



**DEPARTMENT OF THE NAVY**  
**JOINT REGION MARIANAS**  
**PSC 455, BOX 211**  
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Ser J00/0300  
September 25, 2017

The Honorable Senator Telena C. Nelson  
Chairwoman, Committee on Housing, Utilities, Public Safety and  
Homeland Security, 34<sup>th</sup> Guam Legislature  
Hagatna, Guam

Dear Madam Chairwoman,

SUBJECT: WRITTEN TESTIMONY RELATIVE TO LEGISLATIVE RESOLUTION  
228-34

In the time that I've served as Commander, Joint Region Marianas, my experiences and engagements with the island community continue to affirm the true patriotism and genuine hospitality and sincerity of the Guamanian people. Not merely do the people share a rich and profound history with the U.S. military dating back through the centuries, but more importantly in present day, we as a community are united as Americans covered and protected under the same American Flag; by the same ideals of freedom and democracy; the same spirit of life, liberty and the pursuit of happiness that makes our nation strong against our adversaries and our island an integral part of this American experience.

I have learned in my time here that the multi-layered fabric of the modern Guam society is woven from a unique indigenous culture and a colonial history underscored by times of occupation and oppression but also of hope and success. Our nation was founded on similar weavings of history, first as a British colony, with subsequent Independence marred by religious persecution, civil war and gender and racial discrimination, followed by a vigorous progression of upheavals and later rising to a position of leadership on the global stage. I believe dark ebbs in the tide of history should not constrain the unlimited potential of the American people. Our collective advancement should serve as a beacon of hope, especially for those who call Guam home.

Peace is necessary to ensure that Guam moves forward confidently towards an outcome chosen by its people, unimpeded by open conflict. We believe that securing the nation today by projecting strength and ensuring readiness is one of the best ways to maintain this necessary peace. We cannot achieve a

lasting peace without the support of our treaty allies, including our steadfast neighbor Japan. We uphold the same democratic values and ideals and are both earnest in our efforts to maintain stability in the region.

The U.S. Government, in order to fulfill its obligations under an International Agreement with the Government of Japan, remains committed to relocating Marines to Guam. The relocation process started with a 2006 agreement between nations, which was followed by a long, detailed and inclusive process of planning with public participation starting with scoping meetings in 2007, community engagement on proposed actions during the public comment period that started in 2009 and initially concluded with a Record of Decision in 2010, which deferred selection of a firing range.

The proposed action in that initial analysis would have required all construction to be completed in four (4) years and would have required a surge in the workforce of 79,000 new people to the island and as much as an enduring population of 33,000 people. Many in the community thought that plan was unmanageable - too much, too soon.

As a result of meaningful discussions and thoughtful negotiations with the Government of Guam to complete the 2011 Programmatic Agreement, which is the current framework to review and resolve impacts to cultural resources, the Navy committed to Four Pillars including, One Guam, Green Guam, Net-Negative and 24/7 Access to Págat Trail and Cave. These pillars helped define the subsequent environmental planning efforts for the Marine Corps Relocation and continue to guide Department of Defense (DoD) actions.

In 2012, in what was called the "Roadmap Adjustment," the proposed development on Guam for the Marine Corps Relocation was reduced by distributing some of the projected Marine Corps growth to other locations such as Australia and Hawaii, which would rebalance force strength in the Pacific west of the International Date Line. Another round of lengthy planning for the Marine Corps Relocation to Guam was performed, again with public participation and regulatory consultations. This re-look at the plans resulted in a 2015 Record of Decision by the Navy selecting Finegayan as the site for the main base, Northwest Field as the site of the Live Fire Training Range Complex (LFTRC) and the reutilization of developed areas for family housing and urban combat training at Andersen Air Force Base.

Overwhelming feedback from the public and elected officials was crucial in the Navy's second look at the original preferred firing range alternative at Pãgat or Route 15 area. The Pãgat alternative would have eliminated the highly valued Guam Raceway, restricted access to the ancient village of Pãgat, and required the DoD to expand towards private and GovGuam lands. Again, these factored into the Navy's selection of a range complex located on current DoD footprint within the Northwest Field area. The Northwest Field alternative was suggested by those who were seeking to protect Pãgat cultural resources and the Guam Raceway. These same members of the public were also the most vocal in expressing that the DoD stay within its footprint. The Navy listened to the people of Guam and made a decision influenced by the best available evidence and community concerns.

