3.11 Cultural Resources

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

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3.11 Cultural Resources

3.11.1 Affected Environment

This section supplements the analysis of impacts on cultural resources presented in the 2015 Mariana Islands Training and Testing (MITT) Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). New information made available since the publication of the 2015 MITT Final EIS/OEIS is included below to better understand potential stressors and impacts on cultural resources resulting from training and testing activities. Information presented in the 2015 MITT Final EIS/OEIS that remains valid is noted as such and referenced in the appropriate sections. Comments received from the public during scoping related to cultural resources are addressed in Section 3.11.3 (Public Comments). Comments received from the public during the Draft Supplemental EIS (SEIS)/OEIS commenting period related to cultural resources are addressed in Appendix K (Public Comment Responses).

A 10-year programmatic agreement (PA) that addressed potential effects to historic properties in the Mariana Islands Range Complex (MIRC) study area expired in December 2019. The PA provided the Department of Defense with compliance under the National Historic Preservation Act (NHPA). This process is separate and distinct from the Navy's responsibilities under the National Environmental Policy Act. However, as the need for a new PA was concurrent with the development of this MITT SEIS/OEIS, the Navy conducted Section 106 consultation in conjunction with the National Environmental Policy Act process. This benefitted both processes as comments received through the consultation process have been incorporated into this SEIS/OEIS, and vice versa.

3.11.1.1 Guam, Mariana Islands

Following a review of recent literature, no additional submerged cultural resources have been identified around Guam. However, geospatial data provided by the National Oceanographic and Atmospheric Administration (NOAA) documented the presence of several wrecks, obstructions, or occurrences in the waters around Guam (Lord et al., 2003) (**Error! Reference source not found.**). These submerged cultural resources have not been formally evaluated as historic properties eligible for listing in National Register of Historic Places. (see Section 3.11.1.1, Identification, Evaluation, and Treatment of Cultural Resources of the 2015 MITT Final EIS/OEIS for an explanation of the procedures associated with cultural resources); however, they will be treated as if they were eligible

3.11.1.2 Commonwealth of the Northern Mariana Islands

3.11.1.2.1 Farallon de Medinilla

Following a literature review, no additional submerged cultural resources, land-based archaeological sites, or isolated non-modern artifacts have been identified around or on Farallon de Medinilla (FDM). A reconnaissance archaeological field survey on FDM was conducted in 1996 (Welch, 1997). No archaeological sites or isolated non-modern artifacts were observed; however, smoke-blackened caves and fragments (i.e., pottery sherds) were observed. Modern debris associated with the military use of the island was also observed. As such, the information presented in the 2015 MITT Final EIS/OEIS is still valid and the most current.

