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MITT EIS Project Manager

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Subject: Draft Supplemental Environmental Impact Assessment Comments on the Marianas Islands Training and Testing Activities, United States Department of the Navy

Dear Sir/Madam,

The Commonwealth of the Northern Mariana Islands' (CNMI) Department of Lands and Natural Resources (DLNR) appreciates having the opportunity to share its concerns on the Draft Supplemental Environmental Impact Statement (DSEIS) on the Marianas Islands Training Testing (MITT) Activities proposed by United States Department of the Navy. Due to time constraints this review focuses on questions and comments regarding general concerns and suggested improvements for mitigation of anticipated impacts associated with the expanded timeline and scope of activities proposed in Preferred Alternatives 1 and 2 of the DSEIS. We lacked sufficient time to fully assess the background information and reports associated with this document. We also met with MITT representatives on March 18th, 2019. Several issues, including requests for background information, were brought up that required follow-up. We have yet to receive the promised information. DLNR submitted extensive comments during the previous MITT comment period in 2013. We were not satisfied with how our comments were addressed in the previous Record of Decision. We therefore have limited faith in this process.

DLNR remains concerned regarding the significance criteria used in the DSEIS as well as the overall validity and credibility of the assessment of risk to marine and terrestrial environments and cultural and socioeconomic conditions, as well as compliance with the requirements of NEPA to ensure adequate identification and mitigation of significant impacts. The uses of terms like "slightly" are meaningless; these should be changed to percentage or some other measurable term. The DSEIS also repeatedly down-plays benefits of the No Action Alternative by the use of "not measurably improve" when previous statements indicate this is false. For example, without disturbance, birds on Farallon de Medinilla would change distribution and likely abundance; the DSEIS states that it would not measurably improve distribution and abundance.

General concerns.

Proposed activities will have significant impacts on the ecological, cultural, and socioeconomic resources of the CNMI and its surrounding waters. Some impacts, such as the degradation of landscapes, restriction of access to resource users, and the diminishment of cultural value are impossible to monitor, measure, mitigate, and recover. DLNR is particularly concerned about the cumulative impact of military build-up and training activities (including the MITT, MIRC, CJMT, Divert, etc.) will have in its jurisdiction. As a reminder, DLNR has management jurisdiction of the 0-3 nautical miles (nm) from the shoreline of the islands, as well as oversight over impacts to habitats and species of the CNMI. Any activities within 12nm should still be coordinated DLNR. This document mentions nothing regarding following CNMI laws, regulations, and permitting processes. General concerns for the MITT DSEIS include:

- DLNR and DFW, and our CNMI agency partners are rarely afforded the opportunity to conduct independent, third-party monitoring of the impact of ongoing military training activities, particularly those at sea and on remote northern islands in the archipelago. Studies relied on for the claim that live fire training on Farallon de Medinilla (FDM) do not appear to have been updated since 2016 and those annual surveys were limited in scope and appear to be lacking in scientifically rigorous data collection and analysis. There is also a lack of plant surveys. Active or 'live fire' areas do not preclude independent surveys as demonstrated by other military bases.

- Few data collected by Department of Defense (DOD) and its contractors in monitoring and mitigation activities associated with prior and ongoing training activities in the region are shared with DLNR despite repeated requests for sharing of raw data that is collected. Lack of data sharing and physical restrictions around FDM are preventing the CNMI from monitoring or measuring the impact of military activities in its territorial waters and terrestrial habitats. DLNR and DFW are also prevented from being able to model or predict the likely impact of DOD training activities in its jurisdiction.

- DLNR and DFW are rarely invited to collaborate with DOD on the design, execution, and scientific review of monitoring activities. Recommendations that have been made in the Integrated Resource Management Planning process have not been implemented, and if monitoring is occurring, data has not been shared or included in the DSEIS.

- Military activities are stated as number of events per year but lack the spatial and temporal information to assess the actual impacts of the proposed activity. Without this information cumulative impact of training activities (ecological, cultural and/or socioeconomic) cannot be predicted or monitored. Additive/consecutive activities would instil a level of chronic environmental risk. There is no data to substantiate DOD claims regarding significance of impacts.

