, the summaries in the table support and inform the analysis of the cumulative effects in this EA/OEA.

Table 4-1: Summary of Cumulative Impact Analysis from Mariana Islands Range Complex Environmental Impact Statement/Overseas Environmental Impact Statement by Resource Area

Resource Area	MIRC EIS/OEIS Summary of Cumulative Impacts
Air Quality	The analysis presented in the MIRC EIS/OEIS determined that cumulative impacts on global climate change would not be significant, and no significant cumulative air quality impacts would occur.
Cultural Resources	The analysis presented in the MIRC EIS/OEIS determined that no significant cumulative impacts on cultural resources would occur.
Marine Biological Resources: • Marine Plants and Invertebrates • Fish • Marine Mammals • Sea Turtles	The analysis presented in the MIRC EIS/OEIS determined that Naval activity would have no significant cumulative impact on marine biological resources and would not make a significant contribution to the regional cumulative ecosystem impacts. There would be no long-term changes to species abundance or diversity, no loss or degradation of sensitive habitats, and no effects on threatened and endangered species. None of the potential impacts would affect the sustainability of resources, the regional ecosystem, or the human community.
Onshore Biological Resources: • Geology, Soils, and Bathymetry Environment • Hazardous Materials • Nesting Sea Turtles • Terrestrial Biological Resources • Seabirds and Shorebirds	The analysis presented in the MIRC EIS/OEIS determined that overall cumulative effects would be negligible. In addition, no significant cumulative hazardous materials impacts would occur. The MIRC EIS/OEIS determined that although impacts would occur on terrestrial resources within the MIRC, these impacts would be mitigated to a less-than-significant level, and no significant cumulative impacts would occur.
Land Use	The analysis presented in the MIRC EIS/OEIS determined that no significant cumulative land use impacts would occur.
Health and Safety	The analysis presented in the MIRC EIS/OEIS determined that no unavoidable significant environmental effects would be expected because the MIRC activities would continue to be accomplished in accordance with directives that are developed to protect public health and safety. Therefore, no significant cumulative impacts on public health and safety would occur.

Table 4-1: Summary of Cumulative Impact Analysis from Mariana Islands Range Complex Environmental Impact Statement/Overseas Environmental Impact Statement by Resource Area (continued)

Resource Area	MIRC EIS/OEIS Summary of Cumulative Impacts
Noise	The analysis presented in the MIRC EIS/OEIS determined that an increased level of training would increase noise levels; however, noise levels from training would be intermittent and similar to other noise levels already experienced in the MIRC. In addition, spatial separation among the cumulative projects listed would minimize or preclude significant cumulative noise impacts.
Socioeconomics	The analysis presented in the MIRC EIS/OEIS determined that minority or low-income populations would not be disproportionately affected, nor would children be exposed to increased noise levels or safety risks because events mainly occur at sea or in areas already designated for military activities.
Water Resources	The analysis presented in the MIRC EIS/OEIS determined that water quality impacts are transitory and would not reach a level of significance even in conjunction with the impacts of the other actions considered in a regional context.

Notes: MIRC = Mariana Islands Range Complex, EIS = Environmental Impact Statement, OEIS = Overseas Environmental Impact Statement

4.2 OTHER ACTIONS ANALYZED IN THE STUDY AREA

Various types of reasonably foreseeable future actions relevant to the Proposed Action have the potential to affect the resources identified in Chapter 3. Descriptions of the other actions and environmental considerations carried forward for analysis are provided in the following sections.

4.2.1 OTHER MILITARY ACTIONS

4.2.1.1 Final Overseas Environmental Impact Statement and Environmental Impact Statement for Surveillance Towed Array Sensor System Low-Frequency Active Sonar

The Navy plans to operate up to four Surveillance Towed Array Sensor System low-frequency active sonar systems for routine training, testing, and military operations; these sonar systems could be used in the Study Area. Analysis of the system and finding of no reasonably foreseeable impacts was previously presented in a series of documents (U.S. Department of Defense 2002; U.S. Department of the Navy 1999, 2007) and addressed by NMFS (National Marine Fisheries Service 2009) in consideration of applicable regulations, including the potential for additive and cumulative effects.

4.2.1.2 Mariana Islands Training and Testing Environmental Impact Statement/Overseas Environmental Impact Statement

The Navy's Proposed Action in the MITT EIS/OEIS is to conduct military training and testing activities in the MIRC, additional areas on the high seas, and a transit corridor where training and testing activities may occur. These areas are collectively referred to as the MITT Study Area. The Proposed Action includes activities such as an increase in air combat maneuvers which may occur outside of the MIRC but

within the MITT Study Area. Strike warfare and naval gunfire exercises at FDM would increase under the alternatives. Through the MITT EIS/OEIS, the Navy will do the following:

- Reassess the MIRC EIS/OEIS to support reauthorization of incidental takes of marine mammals under the MMPA and incidental takes of threatened and endangered marine species under the ESA
- Adjust baseline training and testing activities to the level needed to support military training and testing requirements beginning in 2015 (for example, the MITT EIS/OEIS proposes an increase in the total number of aircraft sorties within the MIRC)
- Analyze the potential impacts in areas not covered previously
- Account for force structure changes, including those resulting from the development, testing, and use of weapons, platforms, and systems that will be operational by 2020
- Implement enhanced range capabilities
- Update environmental analyses with the best available science and most current acoustic analysis methods

The MITT EIS/OEIS will analyze the environmental effects which might result from the implementation of the Navy's Proposed Action or alternatives. Resource areas to be analyzed include sediments and water quality, air quality, marine habitats, marine mammals, sea turtles, seabirds and shorebirds, marine vegetation, marine invertebrates, fish, terrestrial species and habitats, cultural resources, socioeconomic resources, and public health and safety. In addition, cumulative impacts will be analyzed and will take into account potential cumulative impacts associated with increased training and testing activities (including increased sorties) as applicable to other reasonably foreseeable and ongoing actions.

4.2.1.3 Environmental Impact Statement for Divert Activities and Exercises, Guam and Commonwealth of the Northern Mariana Islands

A Draft EIS was released to the public to address the ground movements and immediate approaches and departures within existing airspace at the airport or airports selected for improvement (e.g., takeoffs and landings) during unit-level training and exercises. The proposed action is needed because there is no existing divert or contingency airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian airlift and disaster relief in times of natural or man-made disasters. Under the preferred alternative, the U.S. Air Force would develop and construct facilities and infrastructure at Saipan or Tinian International Airport. Potential impacts on resources are mostly anticipated to be short term and minor to moderate; only periodic, minor, adverse, cumulative impacts are anticipated. Therefore, cumulative effects are not anticipated for the MIRC EA/OEA.

4.2.1.4 Guam and Commonwealth of the Northern Mariana Islands Military Relocation (2012 Roadmap Adjustments) Supplemental Environmental Impact Statement

A ROD for the Guam and CNMI Military Relocation EIS was signed in 2010. The proposed action included three components: Marine Corps relocation from Okinawa to Guam, Navy nuclear aircraft carrier berthing in Apra Harbor, and Army Air and Missile Defense Task Force (AMDTF). Selection of a specific site and implementation of construction of a transient nuclear aircraft carrier wharf was deferred in the ROD. In response to public concerns, the Navy also elected to defer selection of a specific site for the construction and operation of a live-fire training range complex on Guam. Decisions were issued on proposed actions for main cantonment, non-live-fire training, airfield, waterfront, and CNMI training ranges. The Army cosigned the ROD, indicating that although DoD has not yet made a decision to place

and operate an AMDTF on Guam, the preferred alternatives noted in the Final EIS for the AMDTF best represent how the Army would implement the action on Guam if the mission was assigned to the Army.

In January 2011, the Under Secretary of the Navy committed that the proposed live-fire training activities would be conducted in a manner such that access to Pagat Village, Cave, and the existing trail leading to these sites would remain available 24 hours per day, 7 days per week, as is currently available. Since that time, the Navy has been evaluating options to satisfy this commitment while also meeting the training requirements of the relocating Marines. To inform decision-making about the environmental impacts of potential alternatives for the Live-Fire Training Range Complex (LFTRC) and associated airspace requirements, a Supplemental EIS (SEIS) was proposed. A Notice of Intent was prepared and public scoping period completed (April 2012) for the SEIS. The LFTRC SEIS was intended to be limited in scope to the LFTRC proposed actions on Guam. After the public scoping for LFTRC SEIS, the Department of Defense, in a joint statement with the government of Japan released on 26 April 2012, announced that they have agreed to adjustments in the 2006 Realignment Roadmap Agreement to relocate U.S. Marine Corps forces from Okinawa, Japan to Guam. The adjustments include reducing the originally planned relocation of 8,600 Marines to a force of approximately 5,000 Marines on Guam. Because of this substantial change, the Department of the Navy has decided to expand the ongoing LFTRC SEIS to evaluate alternatives for the main base and family housing and to assess impacts on Guam's civil infrastructure. The working title for the expanded SEIS is the Guam and CNMI Military Relocation (2012 Roadmap Adjustments) SEIS. No CNMI actions will be included in the SEIS.

4.2.2 OTHER ENVIRONMENTAL CONSIDERATIONS

4.2.2.1 Commercial Fishing

Commercial fishing can adversely affect fish populations, other species, and habitats. Potential impacts include overfishing of targeted species and bycatch, both of which negatively affect fish stocks (Barnette 2001; National Research Council 2002). Commercial fishing in the CNMI generally occurs within 30 nm of shore. Fisheries bycatch has been identified as a primary driver of population declines in several groups of marine species, including sharks, mammals, seabirds, and sea turtles (Wallace et al. 2010). The MIRC EIS/OEIS concluded that the transient nature of training and testing exercises and the minor, localized potential ecosystem effects are negligible. The CNMI Fishery Management Plan (Western Pacific Regional Fishery Management Council 2005) provides regulatory procedures and processes to prevent overfishing and overfished stocks. The same conditions would apply for the MIRC EA/OEA.