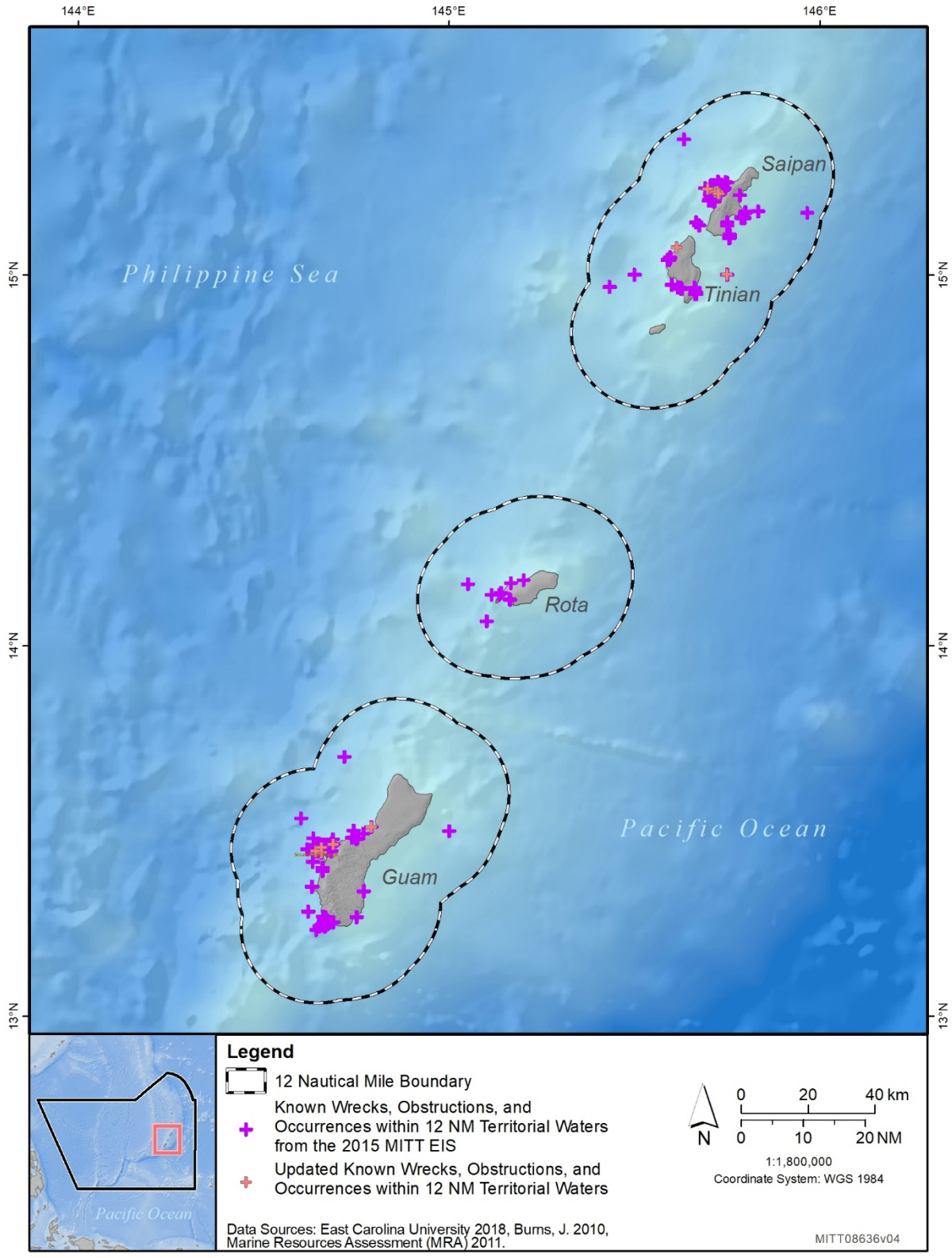

Figure 3.11-1: Known Wrecks, Obstructions, or Occurrences Within the United States Territorial Waters

3.11.1.2.2 Tinian

Following a literature review, additional submerged cultural resources have been identified around Tinian (**Error! Reference source not found.**). In 2017, East Carolina University partnered with the non-profit organization Ships of Exploration and Discovery on a National Parks Service America Battlefield Protection Program grant to conduct an archaeological investigation in the Commonwealth of the Northern Mariana Islands (CNMI). A portion of the 2017 project was dedicated to examining Tinian's World War II invasion beaches Unai Babui and Unai Chulu. The 2017 study was a follow-up study on the original American Battlefield Protection Program grant and a 2010 study of the nearshore areas, which identified potential anomalies in the nearshore areas of Unai Chulu (Burns, 2010). Researchers discovered two previously unidentified cultural resources within the Study Area landing beaches of Tinian: an intact World War II Danforth anchor and a previously unknown, fairly intact Landing Vehicle Tracked-2 in approximately 45 feet (ft.) of water (McKinnon et al., 2017). Researchers also discovered portions of a second Landing Vehicle Tracked, a large stockless U.S. Navy anchor, and a tire that may belong to a DUCKW, a six-wheel-drive amphibious modification of the CCKW trucks (2.5-ton truck) used during World War II in approximately 20 ft. of water in the nearshore area of Unai Babui.

Geospatial data provided by NOAA also documented the presence of several wrecks, obstructions, or occurrences in the waters around Tinian (Lord et al., 2003). The submerged cultural resources have not been formally evaluated for eligibility for inclusion in the National Register of Historic Places; however, they will be treated as if they were eligible.

3.11.1.2.3 Saipan

Following a literature review, one additional submerged cultural resource has been identified around Saipan. The results of an underwater archaeological survey conducted in 2011 and published in 2016 describe a mid-to-late 19th-century wooden ship found in Tanapag Lagoon on the western side of Saipan, along with artifacts and an associated debris field. While the study confirmed the shipwreck to be from the colonial period prior to World War II, it was inconclusive as to the positive identity of the ship (McKinnon et al., 2016). In addition, geospatial data provided by NOAA documented the presence of several wrecks, obstructions, or occurrences in the waters around Saipan (Lord et al., 2003) (Figure 3.11-1). These submerged cultural resources have not been formally evaluated as historic properties eligible for listing in the National Register of Historic Places; however, they will be treated as if they were eligible.