- The DSEIS ignores the environmental impacts of increased bombing activities in waters surrounding Farallon de Medinilla, specifically within the 3 nm permanent Restricted Area (R-7201). There is a strong likelihood that aberrant ordnance will adversely affect the surrounding coral reef and associated fauna (fish, sea turtles, and

marine mammals) and in fact impacts to benthic habitat were observed in the Smith & Marx reports summarizing the surveys that were last conducted in 2012. When it is updated the revised EIS should provide an ordnance-specific probability estimation of land versus sea detonation based on known target success of the specific weapons applied as well as anticipated impacts of "new technologies" that will be used under this proposal.

- There are few detailed maps showing coral habitat for Farallon de Medinilla (contrast Section 3.3-11 to the maps provided for Tinian in Section 3.3-12). Military-funded surveys have been performed on Farallon de Medinilla in the past, and data from these surveys should be incorporated on the standard series of maps.

- The real ecological impact of proposed activities will be observed and described by DOD affiliated observers. Such observers have the potential to underreport or report with bias the impact of activities. The proposal does not provide for independent assessment of the impact of proposed military activities.

- Subsurface activities, including sonar use, and ordnance detonation on or near seamounts will have significant impacts on marine habitats and animal populations, including cetaceans, fish, and marine invertebrates.

- There is limited knowledge of population structure of marine mammal and their spatial/habitat use for the CNMI and are used by MITT. We strongly suggest additional research be conducted to better inform future assessments. The raw data should be made available to resource agencies immediately, followed by actively sharing any products/papers produced. If security clearances or guidelines are needed the military should collaborate with CNMI to ensure this occurs.

- The proposed activities will increase debris and entanglement issues; we recommend beach and ocean clean-up effort be conducted and the collection of materials post-activities. For example, all products and materials from parachute insertions should be collected during or just after the activity.

- We are concerned about the increase in higher explosive rate bins, which have greater environmental impacts and do not believe the increase in bins E8-10 are off-set by the lower occurrence of bins E11-12 (Table 2.4.3.2) All detonations (underwater or subsurface) have the potential to harm marine species and habitat. Thus we are concerned by the increased occurrence proposed within MITT alternates, particularly Alternative 2.

- The use of unmanned vehicles for training offers an excellent opportunity to collect research data while training personnel. We strongly recommend working with researchers from government and state agencies as well as university professors to design scientifically rigorous studies, collect data in a meaningful way, and share raw data. Again, if security clearances or guidelines are needed, the military should collaborate to ensure this occurs.

- Behavioral changes in marine species are looked at as a negligible effect within the EIS, which is inappropriate. Behavioral changes are energetically costly, and can change access to food resources, predation rates and cause added stress in an already stressed environment; thus behavioral changes can cause population effect and should be viewed as significant.

- New endangered species have been listed within the CNMI since the 2015 MITT. Have impacts to these species been assessed?

- It is unclear when/if Alternative 2 activities would be implemented and why the additional munitions use is needed

- DSEIS did not consider a "no change in current training levels" alternative. This is a major issue with this EIS. It offers a "no training" alternative, but even this involves a substantial change from current practices, and any reasonable person is going to understand that the military needs to conduct some level of training to maintain readiness. A "no change from current" alternative should have been presented; instead they only offered no training (which we know is a non-starter) vs. two increase in training alternatives.

- Figures 2.4-2 and 2.4-3 illustrate the current and proposed annual use of underwater explosives. However the DSEIS does not provide a similar comparison for the use of explosives in the air. This oversight needs to be addressed.

Marine Mammals.

Numerous species of marine mammals (26+ spp., 5 Endangered) utilize the nearshore and offshore waters of the CNMI. Although most activities will be performed in excess of 12 nm off shore, there are some concerns about the impact of acoustic activities and submarine explosives on local populations. These include:

- The DSEIS has good descriptions of existing threats to species, but they should be used as a baseline for the assessment of added stress of Navy activities, not as permission or an excuse to conduct current activities or a justification that the additional impacts of these activities will have no significant effects.