In the analysis contained in the Final Supplemental Environmental Impact Statement (FSEIS), the Navy explained how current ranges do not meet qualifications standards for the Marine Corps. The Marine Corps must be ready for any contingency, whether during peacetime or conflict. They must be always prepared to use the full array of small arms weaponry, which includes pistols, rifles and machine guns among others. This unique aspect of a Marine requires that he or she train and qualify on ranges that are more complex and have different configurations than other branches of the Armed Forces. The current ranges in use by Navy, Army, Air Force and civilian law enforcement are not configured for Marines to properly qualify and be certified in the use of their weapons.

Existing ranges are too small for the operational training required for the Marines that will come to Guam. Expansion of existing ranges would have constrained both civilian and military land use or air traffic to an unacceptable degree as these activities occur or have been accustomed to the smaller size and less frequent activation of existing buffer areas.

These buffer areas associated with any range are designed to maintain the highest standard of public safety from the highly unlikely event that a bullet fragment or ricochet may fall within an area within a safety threshold of less than a 1 in 1 million chance. These fragments or ricochets, if they occur would have much less energy than the bullet fired as they are the result of surface or target impact, but people are excluded from the fragment "fall" area as a precaution.

5860  
Ser J00/0300  
September 25, 2017

We acknowledge that the construction of the range will impact both natural and cultural resources and we appreciate the opportunity to address some those concerns below.

We understand that former Ritidian landowners maintain hope that these areas will one day be returned to them. The DoD does not have a position on such local sentiments as such matters are outside of our jurisdiction. These lands are primarily within the Department of Interior's jurisdiction, the Refuge was established for the recovery of endangered wildlife, and these lands held in trust, can accommodate compatible activities including the establishment of a safety buffer for the LFTRC at Northwest Field.

The DoD respects the land it manages, and as an expression of that respect, we manage the environmental impacts of our actions. Our environmental stewardship is well-resourced and is carried out with the support of the environmental industry, academia and our governmental partners. The vast framework of environmental laws we must abide by is in many ways more stringent on our actions compared to GovGuam or private development. This is apparent in the scope and breadth of mitigations that we have developed through consultation required under these environmental laws.

Constructing a new base is a major and unique endeavor on Guam in modern times. Proportional to the scale of development are the unprecedented mitigation requirements that the Navy must follow, particularly as part of the relevant U.S. Fish and Wildlife Services-issued Biological Opinions, the latest of which was received in July 2017.

At the forefront of our natural resource mitigation effort is the equivalent forest restoration required for each acre of habitat disturbed at a 1:1 mitigation ratio, and the durable protection of habitat at a 4:1 ratio per acre of disturbed vegetation. To put this set of requirements in real-world terms, if another developer had five (5) acres of property with vegetation on it, that developer would be limited to developing only one (1) acre of that property, and would also need to invest in actively restoring one (1) acre of vegetation within that same lot to a functional forest. On top of these offsets, that developer must also leave the remaining three (3) acres of vegetation undeveloped in perpetuity. Taking this example even further, if you are a residential developer of one (1) acre of property, you can only productively use one-fifth of your lot.

Although the firing ranges at Northwest Field will remove 89 acres of limestone forest and 110 acres of disturbed limestone forest, DoD is committed to restoring 219 acres of limestone forest to compensate for the loss of vegetation. In addition, DoD will put mitigations in place toward the eradication of ungulates from over 300 acres of higher-quality limestone forest in Northwest Field within the safety buffer of the range. Overall, DoD plans to restore at least 1,000 acres of habitat at Finegayan to offset impacts along with preventing development in 5,234 acres of DoD footprint in Northern Guam.

Forest enhancement at Finegayan shall consist of construction of ungulate fences, removal of ungulates and invasive plant species, propagation of native species, and translocation of endangered plant species from areas affected by construction into this area. We cannot restore forests to their native state, this is impossible from an biological and economic standpoint, but we can at least improve their condition to support recovery of Guam's rare wildlife such as the native *fanihi* (fruit bat), *sihek* (kingfisher), *ko'ko'* (rail) and *aga* (crow).