3.11.1.2.4 Rota

Following a literature review, no additional submerged cultural resources have been identified around Rota. As such, the information presented in the 2015 MITT Final EIS/OEIS is still valid and the most current.

3.11.1.3 Cultural/Traditional Practices and Beliefs

Chamorros and Carolinians have a unique cultural history in the Marianas, with which they are closely connected. As far back as 4,000 years ago, the Chamorros migrated from Southeast Asia to the Mariana Islands. Their people and culture experienced centuries of change, from Spanish occupation in the 16th and 17th centuries, to European-introduced diseases and conflict over land in the 18th century, to Japanese occupation during World War II. To present day, Chamorros and Carolinians strive to maintain their ancestral heritage, cultural traditions, and language.

A number of public comments on the Draft SEIS/OEIS refer to the history of displacement and marginalization the Chamorros and Carolinians experienced, suggesting the Proposed Action represents a comparable impact on existing cultural practices. Commenters stated that military training and testing activities within the Mariana Islands are believed to hinder cultural beliefs, access to cultural sites, and the ability to practice cultural traditions. While specific practices were not described in the comments, cultural traditions include (but are not limited to) resource collection for traditional events or ceremonial purposes, seafaring customs, and practices related to traditional and familial roles.

3.11.1.4 Mariana Islands Training and Testing Transit Corridor

The length and variable width of the MITT transit corridor is so vast and deep (sometimes over 18,000 ft. [5,486 meters]), that it precludes systematic survey for submerged cultural resources. In accordance with the NHPA Section 402 regarding international federal activities affecting historic properties, the World Heritage List was reviewed, and no known natural/cultural resources were identified within the MITT transit corridor.

3.11.1.5 Current Requirements, Practices, and Protective Measures

3.11.1.5.1 Avoidance of Obstructions

As stated in the 2015 MITT Final EIS/OEIS, the military avoids locations of known obstructions, which includes submerged cultural resources such as historic shipwrecks. Known obstructions are avoided to prevent damage to sensitive equipment and vessels, for mission success, and to avoid or reduce potential impacts on cultural resources (Section 2.3.3, Standard Operating Procedures; and Chapter 5, Mitigation).

3.11.1.5.2 Mariana Islands Range Complex Programmatic Agreement

A Programmatic Agreement (PA) was negotiated in 2009 for all military training activities proposed in the MIRC. The PA was based on consultations with the Guam State Historic Preservation Officer (SHPO), CNMI Historic Preservation Officer (HPO), Advisory Council on Historic Preservation, and the National Park Service. The training constraints map identifies Limited Training zones, refined from the previous Military Operations Area constraints map boundaries (U.S. Department of Defense, 2009). Limited Training zones (land-based) are primarily designated as no digging, no vegetation clearing, and no campfire areas. Vehicular access is limited to designated roadways with the use of rubber-tired vehicles. While there are no limits on the quantity of personnel, training in Limited Training zones typically consist of units numbering 20 or fewer. Limited Training and Testing zones (at-sea) are designated for avoidance of historic properties or other environmentally sensitive areas. No Training zones are off limits to training and testing activities.

According to the 2009 PA, training constraint maps shall be reviewed by the Senior Military Official Cultural Resource Manager (CRM) and/or 36th Wing CRM on an annual basis to ensure the maps remain current and take into account any new surveys, studies, or inadvertent and post-review finds. Revisions to the maps shall be consulted upon with the Guam SHPO and CNMI HPO prior to finalization. Each review by the CRM and any resulting revision to the maps shall be reported.

The PA expired in December 2019, and the Navy efforts are ongoing to maintain compliance with the NHPA. Since January 2019, the Navy has been actively engaged in a new NHPA Section 106 consultation with the Guam and CNMI HPOs, consulting parties and members of the interested public. As it has been determined that MITT military readiness training has the potential to affect historic properties in the study area, the Navy is working to develop a MITT PA to maintain NHPA compliance. As we continue to

actively consult and develop a new long-term PA for the MITT undertaking, the Parties have executed interim PAs which incorporate all of the terms and mitigations of the 2009 PA. The interim PAs took effect upon the expiration of the 2009 MITT PA and serve as a continuation of the Department of Defense's compliance under Section 106 of the NHPA for MITT activities. The interim PA with the CNMI HPO expires September 10, 2020, while the interim PA with Guam expires June 30, 2020.