- In general, the DSEIS documents that increased activity in an area negatively affect marine mammals. Whether it is based on explosives, noise, sonar, or the vessel itself does not matter as the net effect is the same. Marine mammals demonstrated stronger responses in areas of lower traffic like the MITT area (Bejder et al. 2006). These impacts should be properly documented and mitigated. Mitigation measures might include changes in timing of activities to avoid seasonal presence of species, or creation of additional areas where activities are reduce/restricted due to high wildlife densities.

- Genetic studies should be funded to conduct stock assessments within the MITT area to further assess, monitor, and mitigate impacts.

- What is the area of impacts modeling (0-12nm or for whole EEZ)? It appears the whole EEZ is not being assessed, just 12nm, and if that is the case, the EIS needs to assess direct, indirect, and cumulative effects throughout the whole nearly 1,000,000 nm range.

- The DSEIS states activities present a low risk of entanglement however a drifting parachute would pose a significant risk to marine mammals, which may ingest or feed in proximity to the object and become entangled. Subsurface sink rates are unknown. The larger un-weighted parachutes are of particularly concern for covering bottom substrate, sea turtles, and marine mammals.

- With all of the surveys conducted, why are there not better density and distribution maps? More information should be collected on these surveys.

- Use of sonar, underwater explosives, and other acoustic devices will have an adverse impact on whales and dolphins, especially residential Culver's beaked whales which have shown mortality, injury, and evasion in response to Navy acoustic activities. Robust distribution studies should be conducted to identify areas where activities can be conducted that will not impact feeding, breeding, and migratory routes.

- Despite numerous examples of harassment given in the DSEIS, it states that it is not possible to ascertain the true significance of the majority of the observed reactions (3.4-97-98). Regardless of whether the experimental design mimics Navy activities, studies show "harassment" and "take" with sonar sound and vessels. Therefore there is no basis to say impacts are no significant.

- The DSEIS notes numerous examples of know sonar effects but discounts or minimizes known responses. There are also contradictions within the report; for example in one area states "no significant behavioural responses" despite the previous section clearly stating that "sonar use during exercises involving the U.S. Navy has been identified as a contributing cause or factor in five specific mass stranding events: Greece in 1996; the Bahamas in March 2000; Madeira Island, Portugal in 2000; the Canary Islands in 2002, and Spain in 2006 (Cox et al., 2006; Fernandez, 2006; U.S. Department of the Navy, 2017c)" (3.4-86).

- Please clarify what "potentially significant behavioural responses" means in Table 3.4. How is the assessed?

- Please clarify figures 3.4-11 through 62 as they are not well explained and they do not indicate the number of "takes" which would be helpful. Also Figures 3.4-13, 17, 23, 24, etc. have panels representing more than 100%. Updates should ensure figures used are clear and that totals are properly calculated to further support assessment and impact mitigation.

- The only marine mammal species, Kogia whales, to experience permanent threshold shifts are the same species that have longer dive durations than the 30-minute wait period proposed as mitigation if a whale is spotted. In areas with pygmy and dwarf sperm whales, mitigation times should meet or exceed the average dive time for these sensitive species.

Sea Turtles.

- Chapter 3.0.1.22 mentions that the effects on sea turtles were assessed by fish experts. This data/information should be reviewed by sea turtle experts.

- We are concerned about the increase in small joint coordinated ASW and increases in insertion/extraction activities as increased use of beach and nearshore waters have a high likelihood of impacting sea turtles. Increased beach use is a concern for nesting sea turtles. As was discussed in the prior MITT comments from CNMI, compaction of sandy beaches should be avoided to protect turtle nesting habitats.

- We oppose any use of vehicles on the beach as it negatively affects sea turtles. If vehicle use on beaches is deemed necessary, then nightly surveys for nesting sea turtles should be conducted year-round to identify and mark nests. These nests should be marked with GPS and monitored with a buffer placed around them, and should be avoided until after hatching.

- We are concerned about the level of nearshore, beach, and littoral explosions as these impact sea turtles and sea turtle habitat. Studies have shown that sea turtles use nearshore waters for foraging and reproduction making them vulnerable to disturbance in this area.