DoD's commitment to conservation will have a direct, beneficial impact on the preservation of bat and bird recovery habitat on Guam. Without active forest enhancement, the existing limestone forest on northern Guam, including those at the firing range area, will continue to degrade to a point where these habitats will no longer be suitable for the recovery of Guam's threatened and endangered species. The degradation is due to lack of birds to disperse seeds, and harmful impacts by invasive animals such as deer, pig, carabao and brown tree snake and invasive plants such as the ubiquitous *tangan tangan*. The Marine Corps Relocation unlocks short- and long-term resources that will help contribute to existing DoD mission funds for conservation that would pause or even reverse this devastating trend.

The Navy's analysis of impacts for cultural resources was just as complex, if not more so, compared to natural resources. The Navy and the Programmatic Agreement Parties entered into a two-step process of first consulting with the public on the impacts of five range alternatives to ensure that each were analyzed sufficiently, followed by consultation among Programmatic Agreement Parties only on the selected alternative after the 2015 Record of Decision to determine the process of resolving impacts to historic properties. As a result, the Range Mitigation Plan (RMP) was signed into effect on October

2015 by DoD and the Government of Guam, with concurrence by the Guam Preservation Trust. The RMP ensures that archaeological sites that will be adversely affected by the LFTRC at Northwest Field will be properly mitigated in consultation with the Guam SHPO.

It would be disingenuous to say without qualification that the Northwest Field is the most impactful alternative with regards to impacts to cultural resources. The proposed range alternative with the most impacts to intact latte period resources was the Naval Magazine locations, which had numerous standing latte and similar resources. The proposed location with the least amount of cultural impacts was the Route 15 or Pãgat alternative, but it also had the highest levels of sociocultural impact due to potential restrictions to access for traditional and modern land uses given that Pãgat area is generally open to the public. Northwest Field had the most eligible properties affected in terms of numbers, but the affected resources are primarily composed of pottery/artifact scatters and post-War earth or concrete structures.

The 2011 Programmatic Agreement has also resulted in mutually beneficial outcomes for the military and the local community true to the One Guam pillar. The DoD and GovGuam succeeded in seeking funds for the Guam Cultural Repository, which is a landmark mitigation. There is no other Programmatic Agreement in the Department of the Navy history with a comparable level of offsets for cumulative effects that has the potential to be as broad in its benefits to an affected community.

The facility is planned to secure all of Guam's artifact collections, including those in the military inventory, and is intended to treat our cultural record with the dignity and respect it deserves, in compliance with federal curatorial standards.

The DoD applied rigorous processes for reviewing other unique resources. One such resource is the Northern Guam Lens Aquifer (NGLA), which is Guam's sole source of freshwater for the northern part of our island.

As part of environmental review, the DoD presented to the public very comprehensive mitigation measures to protect the NGLA from increased water use due to the relocation of Marines

and also potential contamination due to LFTRC operations since the range is above the aquifer.

US EPA, during their preliminary review period for the draft SEIS, expressed their concerns regarding potential aquifer contamination from munitions use at the LFTRC. DoD updated the draft SEIS taking into account EPA's concerns, to which EPA commented: "We are pleased that the DSEIS states that, prior to the construction of the range, a site survey would be conducted, including installation of four wells; groundwater sampling would occur to provide actual data on the depth, flow direction(s) and quality of water present; and this information would be provided to the [Range Environmental Vulnerability Assessment] program." In consideration of the importance of the NGLA, DoD in the Final SEIS/Record of Decision committed to a site-specific implementation of proactive, Guam LFTRC-specific (not generic) environmental actions that are more stringent than required under existing policy.