3.11.2 Environmental Consequences

The 2015 MITT Final EIS/OEIS considered training and testing activities proposed to occur in the Study Area that may have the potential to impact cultural resources. The stressors applicable to cultural resources in the Study Area are the same stressors in the 2015 MITT Final EIS/OEIS and include:

- explosive (in-water explosions), and
- physical disturbance and strike (ground disturbance, use of towed in-water devices, deposition of military expended materials, and use of seafloor devices).

This section evaluates how and to what degree potential impacts on cultural resources from stressors described in Section 3.0.1 (Overall Approach to Analysis) may have changed since the analysis presented in the 2015 MITT Final EIS/OEIS was completed. Tables 2.5-1 and 2.5-2 in Chapter 2 (Description of Proposed Action and Alternatives) list the proposed training and testing activities and include the number of times each activity would be conducted annually and the locations within the Study Area where the activity would typically occur under each alternative. The tables also present the same information for activities described in the 2015 MITT Final EIS/OEIS so that the proposed levels of training and testing under this SEIS/OEIS can be easily compared.

The Navy conducted a review of federal and state regulations and standards relevant to cultural resources and reviewed literature published since 2015 for new information on cultural resources (as presented in Section 3.11.1, Affected Environment) that could inform the analysis presented in the 2015 MITT Final EIS/OEIS. The analysis presented in this section also considers standard operating procedures, which are discussed in Section 2.3.3 (Standard Operating Procedures) of this SEIS/OEIS, and mitigation measures that are described in Chapter 5 (Mitigation). The Navy would implement these measures to avoid or reduce potential impacts on cultural resources from stressors associated with the proposed training and testing activities. Protective measures for cultural resources will be coordinated with the Guam SHPO, CNMI HPO Advisory Council on Historic Preservation, and the National Park Service as part of the Section 106 consultation process.

3.11.2.1 Explosive Stressors

Explosive stressors that have the potential to impact cultural resources are shock (pressure) waves and vibrations from underwater detonations (such as explosive torpedoes, missiles, bombs, projectiles, airguns, and mines) and cratering created by underwater explosions. While the number of training and testing activities would change under this SEIS/OEIS (refer to Tables 2.5-1 and 2.5-2), the locations of activities and the analysis presented in the 2015 MITT Final EIS/OEIS, Section 3.11.3.1.1 (Impacts from Explosives – Shock [Pressure] Waves from Underwater Explosions) and Section 3.11.3.1.2 (Impacts from Explosives – Cratering) remains valid.

3.11.2.1.1 Impacts from Explosive Stressors Under Alternative 1

Under Alternative 1, the annual number of explosive munitions expended at sea in the Study Area would decrease overall from the 2015 MITT Final EIS/OEIS. However, under this alternative, underwater detonation activities would increase for Limpet Mine Neutralization System and Underwater Demolition

Qualification/Certification above the 2015 MITT Final EIS/OEIS (Table 2.5-1 and Table 3.0-16). The explosive ordnance would continue to occur in the same areas and would have no appreciable change in the impact analysis or conclusions for explosive stressors as presented in the 2015 MITT Final EIS/OEIS.

As stated in the 2015 MITT Final EIS/OEIS analysis, training and testing activities using explosives would not typically occur within approximately 3 nautical miles from shore, including the nearshore waters surrounding Tinian, Saipan, or Rota. Therefore, no shock (pressure) waves, vibrations, or cratering from explosions would occur in these areas, and no known submerged cultural resources would be affected by explosive stressors. For those training activities at the Agat Bay Floating Mine Neutralization Site, Piti Point Floating Mine Neutralization Site, and Apra Harbor Underwater Demolition Site (located within Outer Apra Harbor), the military avoids locations of known obstructions, which includes submerged cultural resources (Section 2.3.3, Standard Operating Procedures; and Section 5.4.1, Mitigation Areas for Seafloor Resources). Thus, it is unlikely that cultural resources could be disturbed or destroyed from shock waves or cratering created by underwater explosions during mine warfare activities, surface warfare activities, torpedo testing, mine countermeasure mission package activities, or other training activities that use explosives.