- How many near shore explosives will be used? This area has higher densities of sea turtles increasing the risk of injury and mortalities as well as increasing habitat damage.

- Peak Pressure and SEL Based Ranges to TTS and PTS for Sea Turtles Exposed to Explosives often exceed observable distances. Mitigation measures should be re-assessed.

- The DSEIS, assuming only land strikes of ordnance, ignores the potential impact of aberrant ordnance on pelagic sea turtles around Farallon de Medinilla. Green (threatened), hawksbill (endangered), loggerhead (endangered), olive ridley (threatened), and leatherback sea turtles (endangered) utilize nearshore habitats and reef sites as a refuge from predators and for grazing and reproduction. The sparse available habitat for such activities across the CNMI underscores the ecological significance of each island unit. Although the DSEIS indicates a lower abundance of sea turtles around Farallon de Medinilla relative to other islands, this does not

preclude Farallon de Medinilla's importance as critical habitat, nor establish that impacts to this habitat range would be less than significant.

- The DSEIS states a low risk of entanglement however a drifting parachute would pose a significant risk to sea turtles, which may ingest or feed in proximity to the object and become entangled. Subsurface sink rates are unknown. The larger un-weighted parachutes are of particularly concern for covering bottom substrate, sea turtles, and marine mammals.

- Active low frequency acoustic sources such as the active sonar used by anti-submarine warfare sonars associated with the Littoral Combat Ship, the impact of non-explosive munitions, large vessel ship-radiated noise, and explosive devices emanating frequencies in the range of 300-400 Hz would impact the hearing of sea turtles. If their hearing is compromised, then their ability to navigate and detect predators (the latter is probably the more salient function of hearing in sea turtles) would be negatively affected. This is a significant impact that should be addressed, and mitigation should be proposed.

- Activities such as ship movement, munitions use, and the use of active low frequency acoustical devices in areas where marine downwelling gathers and aligns buoyant material (including dispersed food resources in surface waters) would affect sea turtles that congregate at these convergences in their pelagic stage. These areas should be avoided.

- Proposed monitoring and surveillance of sea turtle nesting activity (including nest locations) is insufficient to identify fresh nests and body pits. Daily monitoring before and constant monitoring during military exercises and beach use are required to adequately reduce impact of amphibious training activities. Monitoring by an independent (i.e. not employed or contracted by the Department of Defense) party specially trained in sea turtle nest location is necessary to provide objective and non-biased assessments of the effect of military activities on sea turtle nesting success and behavior.

Sediment and water quality/habitat impacts.

- In Table ES.6-1it states "Qualitative observations of nearshore waters of Farallon de Medinilla during multi-year dive surveys included observations of generally good water quality. There was little evidence of military impacts on benthic sediments and substrates observed during the dive surveys, and, where noted, impacts were localized and shown to recover during subsequent dive surveys". Are these observations from an independent scientific study? What were the baselines? Please provide raw data to DLNR.

- The increased level of bombing and disturbance of soil on Farallon de Medinilla poses a significant risk to surrounding corals and other sessile invertebrates. The DSEIS focuses on the in-water impacts of explosives and potential contamination from ordnance, which will have local and short-term negative impacts. Increased bombing will significantly disrupt soil and increase sedimentary load on surrounding reefs. Long-term cumulative effects should be meaningfully assessed and addressed.

- With increased sediment loading into near-shore waters, water and substrate quality will decrease. Without proper flushing, sediments will accumulate and be re-suspended with every storm or increased wave and wind activity. Suspended sediments affect light attenuation, effectively decreasing the amount of sunlight needed by photosynthesizing organisms such as corals and algae.

- Aberrant ordnance around Farallon de Medinilla will decimate surrounding corals and cause mortality of sea turtles, marine mammals, and fish, and it will damage critical fish habitat. Existing stressors only compounds the significance of these effects. How will these impacts be meaningfully mitigated?

- The statement: "The impact of vessels and in-water devices on marine habitats would remain inconsequential because (1) vessel and in-water activities that could come into contact with marine substrates would be located in previously disturbed areas (i.e., nearshore shallow waters), (2) military expended materials could be colonized by benthic organisms, and (3) seafloor devices would be used in previously disturbed areas and therefore would not be expected to affect marine substrates" (ES-9) is inaccurate as expended materials may be toxic and contain heavy metals, and there is cumulative damage by disrupting bottom substrates.