4.2.2.2 Maritime Traffic

Section 3.2, Transportation, discusses ocean traffic as the transit of commercial, private, or military vessels at sea, including submarines. Three navigable waterways are used by commercial vessels to link Guam and the CNMI with major ports to the east and west. Primary concerns for cumulative impacts include vessel strikes and underwater sound. Navy vessel traffic is a small fraction (approximately 2 percent) of the overall commercial vessel traffic (Jensen and Silber 2004). The MIRC EA/OEA analysis determined no significant impact on and no significant harm to maritime traffic would occur.

4.2.2.3 Ocean Pollution and Marine Debris

Ocean pollution and marine debris may originate from land-based runoff and discharges, spills, dumping, vessels, and atmospheric deposition (U.S. Department of the Navy 2010a). Plastic debris is a major concern for ocean pollution; floating debris has been discovered accumulating in oceanic gyres (Law et al. 2010). However, Navy training and testing activities are implemented in accordance with environmental compliance policies and procedures applicable to shipboard training afloat and pollution

prevention as defined in Navy and DoD Instruction 5000.2-R, EO 12856, and EO 13101. The same environmental compliance policies and procedures would apply for the MIRC EA/OEA; preventive measures to protect water quality would continue to be implemented.

4.2.2.4 Climate Change and Greenhouse Gas Emissions

Climate change is a global concern, and greenhouse gas emissions are a concern from a cumulative perspective because individual sources of greenhouse gas emissions are not large enough to have an appreciable impact on climate change. Greenhouse gases trap heat within the surface and the lowest portion of the earth's atmosphere, causing heating at the surface of the earth. Scientific evidence indicates a trend of increasing global temperature over the past century due to increasing greenhouse gas emissions from human activities (Council on Environmental Quality 2010). The CEQ (2010) provided guidance on consideration of the impacts of climate change and greenhouse gas emissions, which states that "if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of carbon dioxide equivalent greenhouse gas emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public."

The annual emission of carbon dioxide equivalent greenhouse gas from training and testing activities in the MIRC is estimated to be 127,729 metric tons per year (U.S. Department of the Navy 2010a). In comparison to the United States 2007 greenhouse gas emissions, the greenhouse gas emissions associated with the military activities amount to approximately 0.0017 percent, and the incremental contributions to cumulative impacts are negligible.

The Navy is committed to improving energy security and environmental stewardship by reducing reliance on fossil fuels. The Navy is actively developing and participating in energy, environmental, and climate change initiatives that will increase use of alternative energy and help conserve the world's resources for future generations. The Navy Climate Change Roadmap (U.S. Department of the Navy 2010b) identifies actions the Environmental Readiness Division is taking to implement EO 13514 (*Federal Leadership in Environmental, Energy, and Economic Performance*) and EO 13423 (*Strengthening Federal Environmental, Energy, and Transportation Management*). The Navy's Task Force Energy is responding to the Secretary of the Navy's energy goals through energy security initiatives that reduce the Navy's carbon footprint. The 5-year Climate Change Roadmap action items, objectives, and desired impacts are organized to focus on strategies, policies and plans; operations and training; investments; strategic communications and outreach; and environmental assessment and prediction. The same environmental stewardship activities would apply for the MIRC EA/OEA; no additional greenhouse gas emissions would occur.

4.3 RESOURCE-SPECIFIC CUMULATIVE IMPACTS

Under the No Action Alternative, Alternative 1, and Alternative 2, the number and types of training and testing activities and the geographical locations in which they are conducted would not change from current activities. No significant contribution of military training and testing activities to cumulative impacts when added to other past, present, and reasonably foreseeable future actions were identified (U.S. Department of the Navy 2010a). The discussions presented in Chapter 3 of this EA/OEA indicated that the Proposed Action would not significantly impact the resources that have been evaluated (public health and safety, transportation, regional economy, and recreation). The evaluation of other actions that are reasonably foreseeable in the Study Area and other environmental considerations indicated that procedures and processes are implemented to minimize or avoid cumulative impacts. Therefore,

the proposed airspace modification under Alternative 1 and DZ expansion around FDM out to 12 nm under Alternative 2 would not result in significant cumulative impacts on the resources evaluated.

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5 OTHER CONSIDERATIONS

5.1 CONSISTENCY WITH OTHER FEDERAL, STATE, AND LOCAL PLANS, POLICIES, AND REGULATIONS

Based on evaluation with respect to consistency and statutory obligations, the Navy's Proposed Action for the MIRC Airspace EA/OEA does not conflict with the objectives or requirements of federal, state, regional, or local plans, policies, or legal requirements. Table 5.1-1 summarizes environmental compliance requirements that may apply.

Table 5.1-1: Summary of Environmental Compliance for the Proposed Action

Plans, Policies, and Controls	Responsible Agency	Status of Compliance
National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] §§4321, et seq.) Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 C.F.R. §§1500-1508)	Navy Air Force FAA	This EA/OEA has been prepared in accordance with NEPA, CEQ regulations, and the services' NEPA procedures. The Proposed Action would not result in significant impacts.
Department of the Navy Procedures for Implementing NEPA (32 C.F.R. §775)	Navy	
U.S. Department of Transportation FAA National Policy (Order 1050.1E, CHG 1)	FAA	
Executive Order (EO) 12114, Environmental Effects Abroad of Major Federal Actions and Department of Defense Directive 6050.7, Environmental Effects Abroad of Major Department of Defense Actions	Navy Air Force FAA	EO 12114 requires environmental consideration for actions that may affect the environment outside of U.S. Territorial Waters. The Proposed Action would not result in significant harm to the environment.
Coastal Zone Management Act (CZMA) (16 C.F.R. §§1451, et seq.)	Bureau of Statistics and Plans – Guam Coastal Resources Management Office – CNMI	The Navy has determined that the training and testing activities are consistent to the maximum extent practicable with the Guam and CNMI Coastal Management Plans (U.S. Department of the Navy 2010). The affected environment for the proposed airspace changes and DZ expansion in the MIRC EA /OEA are not part of the Guam and CNMI coastal zones. The CZMA determinations in the MIRC EIS/OEIS would not change under the Proposed Action in the MIRC EA/OEA.

Table 5.1-1: Summary of Environmental Compliance for the Proposed Action (continued)

Plans, Policies, and Controls	Responsible Agency	Status of Compliance
Endangered Species Act (ESA) (16 U.S.C. §§1531, et seq.)	U.S. Fish and Wildlife Service (USFWS) National Marine Fisheries Service (NMFS)	No changes to training or testing activities are proposed that would affect species protected under the ESA. The biological opinion issued for the MIRC EIS/OEIS (U.S. Department of the Navy 2010) remains in effect.
Marine Mammal Protection Act (MMPA) (16 U.S.C. §§1431, et seq.)	NMFS	No changes to training or testing activities are proposed that would affect species protected under the MMPA. The MMPA Final Rule and authorizations issued for the MIRC EIS/OEIS (U.S. Department of the Navy 2010) remain in effect.
EO 12962, Recreational Fisheries	Navy Air Force Army	EO 12962 requires agencies to fulfill certain duties with regard to promoting the health and access of the public to recreational fishing areas. The Proposed Action complies with these duties.
Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§703-712)	USFWS	The Proposed Action would not have a significant impact on migratory birds and would comply with applicable requirements of the MBTA.
National Historic Preservation Act (36 C.F.R. §800)	Navy	The Proposed Action would not have any impacts on cultural resources, including submerged shipwrecks. This action is in compliance with the MIRC Programmatic Agreement.

Notes: CEQ = Council on Environmental Quality, C.F.R. = Code of Federal Regulations, CNMI = Commonwealth of the Northern Mariana Islands, CZMA = Coastal Zone Management Act, EA = Environmental Assessment, EIS = Environmental Impact Statement, EO = Executive Order, ESAS = Endangered Species Act, FAA = Federal Aviation Administration, MBTA = Migratory Bird Treaty Act, MIRC = Mariana Islands Range Complex, MMPA = Marine Mammal Protection Act, Navy = United States Department of the Navy, NEPA = National Environmental Policy Act, NMFS = National Marine Fisheries Service, OEA = Overseas Environmental Assessment, OEIS = Overseas Environmental Impact Statement, U.S. = United States, U.S.C. = United States Code, USFWS = U.S. Fish and Wildlife Service

5.2 REQUIRED PERMITS AND APPROVALS

The FAA is a cooperating agency because of its expertise and regulatory authority over the National Airspace System (JO 7400.1) and will use this EA/OEA in its rulemaking and non-rulemaking processes for changes to the airspace as described in Chapter 2 (Description of Proposed Action and Alternatives). U.S. Army Corps of Engineers has authority over the establishment of and changes to danger zones within U.S. territorial waters (Rivers and Harbors Act of 1899 as amended). They will also use this EA/OEA in their rulemaking process. Both regulatory agencies publish their findings in the *Federal Registe*r. FAA issues advisory circulars for non-rulemaking decisions.

5.3 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of "any irreversible and irretrievable commitments of resources which would be involved in the Proposed Action should it be implemented." [NEPA Sec. 102 (2)(C)(v), 42 U.S.C. §4332]. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy or minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., the disturbance of a cultural site). For the alternatives, including the Proposed Action, most resource commitments are neither irreversible nor irretrievable. Most impacts are short term and temporary or, if long lasting, are negligible. No habitat associated with threatened or endangered species would be lost as result of implementation of the Proposed Action. Since there would be no building or facility construction, the consumption of materials typically associated with such construction (e.g., concrete, metal, sand, fuel) would not occur. Energy typically associated with construction activities would not be expended and irreversibly lost. The Proposed Action does not include any activities involving the expenditure of fuel; therefore, no fuel would be irreversibly lost.