In summary, given that the training and testing activities would decrease and be conducted in the same areas as described in the 2015 analysis, the amount of shock (pressure) waves, vibrations, or cratering from explosives would not appreciably change the conclusions. Therefore, the analysis presented in the 2015 MITT Final EIS/OEIS, Section 3.11.3.1.1 (Explosive Stressors – Shock (Pressure) Waves from Underwater Explosions) and Section 3.11.3.1.2 (Impacts from Explosives – Cratering) remains valid. Explosive stressors resulting from underwater explosions creating shock (pressure) waves, vibrations, and cratering of the seafloor would not adversely affect submerged cultural resources under Alternative 1 within U.S. territorial waters because measures have been previously implemented to protect these resources and would continue to be implemented according to the mitigation measures and procedures identified and described in the 2009 MIRC PA and the successor MITT PA documents or interim PAs.

3.11.2.1.2 Impacts from Explosive Stressors Under Alternative 2 (Preferred Alternative)

Under Alternative 2, the annual number of explosive munitions expended at sea in the Study Area would decrease overall from the 2015 MITT Final EIS/OEIS. However, under this alternative, underwater detonation activities would increase for Limpet Mine Neutralization System and Underwater Demolition Qualification/Certification above the 2015 MITT Final EIS/OEIS (Table 2.5.1 and Table 3.0-16). As noted under Alternative 1, the explosive ordnance would continue to occur in the same areas and would have no appreciable change in the impact analysis or conclusions for explosive stressors as summarized above under Alternative 1 and as presented in the 2015 MITT Final EIS/OEIS.

3.11.2.1.3 Impacts from Explosive Stressors Under the No Action Alternative

Under the No Action Alternative, proposed training and testing activities would not occur. Other military activities not associated with this Proposed Action would continue to occur. Explosive stressors as listed above would not be introduced into the marine environment. Therefore, depending on other activities not related to the MITT undertaking, existing environmental conditions of submerged cultural resources would remain unchanged after cessation of ongoing training and testing activities.

Discontinuing the training and testing activities would result in fewer explosive stressors within the marine environment where training and testing activities have historically been conducted. Therefore, discontinuing training and testing activities under the No Action Alternative would lessen the potential

for explosive impacts on submerged cultural resources, but would not measurably improve the condition of submerged cultural resources in the Study Area.

3.11.2.2 Physical Disturbance and Strike

The physical disturbance and strike stressors that may impact cultural resources include (1) vessels and towed in-water devices, (2) military expended materials, and (3) seafloor devices.

3.11.2.2.1 Impacts from Physical Disturbance and Strike Stressors Under Alternative 1

Under Alternative 1, the number of proposed training and testing events would increase for vessels, decrease for towed in-water devices, increase for non-explosive practice munitions, decrease for military expended materials, and decrease for seafloor devices (see Tables 3.0-12, 3.0-13, 3.0-14, 3.0-15, and 3.0-18, respectively) compared to the numbers in the 2015 MITT Final EIS/OEIS.

Proposed increases under Alternative 1 for vessels would have no appreciable change on the impact analysis or conclusions for physical disturbance and strike stressors presented in the 2015 MITT Final EIS/OEIS because the increase in training and testing events including the use of vessels is not substantial (Table 3.0-12). Thus, the analysis presented in the 2015 MITT Final EIS/OEIS, Section 3.11.3.2.2 (Impacts from Vessel and In-Water Device Strikes) remains valid.

As stated in the 2015 MITT Final EIS/OEIS, the impact of physical disturbance and strike stressors on cultural resources would be inconsequential for vessels and in-water devices because (1) the types of activities associated with towed systems are conducted in areas where the sea floor is deeper than the length of the tow lines; (2) prior to deploying a towed device, there is a standard operating procedure to search the intended path of the device for any floating debris (e.g., driftwood) or other potential surface obstructions, since they have the potential to cause damage to the device; and (3) devices are designed and operated within the water column and do not contact the seafloor. Activities involving vessels and in-water devices are not expected to affect submerged cultural resources.

The proposed increase under Alternative 1 in non-explosive practice munitions (Table 3.0-14) is attributed to the increase in small-caliber projectiles. Larger non-explosive practice munitions such as torpedoes, bombs, and missiles would all decrease under Alternative 1. As stated in the 2015 MITT Final EIS/OEIS, the deposition of non-explosive practice munitions, sonobuoys, and military expended materials other than ordnance may affect submerged cultural resources through possible sudden impact of resources on the seafloor or the simple settling of military expended materials on top of submerged cultural resources. However, the impact of non-explosive practice munitions or military expended materials on cultural resources would be inconsequential because most of the anticipated expended munitions would be small objects and fragments that lose velocity after striking the ocean surface and drift to the seafloor. Larger and heavier objects, such as non-explosive practice munitions, would strike the ocean surface with greater velocity, but their acceleration would slow upon impact with the ocean surface. It is possible these larger and heavier objects could impact a submerged cultural resource site by creating sediment and artifact displacement. A historic resource could be impacted by damaging structural elements; the probability increases in areas where there is a higher density of resources. However, this type of impact is not anticipated because the Navy avoids areas with known submerged obstructions, including submerged objects and sites listed on the National Register of Historic Places. Thus, the increase in non-explosive practice munitions would have no appreciable change on the impact analysis or conclusions for physical disturbance and strike stressors presented in the 2015 MITT Final EIS/OEIS.