- The number of mooring/anchoring stations should be minimized to the maximum number of vessels that use the area; this will minimize the damage to bottom substrate (e.g. coral) by anchors and anchor chains. We suggest installing a minimum number of mooring location instead of setting anchors in different location. The military must also work with DLNR to obtain the proper permits to conduct these activities within the 3 nm boundary.

- We are concerned about the increased damage to seagrass beds as it affects in-water abundance of sea turtles. Seagrass re-growth may take up to 10 years. Thus these areas should be mapped and all activities should be avoided in seagrass beds, just as hard substrates (coral) should be mapped and avoided.

- The DSEIS states there is a low risk of entanglement however it does not address the affects a drifting parachute would pose to coral and bottom substrate. These effects need to be addressed and mitigated.

- Increased terrestrial bombing increases the risk of wildfires on the island, which would kill or destroy vital habitat for tree- and forest-nesting birds such as the Micronesian megapode and red-footed booby. Mitigation strategies should be in

place to detect and extinguish wild fires to protect island wildlife. Denuded soils should be stabilized and revegetated, and no-strike areas should be replanted with native plants to further support viable habitat areas.

- Soft bottom substrate such as sea grass is important for sea turtles and fish. Continued disturbance of any habitat should be minimized in its effect.

- The use of high explosives will result in the deposition of heavy metal on the surface of Farallon de Medinilla. Heavy metal residues will be adsorbed into soil, bioaccumulated in low trophic-level organisms (including microorganisms, plants, and soil-dwelling animals), and ingested by ground-feeding birds such as the Micronesian megapode and white-throated ground dove. These significant impacts should be assessed, monitored, and mitigated.

- Heavy metals will also be washed into the ocean in precipitation and erosion events and bioaccumulated in fish that are ingested by white-tailed tropicbirds, red-tailed tropicbirds, brown noddies, black noddies, red-footed boobies, brown boobies, masked boobies, sooty terns, and great frigate birds. These heavy metals are toxic in relatively small concentrations. These significant impacts should be assessed, monitored, and mitigated.

Birds.

- We are concerned about the increase in larger explosives/missiles as shrapnel poses a threat to the surrounding wildlife and increased disturbance, such as flushing from nests, can increase predation rates even if the adult is away from the nest a short time. Airplane flyovers pose a similar risk. Without a control-treatment design, you cannot determine if F-16 flyovers have an effect.

- The decline in masked and red-footed boobies cannot be determined as natural fluctuations in the population without new data and regularly schedule surveys to assess current trends. Thus the use of this reasoning to support continued military activity is flawed and baseless. Observed impacts should be meaningfully addressed.

- Are the surveys going to continue? Are you using adaptive management to refine monitoring approaches? We encourage the use of independent researchers to conduct surveys. Ideally, you would have independent scientists collecting the data, but at minimum raw data should be shared with CNMI resource managers immediately, have proper vetting, and independent analysis needed.

- When summarizing impacts to marine sea birds the DSEIS states that "[p]eriodic helicopter-based surveys of Farallon de Medinilla have occurred since 1998 (monthly up to 2009, and quarterly thereafter through September 2016) for marine birds nesting on the island. Because of a lack of commercial helicopter transit services, surveys have not

been conducted since 2016" (ES-14). Commercial helicopter transit services are currently available on Saipan, however, this long-standing approach may not be the most appropriate way to conduct bird nesting surveys. Evidence suggests that acute, high decibel sounds (65-85 dBA) impact sea birds (see A. L. Brown, Measuring the effect of aircraft noise on Sea birds, Environment International Vol. 16, pp 587-592, 1990). Conversely, the Ornithological Council Guidelines to the Use of Wild Birds in Research, 2018 Supplement notes that small unmanned aircraft may be used to effectively survey marine birds, marine mammals, and sea turtles and notes this approach has been incorporated into the Department of the Interior's Office of Aviation Services. Robust surveys that reflect best practices should be employed to monitor the extent of current activities and assess the potential for future significant negative impacts from proposed increases in live fire activities on land and at sea.