5.4 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM BIOLOGICAL PRODUCTIVITY

NEPA requires an analysis of the relationship between a project's short-term impacts on the environment and of the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing one development option reduces future flexibility in pursuing other options, or that giving over a parcel of land or other resource to a certain use eliminates the possibility of other uses being performed at the site. The Proposed Action would occur over the open ocean and above ground level. In addition, the scope and nature of training activities associated with the Proposed Action would not change from existing training and testing activities (as defined in the MIRC EIS/OEIS [U.S. Department of the Navy 2010]). Therefore, implementation of the Proposed Action would not result in significant impacts on sensitive resources. As a result, it is not anticipated that the Proposed Action would result in any environmental impacts that would permanently narrow the range of beneficial uses of the environment or pose long-term risks to health, safety, or the general welfare of the public.

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6 LIST OF PREPARERS

Joseph Campo (Parsons), Wildlife Ecology
Ph.D., Wildlife Ecology
Years of Experience: 29

Bob Kull (Parsons), Ornithology
M.S., Biology
Years of Experience: 31

Marya Kaminski (ManTech SRS Technologies, Inc.), Senior Technical Intern
B.A., Environmental Studies: Biology/Ecology
Years of Experience: 1

Tammy Jo Moore (ManTech SRS Technologies, Inc.), Resource Analyst
M.B.A., Management
B.S., Justice and Public Safety, Auburn University
Years of Experience: 18

Karyn Palma (ManTech SRS Technologies, Inc.), Technical Editor
B.A., Environmental Studies
Years of Experience: 15

Kent Randall (ManTech International Corporation), Resource Analyst
J.D., Environmental Law, International Law
M.M.A., Marine Affairs: Marine Biology
B.A., International Studies
Years of Experience: 15

Bob Trombadore (ManTech SRS Technologies, Inc.), Project Manager
M.S., Aviation Systems
B.S., Chemistry
Years of Experience: 32

Karen Waller (ManTech SRS Technologies, Inc.), Program Manager
B.S., Public Affairs
Years of Experience: 23

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7 AGENCIES CONTACTED

Due to the nature of this EA/OEA, there were no requirements to consult with other agencies. Please refer to the MIRC EIS/OEIS, Chapter 10 Distribution List, for the individuals, agencies, and organizations consulted as part of that EIS/OEIS.

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APPENDIX A: ANNUAL TRAINING ACTIVITIES IN THE MIRC AIRSPACE EA/OEA STUDY AREA

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APPENDIX A ANNUAL TRAINING ACTIVITIES IN THE MIRC AIRSPACE EA/OEA STUDY AREA

Table A-1: Annual Training Activities in the Study Area

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Anti-Submarine Warfare (ASW)				
ASW TRACKEX (SHIP)	CG/DDG/FFG SUB/MK-30/ EMATT	SQS-53C/D SQS-56	30	PRI: W-517 SEC: MI Maritime, >3 nm from land
ASW TRACKEX (SUB)	SSN; SSGN MK-30	BQQ	10	PRI: Guam Maritime, >3 nm from land SEC: W-517
ASW TRACKEX (HELO)	SH-60B, SH-60F SUB/MK-30/ EMATT	AQS-22 DICASS	18	PRI: W-517 SEC: MI Maritime, >3 nm from land
ASW TRACKEX (MPA)	FIXED WING MPA SUB/MK-30/ EMATT	DICASS EER/IEER/AEER	8	PRI: W-517 SEC: MI Maritime, >3 nm from land
ASW TORPEX (SUB)	SSN; SSGN MK-30 TRB/MH-60S	BQQ MK-48 EXTORP	10	PRI: Guam Maritime, >3 nm from land SEC: W-517
ASW TORPEX (SHIP)	CG/DDG/FFG SUB/MK-30/ EMATT TRB/MH-60S/ RHIB	SQS-53C/D SQS-56 EXTORP/ REXTORP	3	PRI: Guam Maritime, >3 nm from land SEC: W-517
ASW TORPEX (MPA/HELO)	MPA/SH-60B/F SUB/MK-30/ EMATT TRB/MH-60S/ RHIB	AQS-22/DICASS EXTORP/ REXTORP	4	PRI: Guam Maritime, >3 nm from land SEC: W-517

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Mine Warfare (MIW)				
MINEX	Fixed Wing Fighter/Bomber/MPA e.g., B-1/B-2/B-52/ FA-18/P-3/P-8A	MK-62/MK-56 (Inert)	3	PRI: W-517 SEC: MI Maritime, >12 nm from land
Underwater Demolition	RHIB	Bottom/mid-moored mine shape 5–10 lb. NEW	30	PRI: Agat Bay SEC: Apra Harbor
Floating Mine Neutralization	RHIB	Floating mine shape 5–10 lb. NEW	20	PRI: Piti SEC: Agat Bay
Surface Warfare (SUW)				
SINKEX	Ship hulk or barge	HARM [2] SLAM-ER [4] HARPOON [5] 5" Rounds [400] HELLFIRE [2] MAVERICK [8] GBU-12 [10] GBU-10 [4] MK-48 [1] Underwater Demolitions [2–100 lb.]	2	PRI: W-517, >50 nm from land SEC: MI Maritime, >50 nm from land; ATCAAs
BOMBEX (Air-to-Surface)	Fixed Wing Fighter/Bomber/MPA (MK 58 Smoke tgt. or towed sled or small hull target)	MK-82/83/84 series and JDAM (Live Rounds)	4/year (1 round/quarter)	PRI: W-517, >50 nm from land SEC: MI Maritime, >50 nm from land; ATCAAs
MISSILEX (Air-to-Surface)	Rotary and Fixed Wing Aircraft (MK 58 Smoke tgt. or towed sled or small hull target)	HELLFIRE (Live Rounds)	2 rounds	PRI: W-517, SEC: MI Maritime, >50 nm from land; ATCAAs
BOMBEX (Air-to-Surface) Inert Only	Fixed Wing Fighter/Bomber/MPA (MK 58 Smoke tgt. or towed sled)	MK 82 I; BDU-45; MK 76; JDAM (Inert Rounds)	24 (72 rounds)	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
MISSILEX (Air-to-Surface CATMEX) Inert Only	Rotary and Fixed Wing Aircraft (MK 58 Smoke tgt. or towed sled or small hull target)	Laser Designation and Tracking with Captive Air Training Missile	60	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
GUNEX Surface-to-Surface (Ship)	Ships and patrol craft. Barrel, Inflatable tgt.	.50 cal MG	5 (12,000 rounds)	PRI: W-517 SEC: MI Maritime, >12 nm from land
		.25 mm MG	5 (8,000 rounds)	
	CG and DDG. Barrel or Inflatable tgt. or towed sled	5" gun	8 (320 rounds)	
	FFG. Barrel or Inflatable tgt. or towed sled	76 mm	4 (120 rounds)	
GUNEX Surface-to-Surface (Small Arms)	CG cutters, Ship, RHIB, small craft. Barrel or Inflatable tgt.	M-16, M-4, M-249 SAW, M-240G, .50 cal M-203 (5.56 /7.62 mm/.50 cal round/40mm TP)	32 (16,000 rounds)	PRI: MI Maritime, >3 nm from land SEC: W-517
GUNEX Air-to-Surface	Rotary and Fixed Wing Aircraft, e.g., SH-60; HH-60; MH-60R/S; UH-1; CH-53; FA-18; AH-1W; F-15; F16; F-22; F-35; AV-8B; A-10 (Barrel or MK-58 smoke tgt.)	7.62 mm MG	200 (40,000 rounds)	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
		.50 cal MG	20 (4,000 rounds)	
		20 mm cannon	100 (10,000 rounds)	
		25 mm cannon	40 (4,000 rounds)	
		30 mm cannon	15 (1,500 rounds)	
Visit, Board, Search and Seizure/Maritime Interception Operation (VBSS/MIO)	RHIB, Small Craft, Ship, H-60	n/a	6	PRI: Apra Harbor SEC: MI Maritime

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Electronic Combat				
CHAFF Exercise	SH-60; MH-60; HH-60; MH-53	RR-144A/AL	14 sorties (420 rounds)	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
	FA-18; EA-18; AV-8B; MPA; EA-6	RR-144A/AL	32 sorties (320 rounds)	
	USAF Fixed Wing Aircraft e.g., F-15; F-16; F-35; C-130	RR-188	500 sorties (5,000 rounds)	
	CG, DDG, FFG, LHA, LHD, LPD, LSD	MK 214 (seduction); MK 216 (distraction)	16 (90 canisters)	
FLARE Exercise	SH-60; MH-60; HH-60; MH-53	MK 46 MOD 1C; MJU-8A/B; MJU-27A/B; MJU-32B; MJU-53B; SM-875/ALE	14 sorties (420 rounds)	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
	FA-18; EA-18; AV-8B; MPA; EA-6		32 sorties (320 rounds)	
	USAF Fixed Wing Aircraft e.g., F-15; F-16; F-35; C-130	MJU-7; MJU-10; MJU-206	500 sorties (5,000 rounds)	
Strike Warfare (STW)				
BOMBEX (LAND)	Fixed Wing Aircraft, e.g., FA-18; AV-8B; B-1; B-2; B-52; F-15; F-16; F-22; F-35 A-10	High Explosive Bombs ≤ 500 lb.	500 annually	FDM (R-7201)
		High Explosive Bombs: 750/1,000 lb./ 2,000 lb.	1,650 annually	
		Inert Bomb Training Rounds ≤ 2,000 lb.	2,800 annually	
		Total Sorties (1 aircraft per sortie)	1,300 sorties	