As stated in the 2015 MITT Final EIS/OEIS, any physical disturbance on the continental shelf and seafloor could inadvertently damage or destroy submerged cultural resources if such resources are located within the Study Area and are not avoided. Under Alternative 1, the impact of seafloor devices on cultural resources would remain inconsequential as presented in the 2015 MITT Final EIS/OEIS because (1) seafloor devices are either stationary or move very slowly along the bottom; and (2) the military avoids locations of known obstructions, which include submerged cultural resources (Section 2.3.3, Standard Operating Procedures; and Section 5.4.1, Mitigation Areas for Seafloor Resources). Thus, activities involving seafloor devices are not expected to affect submerged cultural resources.

3.11.2.2.2 Impacts from Physical Disturbance and Strike Stressors Under Alternative 2 (Preferred Alternative)

Under Alternative 2, the number of proposed training and testing events would increase for vessels, decrease for towed in-water devices, increase for non-explosive practice munitions, decrease for military expended materials, and decrease for seafloor devices (see Tables 3.0-12, 3.0-13, 3.0-14, 3.0-15, and 3.0-18, respectively) compared to the numbers in the 2015 MITT Final EIS/OEIS. Under Alternative 2, increases as compared to Alternative 1 would have no appreciable change on the impact conclusions as summarized above under Alternative 1 and presented in the 2015 MITT Final EIS/OEIS.

3.11.2.2.3 Impacts from Physical Disturbance and Strike Stressors Under the No Action Alternative

Under the No Action Alternative, proposed training and testing activities would not occur. Other military activities not associated with this Proposed Action would continue to occur. Physical disturbance and strike stressors as listed above would not be introduced into the marine environment. Therefore, existing environmental conditions of submerged cultural resources would remain unchanged after cessation of ongoing training and testing activities.

Discontinuing the training and testing activities would result in fewer physical disturbance and strike stressors within the marine environment where training and testing activities have historically been conducted. Therefore, discontinuing training and testing activities under the No Action Alternative would lessen the potential for physical disturbance and strike impacts on submerged cultural resources, but would not measurably improve the condition of submerged cultural resources in the Study Area.

3.11.3 Public Comments

The public raised two issues during the scoping period in regard to cultural resources. The issues are summarized in the list below. Comments received from the public during the Draft SEIS/OEIS commenting period related to cultural resources are addressed in Appendix K (Public Comment Responses).

- **U.S. Navy has not consulted with indigenous people for conducting military training –** The 2015 MITT Final EIS/OEIS summarized in Section 3.11.4.2 (Regulatory Determinations) that the 2009 MIRC PA is in effect and satisfies the requirement for consultation as long as the stipulations in that PA are followed. The 2009 MIRC PA was negotiated for all military training activities for the MIRC EIS/OEIS based on consultations with the Guam SHPO, CNMI HPO, Advisory Council on Historic Preservation, and the National Park Service (U.S. Department of Defense, 2009).
- **The Navy should conduct a cultural survey of FDM –** The 2015 MITT Final EIS/OEIS Section 3.11.2.2.1 (Farallon de Medinilla) evaluated the findings of a preliminary archaeological field survey of FDM conducted in 1996 (Welch, 1997). While no archaeological remains were identified during the survey reported by Welch (1997), the reconnaissance effort was

incomplete due to an approaching typhoon and the discovery of "dangerous submunitions" on the island, which prohibited the archaeologists from continuing the work. As part of the PA development, the Navy, in cooperation with the CNMI HPO, is exploring the feasibility of conducting archeological surveys on FDM as well as in the nearshore waters surrounding the Island. Due to the high risk of encountering unexploded ordnance while surveying areas on and around a bombing range, these decisions will require approval from the highest levels of Navy leadership, and no decisions have yet been made.

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