- A 22-60% increase in the amount of net explosive weight is not negligible. (3.6.2.4.3). It is unclear why this increase is needed and what mitigation is being proposed to reduce the significance of impacts to the environment and the animals that will be further effected.

- Even if debris "does not resemble prey items", there is ample evidence that marine birds may ingest it. Thus all debris poses a risk. Studies also show some debris absorb toxins and heavy metals, and can be harmful to the tissues when ingested (Fukuoka et al., 2016; Teuten et al., 2007). Mitigation measures should include collecting debris at-sea and on land and reducing the amount of debris released into the environment as much as possible.

- Four Micronesian megapod deaths per year is a significant portion of the 10-42 individuals surveyed. Increased munitions and large calibre projectiles devices should require reinitiation of Section 7 consultations and require the Navy to consult DLNR regarding CNMI permits.

- Page 3.6-10: While Farallon de Medinilla activities may not put Great Frigatebird or Masked Booby at risk regionally, these are relatively rare in the CNMI and must be conserved here if they are to persist as part of our natural heritage. The argument " they're common somewhere else" should not be use.

- DSEIS cannot say there are no significant declines in bird populations on Farallon de Medinilla as surveys are lacking and have not been done since 2016.

- Section 5.5: The DSEIS does not consider seasonal restrictions as a terrestrial mitigation measure. Any reduction in activities, even if not a complete ban, during breeding season can have tremendous mitigation value. On page 5-63, it says that seasonal or timing restrictions would be impractical, but offer no explanation or justification as to why.

Fish.

The DSEIS states that most activities will be in deeper waters and therefore will have a low risk to fish. This is likely accurate in deeper, offshore waters (>25 nm). The DSEIS assessment is speculative regarding impacts to fish <25 nm from Farallon de Medinilla and Tinian.

- Increased bombing of Farallon de Medinilla will impact local reef and bottom fish species that inhabit the surrounding shallow and deep water reefs. Direct impact of reef sites by aberrant ordnance will mortally wound fish in proximity to detonation and be a significant stressor outward for hundreds of meters.

- Increased bombing on Farallon de Medinilla will impact five pomacentrid species of fish, and the Napoleon wrasse (*Cheilinus undulatus*), that have been proposed for listing under the Endangered Species Act. Increased use of 2000 pound bombs on Farallon de Medinilla increases the potential for impact on surrounding reef fish.

- Increased bombing activity will impact the genetic continuity of reef fish populations in the Mariana Archipelago. Bombs reaching the nearshore will kill reef fish, remove multiple year classes, and homogenize coral reef structure. These significant impacts should be assessed, monitored, and mitigated.

- A decrease in the functional diversity of the reef surrounding Farallon de Medinilla will decrease grazing by herbivorous fish would likely increase algal production and outcompeting of corals. These significant impacts should be assessed, monitored, and mitigated.

- No information (past or current) on reef fish populations or densities from Farallon de Medinilla, including reef fish habitat, are available to allow for an assessment of probable impacts from aberrant ordnance within the nearshore (<3 nm) waters of Farallon de Medinilla. Additional data should be collected and shared with CNMI to support meaningful assessment of impacts and discussion of appropriate mitigation measures.

Marine invasive species.

- Increased shipping activity and associated fouling and ballast-water organisms has the potential will introduce marine organisms to nearshore habitats and pelagic waters. Once introduced, marine species are nearly impossible to eradicate, and the consequences of introductions are impossible to predict. In fact, in 2012 invasive barnacles were reported surrounding FDM and we lack current surveys to assess the damage. Additional concerns regarding invasive threats from ballast water and increased ship traffic should also be assessed and addressed.

Data and mitigation measures.

We recommend that the following items be provided by DOD to enable the Commonwealth to independently and objectively predict, monitor, and evaluate the impact of military activities proposed in this EIS.

- Provide a summary of the number of species on this list that have been impacted (both Type A and type B "take") by DOD training activities in the region in the last 20 years.