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
MISSILEX A-G	Fixed Wing and Rotary, e.g., FA-18; AV-8B; F-15; F-16; F-22; F-35; A-10; MH-60R/S; SH-60B; HH-60H; AH-1	TOW; MAVERICK; HELLFIRE	60 annually	FDM (R-7201)
GUNEX A-G	Fixed Wing and Rotary, e.g., FA-18; AV-8B; F-15; F-16; F-22; F-35; A-10; MH-60R/S; SH-60B; HH-60H; AH-1; AC-130	20 OR 25 MM CANNON	20,000 rounds	FDM (R-7201)
		30 MM CANNON (A-10)	1,500 rounds	
		40mm or 105mm CANNON (AC-130)	200 rounds	
CSAR	SH-60; MH-60; HH-60; MH-53; CH-53; C-17; C-130; V-22	NIGHT VISION	60 sorties	PRI: Tinian North Field: Guam Northwest Field SEC: Orote Point Airfield; Rota Airport
Air Warfare (AW)				
ACM	Fixed Wing Aircraft, e.g., FA-18; AV-8B; F-15; F16; F-35.	Captive Air Training Missile or Telemetry Pod	720 sorties of 2–4 aircraft per sortie	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
Air Intercept Control	Fixed Wing Aircraft, e.g., FA-18; F-15; F-35	Search and Fire Control Radars	80 sorties (2–4 aircraft) 40 events	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
MISSILEX/GUNEX Air-to-Air	Fixed Wing Aircraft, e.g., FA-18; EA-18; AV-8B; F-35. TALD tgt.	AIM-7 Sparrow (Non Explosive). 20mm or 25 mm cannon.	6 sorties (2–4 aircraft) (6 missiles; 1,500 rounds)	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs
		AIM-9 Sidewinder (HE)/AIM-120 (HE or Inert). 20mm or 25 mm cannon.	6 sorties (2–4 aircraft) (6 missiles; 1,500 rounds)	
MISSILEX Ship-to-Air	CVN, LHD, CG, DDG; BQM-74E.	RIM-7 Sea Sparrow RIM-116 RAM RIM-67 SM-II ER	2 (2 missiles)	PRI: W-517 SEC: MI Maritime, >12 nm from land; ATCAAs

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Amphibious Warfare (AMW)				
FIREX (Land)	CG, DDG	5" Guns and (HE) shells		FDM (R-7201)
Amphibious Assault MAGTF	1 LHA or LHD, 1 LPD, 1 LSD, 1 CG or DDG, and 2 FFG	4-14 AAV/EFV or LAV/LAR; 3-5 LCAC; 1-2 LCU; 4 H-53; 12 H-46 or 10 MV-22; 2 UH-1; 4 AH-1; 4 AV-8; Includes temporary FARP construction	4 events (assault, offload, backload)	PRI: Tinian Military Leased Area; Unai Chulu, Dankulo and Babui (beach) and Tinian Harbor; North Field. SEC: Apra Harbor; Reserve Craft Beach; Polaris Point Beach (MWR) and Polaris Point Field; Orote Point Airfield; Sumay Cove and MWR Ramp; Tipalao Cove and Dadi Beach
Amphibious Raid Special Purpose MAGTF	1 LHA or LHD, 1 LPD, and 1 LSD. Tailored MAGTF	4-14 AAV/EFV or LAV/LAR; 0-5 LCAC; 0-2 LCU; 4 H-53; 12 H-46 or 10 MV-22; 2 UH-1; 4 AH-1; 4 AV-8	2 events (raid, offload, backload)	PRI: Apra Harbor; Reserve Craft Beach; Polaris Point Beach (MWR) and Polaris Point Field; Orote Point Airfield; Field; Sumay Cove and MWR Marina Ramp; Tipalao Cove and Dadi Beach SEC: Tinian Military Leased Area; Unai Chulu, Dankulo, and Babui (beach) and Tinian Harbor; North Field.

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Expeditionary Warfare				
MOUT Training	USMC Infantry Company: AH-1, UH-1; H-46 or MV-22; H-53; AAV, LAV, HMMWV, TRUCK	5.56 mm blanks/simulations	5 events, 7–21 days per event	PRI: Guam; AAFB South; Finegayan Communication Annex; Barrigada Housing; Northwest Field SEC: Tinian; Rota; Saipan
	USAF RED HORSE SQUADRON: TRUCK, HMMWV; MH-53; H-60		4 events, 3–5 days per event	
	Navy NECC Company: HMWWV, TRUCK		4 events, 3–5 days per event	
	Army Reserve/GUARNG Company; HMWWV, TRUCK		4 events, 3–5 days per event	
Special Warfare				
Direct Action	SEAL; RHIB; Small Craft.	M-16, M-4, M-249 SAW, M-240G, .50 cal, M-203 (5.56/7.62 mm/.50 cal round/40mm HE)	3 (3,000 rounds)	FDM (R-7201)
	SEAL Platoon/Squad; NECC Platoon/Squad; USMC Platoon/Squad; ARMY Platoon/Squad; USAF Platoon/Squad	5.56 mm blanks/simulations 9 mm (Orote Pt. Combat Qualification Center – OPCQC) 1.5 lb. NEW C4 (Navy Munitions Site Breaching House)	40 (15,000 9 mm) (15 lb. NEW C4)	PRI: OPCQC and Navy Munitions Site Breacher House SEC: Taragues Beach CQC and Navy Munitions Site Breacher House.
MOUT Training	SEAL Platoon/Squad; EOD Platoon/Squad; HMWWV; TRUCK	5.56 mm blanks/simulations	8 events, 3–5 days per event	PRI: Guam; AAFB South; Finegayan Communication Annex; Barrigada Housing; Navy Munitions Site Breaching House SEC: Tinian; Rota; Saipan

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Parachute Insertion	SEAL Platoon/Squad; EOD Platoon/Squad; ARMY Platoon/Squad USAF Platoon/Squad; C-130; CH-46; H-60	Square Rig or Static Line	12	PRI: Orote Pt. Airfield; Northwest Airfield; Orote Pt. Triple Spot SEC: Finegayan DZ; Apra Harbor; Navy Munitions Site Breacher House
Insertion/ Extraction	SEAL Platoon/Squad; EOD Platoon/Squad; ARMY Platoon/Squad; USMC Platoon/Squad; USAF Platoon/Squad: RHIB; Small Craft; CRRC; H-60; H-46 or MV-22	Square Rig or Static Line; Fastrope; Rappel; SCUBA	150	PRI: Orote Pt. Airfield; Northwest Field; Orote Pt. Triple Spot; Apra Harbor; Gab Gab Beach SEC: Orote Pt. CQC; Finegayan DZ; Haputo Beach; Munitions Site Breacher House; Polaris Pt. Field; Orote Pt. KD Range
Hydrographic Surveys	SEAL Platoon/Squad; EOD Platoon/Squad; USMC Platoon/Squad; Small Craft; RHIB; CRRC; H-60	SCUBA	6	PRI: FDM; Tinian; Tipalao Cove SEC: Haputo Beach; Gab Gab Beach; Dadi Beach
Breaching (Buildings, Doors)	SEAL Platoon/Squad; EOD Platoon/Squad; ARMY Platoon/Squad; USMC Platoon/Squad	Breach House (1.5 lb. NEW C4 max/door)	20	Navy Munitions Site Breacher House

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
Special/Expeditionary Warfare				
Land Demolitions (IED Discovery/ Disposal)	NECC EOD Platoon/ Squad; USMC EOD Platoon/ Squad; USAF EOD Platoon/ Squad: HMWWV; TRUCK	IED Shapes	120	PRI: Guam, Orote Pt. Airfield; Orote Pt. CQC; Polaris Pt. Field; Andersen South; Northwest Field SEC: Northern/Southern Land Navigation Area; Munitions Site Breacher House; Tinian MLA
Land Demolitions (UXO Discovery/ Disposal)	NECC EOD Platoon/ Squad; USMC EOD Platoon/ Squad; USAF EOD Platoon/ Squad: HMWWV; TRUCK	UXO	200	PRI: Navy Munitions Site EOD Disposal Site (limit 3000 lb. NEW per UXO event) SEC: AAFB EOD Disposal Site (limit 100 lb. per event) and Northwest Field (limit 20 lb. NEW per event)
Seize Airfield	SEAL Company/ Platoon USMC Company/ Platoon ARMY Company/ Platoon USAF Squadron C-130; MH-53; H-60; HMWWV; TRUCK	5.56 mm blank/simulations	12	PRI: Northwest Field SEC: Orote Pt. Airfield; Tinian North Field; Rota Airfield
Airfield Expeditionary	USAF RED HORSE Squadron. NECC SEABEE Company. USMC Combat Engineer Company USAR Engineer Dozer, Truck, Crane, Forklift, Earth Mover, HMMWV. C-130; H-53.	Expeditionary Airfield Repair and Operation (includes temporary FARP construction and operation)	12	PRI: Northwest Field SEC: Orote Pt. Airfield; Tinian North Airfield