DoD concluded in the Final SEIS that, considering the implementation of these site-specific environmental actions, the LFTRC operations would result in less than significant impacts to the aquifer. The LFTRC would be located down-gradient from and approximately 2 miles (3 km) from the nearest active groundwater well (AF-5). The Marine Corps commissioned a study on the effects of pumping and drought on the NGLA (USGS Scientific Investigations Report 2013-5216: *The Effects of Withdrawals and Drought on Groundwater Availability in the Northern Guam Lens Aquifer, Guam*). Information from this report will be used to adjust pumping rates in order to avoid increased salinization and reversal of groundwater flow patterns. Hence, the overall flow of groundwater in this area would not be altered by proposed future pumping rates, and groundwater from the LFTRC area would not flow towards drinking water production wells.

Following through on its commitments to mitigate potential impacts to the NGLA, DoD awarded Guam Waterworks Authority (GWA) a \$3.7-million grant for the expansion and rehabilitation of the NGLA monitoring system. The *One-Guam Well Installation and Rehabilitation Project* will be a collaboration amongst Joint Region Marianas, GWA, the Water and Environmental Research Institute (WERI) and the United States Geological Service (USGS), and completion of this project will allow for implementation of the NGLA Monitoring Program, which will provide the long-term hydrologic data and information needed for effective, sustainable management of the NGLA. An initial

\$55.6M dollar grant has also been awarded to GWA to fix parts of the sewer collection system and the Northern District Wastewater Treatment Plant.

The Navy will implement specific measures to reduce the likelihood of contamination from construction and operation of the ranges. A few examples of these Best Management Practices (BMPs) to minimize impacts to soil from erosion and potential metals contamination associated with range operations, thereby reducing the potential for soil or sediments to enter nearshore waters include:

- Employing engineering controls and maintain grassy vegetation on berms
- Managing storm water at ranges
- Implementing quarterly inspections of the range Best Management Practices
- Collecting monitoring information (lab sampling and analyses) and range clearance at a minimum of every 5 years

Range clearance is the removal and disposal of military munitions (i.e., unexploded ordnance and munitions debris) and other range-related debris. Range managers will ensure all ordnance expended at the LFTRC is tracked. By knowing the expenditures and having the ability to measure the recoverable materials within a defined area, range clearance can be forecasted and scheduled.

To determine whether there exists a substantial threat of a release of constituents of concern (such as lead) from the LFTRC, groundwater wells shall be constructed at the range, and a baseline groundwater assessment at the LFTRC conducted prior to its operation, and future groundwater quality during range operation shall be compared to this baseline condition.

There will be close coordination between LFTRC management and environmental departments; for example, information in the most recent lab results provided by DoD water quality personnel shall be used to assist range operations managers in the scheduling and prioritization of range clearance.

In keeping with our commitments to transparency, all LFTRC environmental assessments shall be documented and made available to the public on DoD-hosted website.



5860  
Ser J00/0300  
September 25, 2017

Another point of concern is noise from the operational range. The Pâgat range alternative had the greatest noise impacts to civilian activities, including residential areas. The Northwest Field alternative does not have noise impacts to residential properties due to its remote location. The Navy modeled potential noise from the firing range and provides this information in its analysis. The modeled noise contours are considered conservative as it does not factor in reduction of noise levels from vegetation as well as the steep elevation change at the Ritidian cliff line.

Considering the aforementioned, the Navy does not anticipate levels of noise that would damage cultural artifacts within the safety buffer of the range and expects most noise for those outside of the safety buffer during range operation to hear noise no louder than a normal conversation. The actual levels of noise will be verified during operations and a noise study will be completed to adjust modeled noise contours for range management purposes. Cultural sites within the Refuge will be monitored by the Navy for any unlikely impacts from operation of the range.

I also want to take this opportunity to inform your office that a mutually-beneficial aspect of the awarded MILCON P-715 Known Distance Ranges project includes the rehabilitation of existing Route 3A, which is dilapidated and in need of repair. This upgrade enhances access to recreational areas of Ritidian by making vehicular trips to this remote part of our island more safe and efficient.

In closing, we appreciate the sentiments expressed by those who testified at a recent hearing on this resolution. Members of the military assigned to Guam consider themselves part of the Guam family and as such we are committed to collaborative and open communication with the community as we accomplish our national defense mission.

Sincerely,



S. S. CHATFIELD

Rear Admiral, U.S. Navy  
Commander