- Provide funds for CNMI or an independent third-party contractor to perform ecosystem inventories and abundance estimates for wildlife on Farallon de Medinilla (including surrounding waters and the coral reef west of the island).

- Involve DFW staff in the planning of surveys and pre- and post-survey scientific review.

- Provide funds for CNMI to employ a Biologist, who is dedicated to reviewing DOD documents such as subsequent EISs, monitoring impact of military activities, and liaising with DOD, CNMI political officials, and third parties about conservation issues of mutual interest.

- Provide data on all surveys performed around Farallon de Medinilla for marine invertebrates, reef fishes, marine mammals and sea turtles. Provide access to Farallon de Medinilla's waters for DFW to perform independent surveys of fish, invertebrates and wildlife.

- Fund a study that would satellite tag species of marine mammals (especially Culver's beaked whale) and sea turtles to measure movement and behavioral response of animals to military activities.

- Funding should be provided for independent research into the movement and at-sea habitat use for green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricatata*), loggerhead sea turtle (*Caretta caretta*), olive ridley sea turtle (*Lepidochelys olivacea*), and leatherback sea turtle (*Dermochelys coriacea*).

- Studies should be conducted to identify density 'hotspot', ideally in real-time, so that Navy activities can avoid these areas. Some advances have been made for in Dynamic Ocean Management that the Navy should consider implementing for mitigation purposes.

- In the absence of robust data regarding marine mammals and endangered sea turtle distribution, the Navy proposes two geographic mitigation areas at the Marpi Reef and Chalan Kanoa Reef. It would be prudent to continue marine mammal and turtle monitoring activities in partnership with the CNMI to develop BIAs or other appropriate management measures.

- Ensure that current and future Commonwealth laws and regulations governing the use of designated CNMI Conservation Areas be respected. Ensure that training plans are revised if boundaries of legally designated Conservation Areas change, or if new Conservation Areas are established, and that training activities are coordinated with CNMI in advance with opportunities for state agencies to monitor areas before and after exercises at minimum.

- Improve communication and collaboration with CNMI-DLNR on research and monitoring activities related to DOD training described in the MITT. Improvements should include collaborative projects, funding for independent research and monitoring from CNMI-DLNR, regular data and information sharing, and consultation prior to training activities that are likely to impact CNMI's natural resources.

- Provide funds for CNMI to sample, monitor, and research the effects of the release, environmental persistence, and bioaccumulation of explosive and toxic residues left by propellant and ordnance use on and in the waters surrounding Farallon de Medinilla.

- Provide alternatives and actions to mitigate sub-lethal effects.

- Mitigation measures involving Navy Divers should include observation/mitigation for all ESA species (see Table 5.3-11: Procedural Mitigation for Explosive Mine Neutralization Activities Involving Navy Divers as example).

- The Navy is basing its decision not to consider Minke whale mitigation area on the fact that there is limited data available regarding their range in the Marianas. "In addition to Norris et al. (2017) noting the requirement for more detailed analyses of the current data, these results were collected from only a single season (January to April 2007), so it remains unknown if the minke whale detections were associated with static features such as water depth and bathymetry slope or were associated with dynamic ocean conditions present during that particular survey. Given the temporally dynamic redistributions of marine mammals in response to both seasonal variation and longer-term climate change affecting ocean conditions (Becker et al., 2017; Forney et al., 2015; Ramp et al., 2015; Risch et al., 2014; Silber et al., 2017), and that species such as minke whales migrate from low-productivity tropical waters in the summer (Jefferson et al., 2015; Perrin & Brownell, 2009), it is possible that minke whales may not have a fixed distribution within the MITT Study Area" (I-33). Marine mammal and sea turtle surveys be conducted that address both spatial and temporal use of the area to better mitigate the Navy's activities

The CNMI Department of Land & Natural Resources Division of Fish & Wildlife appreciates the opportunity to review and to provide comment on the EIS on the Marianas Islands Training Testing Activities, United States Department of the Navy. We hope that you will give considerable and favorable attention to our comments, and we ask for an open and ongoing exchange of information and a vigorous discussion of your future plans and their implications for our Commonwealth.

Sincerely,

Anthony T. Benavente

Secretary, DLNR