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
ISR	SEAL Platoon/Squad; ARMY Platoon/Squad; USMC Platoon/Squad; USAF Platoon/Squad	Night Vision; Combat Camera; 5.56 mm blanks/Simulation	16	PRI: Guam; Northwest Field; Barrigada Housing; Finegayan Comm. Annex; Orote Pt. Airfield. SEC: Tinian, Rota, Saipan
FTX	ARMY Company/ Platoon NECC SEABEE Company/ Platoon	Tents; Trucks; HMMWV; Generators	100 events, 2–3 days per event	PRI: Guam, Northwest Field; Northern Land Navigation Area SEC: Orote Pt. Airfield; Polaris Pt. Field; Tinian North Field.
NEO	Amphibious Shipping (1-LHD; 1-LPD; 1-LSD) USMC Special Purpose MAGTF	HMMWV; Trucks; Landing Craft (LCAC/LCU); AAV/ LAV; H-46 or MV-22	2	PRI: Apra Harbor; Reserve Craft Beach; Polaris Point Beach (MWR) and Polaris Point Field; Orote Point Airfield; Northwest Field; Sumay Cove and MWR Marina Ramp SEC: Tinian Military Leased Area; Unai Chulu, Dankulo, and Babui (beach) and Tinian Harbor; North Field. Rota Airfield/West Harbor
MANEUVER (Convoy; Land Navigation)	USMC Company/Platoon Army Company/Platoon	Trucks; HMWWV, AAV/LAV	16	PRI: Northwest Field; AAFB South; Northern and Southern Land Navigation Area; Tinian MLA SEC: Finegayan Annex; Barrigada Annex; Orote Pt. Airfield;

Table A-1: Annual Activities in the Study Area (continued)

Range Activity	Platform	System or Ordnance	Alternative 1 (per MIRC EIS/OEIS ROD)	Location (PRI=Primary; SEC=Secondary)
HADR	Amphibious Shipping (1-LHD; 1-LPD; 1-LSD) USMC Special Purpose MAGTF	HMMWV; Trucks; Landing Craft (LCAC/ LCU); AAV/ LAV; H-46 or MV-22	2	PRI: Apra Harbor; Reserve Craft Beach; Polaris Point Beach (MWR) and Polaris Point Field; Orote Point Airfield; Northwest Field; Sumay Cove and MWR Marina Ramp SEC: Tinian Military Leased Area; Unai Chulu (beach) and Tinian Harbor; North Field; Rota Airfield/West Harbor.
Force Protection/Anti-Terrorism				
Embassy Reinforcement	SEAL Platoon ARMY Platoon USMC Company/ Platoon Trucks; HMMWV; helicopters, tilt-rotor, STOL fixed wing aircraft; LCAC or other landing craft	5.56 mm blanks/simulations	50 events, 2–3 days per event	PRI: Orote. Pt. Airfield Inner Apra Harbor; Northern and Southern Land Navigation Area SEC: Orote Pt. Triple Spot; Orote Pt. CQC; Kilo Wharf; Rota Municipality
Force Protection	USAF Squadron/ Platoon NECC SEABEE Company/Platoon USAR Engineer Company/Platoon Tents; Trucks; HMMWV; Generators	5.56 mm blanks/simulations	75 events, 1–2 days per event	PRI: Guam, Northwest Field; Northern Land Navigation Area; Barrigada Annex SEC: Orote Pt. Airfield; Polaris Pt. Field; Tinian North Field; Rota Municipality
Anti-Terrorism	Navy Base Security USAF Security Squadron USMC FAST Platoon Trucks; HMMWV; MH-60	5.56 mm blanks/simulations	80 events, 1 day per event	PRI: Tarague Beach Shoot House and CATM Range; Polaris Pt.; Northwest Field. SEC: Kilo Wharf; Finegayan Comm. Annex; Navy Munitions Site; AAFB Munitions Site; Rota Municipality

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APPENDIX B PUBLIC PARTICIPATION

This appendix presents public comments, and the responses to those comments, received on the Draft Mariana Islands Range Complex (MIRC) Airspace Environmental Assessment (EA)/Overseas EA (OEA) during the public comment period. The public was provided with a 45-day public comment period from 20 December 2012 to 4 February 2013.

B.0 PUBLIC REVIEW PROCESS

A Draft EA/OEA was prepared to assess the potential effects of the Proposed Action and Alternatives on the environment. On 20 December 2012, the MIRC Airspace Draft EA/OEA was posted on www.MIRCairspaceEA.com. The document was also made available at the following locations: Nieves M. Flores Memorial Public Library, University of Guam Robert F. Kennedy Memorial Library, Rota Public Library, Joeten-Kiyu Public Library, and Tinian Public Library**.**

On 15 January 2013, a public open house regarding the Proposed Action was held on Guam at the University of Guam (Anthony Leon Guerrero Multi-Purpose Room 129); on 17 January 2013, a public open house was held on Saipan at the Pedro P. Tenorio Multi-Purpose Center in Susupe. The open houses were attended by members of the public, elected officials or their representatives, and media.

On 4 February 2013, the 45-day public comment period closed. The Navy received 11 comments from individuals, elected officials, and governmental organizations in response to the Draft EA/OEA. Of the 11 comments, 4 were received via the public website, 2 were submitted during the open houses, and the remaining were mailed in to the Navy.

B.1 MIRC AIRSPACE EA/OEA PUBLIC OPEN HOUSES SUMMARY

Total attendance at the public open houses included federal and local government officials and staff, media, and non-governmental offices. Two public open houses were held at the locations noted above (University of Guam and the Pedro P. Tenorio Multi-Purpose Center in Susupe), with 25 and 7 attendees (based on the sign-in sheet), respectively. Media attending the Guam meeting included the *Pacific Daily News*, *Marianas Business Journal*, and the *Marianas Variety*.

Table B-1: Public Meeting Attendance

LOCATION	TOTAL ATTENDEES SIGNED IN	(SELF IDENTIFIED) MEMBERS OF THE MEDIA	ELECTED OFFICIALS OR THEIR REPRESENTATIVES	COMMENT FORMS RECEIVED
University of Guam	25	3	5	2
Pedro P. Tenorio, Saipan	7	0	2	0

B.2 WEBSITE COMMENTS

B.2.1 RAY YUMUL

Representing: Private Individual

Submitted: 1/7/2013 12:39:07 a.m.

Comment
I am opposed to the proposed Draft EA/OEA wherein the plan calls to extend Restricted Area (R-7201) at FDM from 3nm to 12nm and designating the new area as R-7201-A. I am an active fisherman and I fish the area when the military is not conducting training in the area.

B.2.2 RUSSEL YOUNG

Representing: Private Individual

Submitted: 1/15/2013 3:23:24 a.m.

Comment
The noise level at our house is super load [sic] sometimes day sometimes night. It there is an excercise it's hard to sleep. We are hoping the Feds or DOD will soudproof nthe [sic] homes in the landing poath [sic] of Andersen AFB. I have video of the noise it's so loud you can't talk to someone right next to you. thanks

B.2.3 DAVID LOTZ

Representing: Private Individual

Submitted: 1/15/2013 1:30:29 p.m.

Comment
The statement incorporated in the handout that "The Mariana Islands Range Complex' has provided the military with a safe training and testing environment for more than 100 years" is incorrect. The concept of the MIRC is quite recent and the United States has only used the lands and waters of the Mariana Islands for training since 1944. Prior to that the United States military had very limited military resources on Guam and probably only one naval exercise near Guam in the 1920s. Certainly the Unived States did not have exercies in the Mariana Islands north of Guam prior to 1944 as those islands and waters were first controlled by Spain, then Germany, and finally Japan.

B.2.4 SENATOR JUDE HOFSCHNEIDER

Representing: Other

Submitted: 1/31/2013 11:44:44 p.m.

Organization: 18th Northern Marianas Commonwealth Senate

Comment
February 1, 2013 Naval Facilities Engineering Command Pacific Attention: MIRC Airspace EA/ OEA Project Manager 258 Makalapa Drive, Suite 100 Pearl Harbor, HI 96860-3134 RE: Mariana Islands Range Complex Airspace Draft EA/ OEA Hafa Adai! On behalf of the 18th Northern Marianas Commonwealth Senate, I would first like to thank you for meeting with us and allowing us the opportunity to comment on the Draft Environmental Assessment/ Overseas Assessment. Furthermore, we appreciate your public outreach efforts, as the knowledge and safety of our citizens in the Commonwealth of the Northern Mariana Islands (CNMI) is always a top priority. The Senate is certainly amenable to amending our islands' current air and sea space danger zones for the safety of our citizens and tourism industry. Our main concern, however, is the increase of permanently restricted areas in the CNMI, as expressed in Figure 3 on Page 5 of the MIRC Booklet. This issue is in urgent need of clarification before any further action is taken, as you have assured us that the proposed actions will only restrict any new areas during times of training. Permanently restricting our islands and its surrounding waters may be detrimental to our already struggling island economy, and will not be supported by members of our Senate. Our members look forward to clarification on the aforementioned issue, and stand ready to assist your agency in improving the safety of our people here in the Marianas. In any case, the Senate has supported, and will continue to support, the US Armed Forces and its use of our islands. Senseramente, Senator Jude U. Hofschneider

B.3 COMMENTS FROM PUBLIC OPEN HOUSE

B.3.1 RON MCNINCH

Public Outreach Meeting Comment Form

Mariana Islands Range Complex Airspace
Draft Environmental Assessment / Overseas Environmental Assessment

Location: UOG Date: 1/15/13

Comments must be postmarked or received online by **Feb. 4, 2013**, for consideration in the Final EA/OEA. Comments may be submitted at the public outreach meetings, via the project website at **www.MIRCAirspaceEA.com** or by U.S. Postal Service to the address below.

* Please contact me for possible presentations to my classes at UOG.

* In our research, we found the most important factor for success on the EIS, etc... is communication.

* One commenter suggested putting up flags at the harbor to warn if the ranges are active.

Please Print

1. Name: RON MCNINCH
2. Organization/Affiliation (if applicable): UOG
3. Address: PO BOX 5224 MANGILAO GU 96923
   govguam@gmail.com
4. Do you wish to withhold your name and address from public review or from disclosure under the Freedom of Information Act (FOIA)? [X] No [ ] Yes

Please hand this form in or mail by **Feb. 4, 2013**, to:

Naval Facilities Engineering Command Pacific
Attention: MIRC Airspace EA/OEA Project Manager
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134
www.MIRCAirspaceEA.com

B.3.2 FELIX REYES

Public Outreach Meeting Comment Form

Mariana Islands Range Complex Airspace
Draft Environmental Assessment / Overseas Environmental Assessment

Location: NOCG, GUAM Date: 1/15/13

Comments must be postmarked or received online by **Feb. 4, 2013**, for consideration in the Final EA/OEA. Comments may be submitted at the public outreach meetings, via the project website at **www.MIRCAirspaceEA.com** or by U.S. Postal Service to the address below.

Based on what I saw & heard on this date, I do not have any opposition to the EA as presented.

Please Print

1. Name: FELIX S. REYES
2. Organization/Affiliation (if applicable):
3. Address: POB 8282
   TAMUNING, GUAM 96931
4. Do you wish to withhold your name and address from public review or from disclosure under the Freedom of Information Act (FOIA)? [✓] No [ ] Yes

Please hand this form in or mail by **Feb. 4, 2013**, to:

Naval Facilities Engineering Command Pacific
Attention: MIRC Airspace EA/OEA Project Manager
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134
www.MIRCAirspaceEA.com

B.4 COMMENTS FROM ELECTED OFFICIALS AND GOVERNMENT ORGANIZATIONS

B.4.1 NATIONAL RESOURCES CONSERVATION SERVICE

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 5082 CHRB
Saipan, MP 96950
Office: 670-233-3415
Fax: 670-234-0889

December 31, 2012

Mr. Larry Foster
Department of Navy
250 Makalapa Drive
Pearl Harbor, HI 96860-3131

Reference: 5090 Ser N01CE1/1661

Dear Sir:

Thanks for sending the copy of the notice of availability of the Draft MIRC airspace EA/OEA. NRCS will give it diligent and serious consideration and NRCS appreciates being included in your notification mailing list.

I'm writing this letter to give you information about a staff change here in the CNMI USDA/NRCS Field Office. James T. Eller no longer works in the office since he accepted a lateral transfer to work in a NRCS Field Office in Idaho. As his replacement, I am sending you my name so that you can please update your records accordingly.

My name is Kendal B. Hicks. I am the new District Conservationist for the CNMI and am located in the Saipan Field office. My effective on duty date was March 11, 2012. All the Saipan field office contact information previously used by your office to contact James Eller is still active and correct to contact me. It is also indicated above in the letterhead. My email address is: Kendal.Hicks@pb.usda.gov

As the new District Conservationist, please be encouraged to address all future correspondence to the NRCS Saipan field office in my name. I am the current NRCS staff supervisor and point of contact for this field office. Thanks for your consideration of the staffing change.

We look forward to continued interaction and/or dialogue with you. We hope to have at least one staff person visit the open house to be held January 17, 2013, in Susupe, Saipan.

Sincerely,

Kendal B. Hicks, District Conservationist

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B.4.2 CNMI DIVISION OF ENVIRONMENTAL QUALITY

Commonwealth of the Northern Mariana Islands
OFFICE OF THE GOVERNOR
Division of Environmental Quality
P.O. Box 501304, Saipan, MP 96950-1304
Tel: (670) 664-8500/1
Fax: (670) 664-8540

January 3, 2013

L.M. Foster
Naval Facilities Engineering Command Pacific
Attention: MIRC Airspace EA/OEA Project Manager
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

Subject: Draft Mariana Islands Range Complex Airspace Environmental Assessment / Overseas Environmental Assessment

Dear Mr. Foster:

On December 28, 2012, I received a letter informing me that the Draft EA/OEA for the Mariana Islands Range Complex Airspace was available for review. Based on a review of the documents posted online, I am happy to say that the project does not appear to pose any significant environmental threats to the CNMI. I look forward to the open house information session on January 17 and receiving the final EA/OEA.

Sincerely,

Frank M. Rabauliman
Director, Division of Environmental Quality

B.4.3 SENATOR JUDITH P. GUTHERTZ

SENATOR JUDITH P. GUTHERTZ DPA
CHAIRPERSON, COMMITTEE ON THE GUAM MILITARY BUILDUP & HOMELAND SECURITY
31st Guam Legislature • *I Mina'trentai Unu na Liheslaturan Guåhan*
155 Hesler Place, Hagåtña, Guam 96910 • (671)472-JUDI (5834)• Fax: (671)472-3547 • judiguthertz@pticom.com

VICE CHAIRPERSON
• COMMITTEE ON RULES, FEDERAL, FOREIGN & MICRONESIAN AFFAIRS, AND HUMAN & NATURAL RESOURCES
• COMMITTEE ON EDUCATION AND PUBLIC LIBRARIES (WITH OVERSIGHT OVER THE UNIVERSITY OF GUAM)

MEMBER
• COMMITTEE ON PUBLIC SAFETY, LAW ENFORCEMENT, AND JUDICIARY
• COMMITTEE ON APPROPRIATIONS, TAXATION, PUBLIC DEBT, BANKING, INSURANCE, RETIREMENT & LAND
• COMMITTEE ON MUNICIPAL AFFAIRS, TOURISM, HOUSING AND RECREATION
• COMMITTEE ON HEALTH AND HUMAN SERVICES, SENIOR CITIZENS, ECONOMIC DEVELOPMENT, AND ELECTION REFORM
• COMMITTEE ON YOUTH, CULTURAL AFFAIRS, PROCUREMENT, GENERAL GOVERNMENT OPERATIONS AND PUBLIC BROADCASTING

January 4, 2013

Naval Facilities Engineering Command Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

Attention: MIRC Airspace EA/ OEA Project Manager

OFFICIAL COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT FOR MIRC

On June 16, 2010, I submitted my official comments on the draft EIS for the Mariana Islands Range Complex (MIRC). Shortly afterwards, a Record of Decision (ROD) was issued for this study.

Now, it appears that we are replowing fields that were plowed back in 2010. This new iteration appears to be duplicative of the work accomplished two years ago.

Alternative 1 will modify existing military airspace and establish new airspace for safety and training efficiency to extend the restricted area at Farallon de Medinilla, or FDM, from 3 nautical miles to 12 nautical miles. Alternative 2 will modify and extend airspace as described under Alternative 1. It will also expand the sea space danger zone around FDM.

The Navy has indicated that, based on a thorough assessment of environmental resources, there will be no significant impact on the environment from proposed modifications to airspace and sea space.

Absent definitive proof of the Navy assessment being seriously in error, we must take the Navy at its word. I do have two comments that I hope will be considered as the Navy considers mitigating measures for this expansion of its restrictive areas for the Marianas Islands Range Complex.

First, I ask that the interests of the Guam fishermen be considered. Each expansion of restrictive measures over the ocean is another restriction on the fishermen's freedom to fish where and when they wish.

Second, similar to my concern regarding further restricting access to fishing areas for people in Guam, I ask that the interests of the Commonwealth of the Northern Marianas (CNMI) also be considered when the FDM restrictive area is considered. Consultation must be accomplished with the CNMI Government. Not just the NEPA planning process, but policy level officials sitting down in formal consultation, as called for in the Covenant that underlies the political relationship between the people of the Northern Marianas Islands and the United States. I urge the Navy to read the Covenant and follow through with the specific terms regarding official consultation.

In summary, I commend the Navy for a thorough study in compliance with the NEPA process. This is a lengthy and costly process.

One more point with respect to Guam, I am concerned that certain Federal agencies wish to further reserve land in Guam for endangered species that no longer exist here, yet are abundant in other Pacific islands. This effort may prevent a live fire training range from being established to support the planned realignment of Marines to Guam. I recognize that the live fire training range is absolutely needed for the Marines. If it comes to no range, then there will likely be no Marines, all to save some habitat for a possible reintroduction of some endangered species that no longer exists. This issue must be resolved between the Department of Defense and the Department of Interior. If not, I am concerned that the Marine realignment to Guam may be in jeopardy.

Senseramente,

Judith P. Guthertz, DPA

cc: The Honorable Madeleine Z. Bordallo, Congress Delegate
The Honorable Eddie Calvo, Governor of Guam
The Honorable Benigno Fitial, Governor of Northern Mariana Island
Mr. Joe Ludovici, Executive Director, JGPO
All Senators 31st and 32nd Guam Legislatures

B.4.4 GUAM DEPARTMENT OF PARKS AND RECREATION

Eddie B. Calvo
Governor

Ray Tenorio
Lt. Governor

Department of Parks and Recreation
Government of Guam
490 Chalan Palasyo
Agana Heights, Guam 96910
Director's Office: (671) 475-6296/7
Facsimile: (671) 477-0997
Parks Division: (671) 475-6288/9
Guam Historic Resources Division: (671) 475-6294/5
Facsimile: (671) 477-2822

Raymond F.Y. Blas
Acting Director

In reply refer to:
RC2009-0391

January 25, 2013

L. M. Foster
MIRC Airspace EA/OEA Project Manager
Naval Facilities Engineering Command, Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

Subject: Review of: ***Notice of Availability of the Draft Mariana Islands Range Complex (MIRC) Airspace Environmental Assessment/Overseas Environmental Assessment (EA/OEA)***

Dear Mr. Foster,

We reviewed the Environmental Assessment and the Overseas Environmental Assessment of the Draft Mariana Islands Range Complex (MIRC) above subject plan and have the following comments:

1. The "No Action Alternative" should be implemented.
2. Alternatives 1 and 2 are should not be considered or implemented.
3. The Navy should focus on reducing their footprint and effects on the environment through better technological advances rather than increasing them. The notion of training efficiency alludes to decrease impact rather than increase impacts, though public safety should always be the top priority. Therefore, the Navy in the future should find safer means of training while still providing the illusion of combat participation.

Should you have any questions please contact our office at (671) 475-6339.

Sincerely,

Raymond F.Y. Blas
Acting Director

Lynda Bordallo Aguon
State Historic Preservation Officer

B.4.5 GUAM DEPARTMENT OF AGRICULTURE

Department of Agriculture
Dipåttamenton Agrikottura
163 Dairy Road, Mangilao, Guam 96913

Director's Office 734-3942/43; Fax 734-6569
Agricultural Dev. Services 734-3946/47; Fax 734-8096
Animal Health 734-3940
Aquatic & Wildlife Resources 735-3955/56; Fax 734-6570
Forestry & Soil Resources 735-3949/50; Fax 734-0111
Plant Nursery 734-3949
Plant Inspection Facility 472-1426; 475-1427; Fax 477-9487

Edward J.B. Calvo
Governor

Raymond S. Tenorio
Lieutenant Governor

Mariquita F. Taitague
Director

Manuel Q. Cruz
Deputy Director

February 04, 2013

Mariana Islands Range Complex EA/OEA
Project Manager, Code EV21
Naval Facilities Engineering Command, Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96869-3134

Subject: Mariana Islands Range Complex Airspace Draft Environmental Assessment (EA)/Overseas Environmental Assessment (OEA)

Dear Sir/Madam:

On January 15, 2013, the U.S Department of Navy Representatives (DON) held a community meeting on Guam requesting comments on environmental factors for consideration in the Draft Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) for the Mariana Islands Range Complex (MIRC) Airspace. The draft was prepared to analyze potential environmental impacts relevant to the proposed modifications to training airspace and sea space in the Mariana Islands Range Complex (MIRC). The purpose of the Proposed Action consists of modification to existing training airspace and sea space within the MIRC to maximize public awareness of hazardous military training activities, and to optimize safety and training efficiency. Three alternatives have been put forth: 1) No action alternative, 2) Alternative 1, and 3) Alternative 2. Alternative 1 proposes to extend the Restricted Area (R-7201) at FDM from 3 nm to 12 nm and designate the new Restricted Area (R) as R-7201A; and create new Warning Areas—designated as W-11, W-12, and W-13— which, upon approval and implementation, would replace existing ATCAAs 1, 2, and 3. Alternative 2 proposes to modify airspace within the MIRC as described under Alternative 1. In addition, a 10 nm DZ around FDM (as analyzed in the MIRC EIS/OEIS) would be expanded to 12 nm (congruent with proposed R-7201A).

Our comments address the concerns of the Guam Department of Agriculture (Department) in regards to the MIRC. The Department requests that its comments be addressed in the development of the Final EA/OEA. Further, the Final EA/OEA needs to

address separately the impacts to natural resources from impacts to other areas of concern such as infrastructure, socioeconomics, etc. We offer the following comments for consideration in the DEIS/DOEIS.

1. Cumulative Impacts

The cumulative impacts (direct, indirect, and secondary) of all past, present, and future projects affecting the marine and terrestrial environment should be addressed in the Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) for the Mariana Islands Range Complex (MIRC) Airspace (Alpha and Bravo Wharves' Improvement; Kilo Wharf Extension; Red Horse Squadron; Beddown of Training and Support Initiatives at Northwest Field, Andersen Air Force Base (AAFB); Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike Capability (ISR/Strike) at AAFB; Proposed Munitions Storage Igloos Construction at AAFB; and others). The cumulative impacts of all these projects must be thoroughly considered in order to ascertain the impact of this proposed action. The Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) needs to include a comprehensive and detailed description on all projects and their impacts to the Mariana Islands' natural resources associated with the MIRC. This can be demonstrated in a table or other means by showing the amount of actual or estimated impacted areas quantified in units such as acres. These cumulative impacts should not only address the marine and terrestrial environment but, in separate reports, impacts to socioeconomics, land use, infrastructure, etc.

2. Marine Resources

The Department recommends that DON confer with us regarding marine mammals and reptiles. The use of sonar has been proven to have a negative effect on marine mammals under certain conditions. The Navy must take proactive, protective measures to avoid such conditions that could harm or injure marine mammals. The Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) needs to include detailed methods used to take protective measures against such incidents. We also require that if marine mammals were detected near the vicinity of training, a written report summarizing the situation and the condition of the mammal be sent to the Department for records.

Additionally, the risk of damage to essential fish habitat (EFH) from vessel groundings will be higher due to increased vessel traffic. The Department should be consulted for locations of EFH and how to avoid damage. Also, DON needs to be familiar with the locations of Department deployed fishing aids such as fish aggregating devices (FADs) and shallow water moorings (SWMs) to ensure no negative interactions with military vessels. The Department also requests to review DON's plans for handling fuel or oil spills within Guam's territorial waters.

The information, via handouts, available at the public scoping meeting indicated that the waterfront-training site would be in Apra Harbor, at the Polaris Point Field. The Navy

should be aware that the waterfront site at the Polaris Point Field is within the Sasa Bay Marine Preserve. Training should be avoided within the Sasa Bay Marine Preserve to avoid impacts to the marine environment.

Many of the proposed actions will take place in areas frequented by local fishermen as well as commercial and private dive boats. Extreme care must be taken in order to ensure no negative interactions occur between the military and civilians. The Department wants to see a plan with notification procedures and contingency plans in case a private boat is in an area in which exercises are taking place.

3. Direct, Indirect, and Secondary Impacts to Protected Species and Resources

Guam's native terrestrial fauna has been negatively impacted by the introduced brown treesnake (*Boiga irregularis*). As a result, many species are extinct on Guam and others exist in low numbers or are in captive breeding programs. The majority of species are listed locally and/or federally as endangered or threatened. The Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) needs to address impacts to threatened and endangered species (T&E), including impacts to habitat deemed essential to their recovery. The Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) must address how the MIRC will limit or prevent the repatriation of locally and/or federally listed T&E species on Department of Defense property on Guam. DODR must also address impacts from MIRC on other federally listed species such as the Mariana common moorhen (*Gallinula chloropus guami*) and the Mariana swiftlet (*Aerodramus bartschi*) as well as migratory birds and Guam's remaining native gastropods and insects.

5. Protected and Endangered Marine Reptile

The Department recommends that DON confer with us regarding marine reptile species such as sea turtles and their nests. Currently, there are at least three, possibly four, different areas within Apra Harbor (i.e. Sumay Marina, Spanish Steps adjacent to Kilo Wharf heading towards Orote Point, and Port Authority property between sea plane ramp and Port Authority Beach) where green and hawksbill sea turtles nest sites have been documented. Sea turtles are federally and locally listed and DON must ensure that their habitat, both at sea and nesting, does not get disturbed with MIRC. No training should occur within sea turtle nesting areas at all to avoid disturbing and impacting sea turtle nesting activities and areas.

6. Brown Treesnake and other Invasive Species

The Notice of Intent 'Rota and Saipan Training' indicated the need to strictly inspect all cargo leaving Guam to avoid the introduction of brown treesnakes to other islands such as Rota, Saipan and Tinian. DON must assure that consistent funding is available to sustain the 100% inspection rate of all cargo, vehicle, munitions, and other items departing from Guam. In addition, DON needs to fund brown treesnake control and eradication research to eliminate the constant threat of this species to other islands. The

Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) needs to include in appendices a Brown Treesnake Control Plan which ensures that the orders to inspect cargo meet Regulation 505 and 506 from the DOD Defense Transportation Regulation. DON must also assure that a biosecurity plan for other islands be drafted, reviewed, and approved by the Department and U.S.D.A. – Wildlife Services, and implemented in order to reduce the likelihood of introducing invasive species to the other islands. Written reports need to be submitted to the Department indicating vital information such as actual man hours for inspection and the actual number of cargo inspected before and after transporting.

Guam's terrestrial fauna and flora have been decimated by introduced species. With increased vessel traffic to Guam and the Marianas, the risk for introduction of invasive species is increased. A major source of aquatic introductions in other parts of the Pacific Ocean has been ballast water from incoming vessels. The Department would like to see this and other issues addressed in the Navy's plans for reducing the risk of introduction of exotic marine organisms to Guam and the northern Mariana Island's inshore waters.

7. Access and Biological Assessments

It is understood that DON will conduct biological assessments. The Department would need access to conduct its own biological assessments of the project areas related to the proposed action and its alternatives. Independent assessments by the local and federal trust agencies may need to be conducted to assist in the decision to determine alternatives or compensatory mitigation. Impacts to corals, forest, wildlife, endangered and threatened species, and associated biological communities are factors considered by the Department in determining the preferred alternative. The Department has difficulty with access to Department of Defense property in order to conduct biological assessments. The Department would like DON to commit to allowing the local and federal resource agencies access to project areas. Also, adequate time must be allowed to assure accurate collection of data and impact assessment. This would be beneficial in the decision on a preferred alternative.

8. GPS coordinates and GIS Mapping

The Department recommends that GPS coordinates along with a GIS map be used for activities and actions resulting in direct impacts (i.e. dredge footprint, clearing of forest, storage areas, anchors, etc.). This will assist resource agencies and the public in reviewing and providing comments as we will have a better understanding of the actual locations of the marine or terrestrial environment being impacted. GPS coordinates and GIS mapping is a tool essential for resources agencies to conduct site inspections in project areas.

9. Compensatory Mitigation of Unavoidable Impacts

The Department requests that collaboration with all resource agencies of the Government of Guam in determining appropriate compensatory mitigation commensurate to unavoidable losses or impacts to Guam's natural resources. The Department recommends that a "Habitat Equivalency Analysis" (HEA) or other equivalent models be used to determine appropriate compensatory mitigation for the loss of coral reef habitat. The same type of analysis or equivalent can be applied to the terrestrial ecosystem. Furthermore, compensatory mitigation for the loss of services and functions of coral reef resources and terrestrial resources is separate from infrastructure impacts. A common misconception is that compensatory mitigation for loss of these resources can be used to improve infrastructure.

DON needs to honor, implement, and fund mitigation measure(s) related to the loss of the coral reefs and terrestrial ecosystems as agreed upon between the DON and the Government of Guam natural resource agencies. Appropriate compensatory mitigation should have a long-term benefit to the ecosystem. The Department feels that a long-term, inherent benefit is needed because the impacts to coral reefs and terrestrial ecosystems will be permanent. The loss of coral reef resources as a result of the proposed action may be best mitigated in areas outside the harbor area, if such mitigation measures are only to be negated by future actions. The Department prefers offsite compensatory mitigation. With the continued increase of military projects, it does not seem feasible to mitigate within DOD's properties. The Government of Guam natural resources agencies and the Department of Navy (DON) have been working on a watershed/reforestation approach as compensatory mitigation to offset the loss of ecological services to coral reefs for other DOD projects. The Department recommends that the watershed approach be continued with projects resulting in the loss of coral reef resources. The mitigation measure(s) need to be included in the Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA), as well as in the Final EIS/OEIS to ensure the measures are funded and implemented. The Department requests active participation with the Navy in deciding on the mitigation measures. However, the Department is not in support of mooring buoys or artificial reefs as compensatory mitigation.

10. Cooperation Between Resource Agency and U.S. Pacific Command (PACOM), U.S. Pacific Fleet (PACFLT), and U.S Department of Defense Representatives (DODR)

The Department highly encourages that DON work, cooperate, and meet with the Department throughout the project. Any new information concerning the project needs to be provided to the Department. This would ensure that the process to develop the Final Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) fully addresses the natural resource concerns of Guam.

The Department appreciates the opportunity to provide comments for the development of the Draft Environmental Assessment (EA)/Overseas Environmental Assessment (OEA) and looks forward to having our concerns addressed. Further, the Department anticipates to be cooperatively working and collaborating with the DON, as well as with federal and local resource partners, on these proposed projects. Please do not hesitate to contact me

or Celestino Aguon or Jay Gutierrez at 735-3955/56, both with the Division of Aquatic and Wildlife Resources, if you have any questions.

Sincerely,

MARIQUITA F. TAITAGUE

Cc: Bureau of Statistics and Plans, Guam Coastal Management Program (GCMP)
Civilian Military Task Force (CMTF)/Environment Subcommittee
Guam Environmental Protection Agency (GEPA)
NAVFAC Marianas
NOAA, Pacific Islands Regional Office
U S Army Corps of Engineers (Frank Dayton)
U S Fish and Wildlife Service (USFWS), Ecological Services, Honolulu

B.5 RESPONSES TO COMMENTS

NAME	VENUE AND DATE SUBMITTED	COMMENT LOCATION IN APPENDIX B	RESPONSE
WEBSITE COMMENTS			
Ray Yumul	Submitted Via Website, 7 January 2013	Section B.2.1	As discussed in the Draft EA/OEA, the proposed Danger Zone expansion out to 12 nm around FDM would restrict all private and commercial vessels from entering the area when, and only when, hazardous activities are scheduled. No permanent restrictions are proposed as part of this action. As analyzed in the EA/OEA, this expansion of the DZ would increase provisions for public health and safety. Implementation of the DZ would not preclude recreational fishing from occurring in other areas within the Study Area. The EA/OEA determined that there would be no significant impacts on commercial or recreational fishing.
Russel Young	Submitted Via Website, 15 January 2013	Section B.2.2	Training activities at Andersen Air Force Base are outside the scope of the Proposed Action. In addition, proposed modifications to the airspace and expansion of the sea space, or DZ, would not result in training activities that differ in scope, nature, or location from those approved in the MIRC EIS/OEIS. The MIRC EIS/OEIS determined that airborne noise generated by training and testing activities would have no substantial environmental effects on human sensitive receptors because sound from training activities in the MIRC would be dispersed and intermittent, so it would not contribute to public long-term sound levels; and training areas on FDM are remote and isolated from the general public, so no sensitive receptors (non-participants) would be exposed to sound events occurring on FDM.
David Lotz	Submitted Via Website, 15 January 2013	Section B.2.3	U.S. military training and testing operations have occurred in and around what is now designated as MIRC since 1898. The MIRC is an important area for training now and in the future to provide fully capable training range complexes that provide realistic and controlled environments with sufficient surface DZs and SUA vital for safety and mission success. The Navy will continue to work with local stakeholders and public regarding military training activities that are conducting in Guam and CNMI.

NAME	VENUE AND DATE SUBMITTED	COMMENT LOCATION IN APPENDIX B	RESPONSE
Senator Jude Hofschneider, 18th Northern Mariana Commonwealth Senate	Submitted Via Website, 31 January 2013	Section B.2.4	As discussed in the Draft EA/OEA, the proposed Danger Zone expansion out to 12 nm around FDM would restrict all private and commercial vessels from entering the area when, and only when, hazardous activities are scheduled. No permanent restrictions are proposed as part of this action. As analyzed in the EA/OEA, this expansion of the DZ would increase provisions for public health and safety. Implementation of the DZ would not preclude recreational fishing from occurring in other areas within the Study Area. The EA/OEA determined that there would be no significant impacts on commercial or recreational fishing.
COMMENTS FROM PUBLIC HEARINGS			
Ron McNinch, University of Guam	At Public Meeting, 15 January 2013	Section B.3.1	For military training and testing activities, the current protocol is publication of NOTMARs at least 72 hours prior to hazardous training activities taking place. They are published weekly by the National Imagery and Mapping Agency and are prepared by the United States Coast Guard, National Ocean Service, and National Imagery and Mapping Agency. These navigational warnings provide information about duration and location of closures due to activities that are hazardous to surface vessels. While putting up flags at the harbor as a signal for when military training activity is taking place is beyond the scope of this action, the Navy is working with the local fisherman to discuss additional methods of notifying the public when military training activities are being conducted and when areas around FDM and elsewhere are available for fishing.
Felix Reyes	At Public Meeting, 15 January 2013	Section B.3.2	We appreciate your time in reviewing the document and providing comments. Your comment is noted.

NAME	VENUE AND DATE SUBMITTED	COMMENT LOCATION IN APPENDIX B	RESPONSE
COMMENTS FROM ORGANIZATIONS			
National Resources Conservation Service (Kendal B. Hicks)	Received via mail, letter dated 31 December 2012	Section B.4.1	We appreciate your time in reviewing the document and providing comments. Your comment is noted
CNMI Division of Environmental Quality (Frank Rabauliman)	Received via mail, letter dated 3 January 2013	Section B.4.2	We appreciate your time in reviewing the document and providing comments. Your comment is noted
Senator Judith P. Guthertz, 31st Guam Legislature	Received via mail, letter dated 4 January 2013	Section B.4.3	We appreciate your comment and have revised the EA to be clear that the proposed Danger Zone expansion out to 12 nm around FDM would restrict all private and commercial vessels from entering the area when, and only when, hazardous activities are scheduled. No permanent restrictions are proposed as part of this action. As analyzed in the EA/OEA, this expansion of the DZ would increase provisions for public health and safety. Implementation of the DZ would not preclude recreational fishing from occurring in other areas within the Study Area. The EA/OEA determined that there would be no significant impacts on commercial or recreational fishing. As part of the EA/OEA process, the Navy provided stakeholder notification of the Draft EA/OEA along with stakeholder briefings. Stakeholder briefings included federal and local elected officials and government agencies. The purpose of the briefings was to identify and respond to issues, address concerns, and correct misinformation. In addition, the Navy provided an opportunity for the public to review the Draft EA/OEA. The Draft EA/OEA was available for public review from 20December 2012 through 4 February 2013. In addition, a public open house was held on Guam and Saipan. The open house meetings were provided to give the public, including local fisherman, an opportunity to provide their comments on the Proposed Action.

NAME	VENUE AND DATE SUBMITTED	COMMENT LOCATION IN APPENDIX B	RESPONSE
			In regards to your comment regarding federal agencies reserving land in Guam for endangered species, terrestrial issues regarding Guam and threatened species is outside the scope of this EA/OEA.
Guam Department of Parks and Recreation (Raymond F.Y. Blas and Lynda Bordallo Aguon)	Received via mail, letter dated 25 January 2013	Section B.4.4	Comment noted. The analysis in the EA/OEA determined that none of the action alternatives resulted in any significant impact. The Navy has chosen to pursue Alt 2 as the Preferred Alternative because the implementation of both special use airspace and the danger zone enhance range safety to the greatest extent.
Guam Department of Agriculture (Mariquita F. Taitague)	Received via mail, letter dated 4 February 2013	Section B.4.5	Chapter 4 of the EA/OEA contains the cumulative effects section; that section establishes the past and present actions that currently have impacts in the area, as well as all reasonably foreseeable actions in the area. In keeping with CEQ guidance, the DoD attempted to use only those past, present, and reasonably foreseeable actions that are like or similar to the current impacts of the Proposed Action and its Alternatives. The remaining comments address issues that are outside the scope of this EA/OEA.

Notes: DZ = Danger Zone, EA = Environmental Assessment, FDM = Farallon de Medinilla, MIRC = Mariana Islands Range Complex, nm = nautical mile, NOTMARs = Notices to Mariners, OEA = Overseas Environmental Assessment, SUA = special use airspace.