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SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS) FOR A
**LIVE-FIRE TRAINING RANGE COMPLEX (LFTRC) AND MAIN CANTONMENT
AND FAMILY HOUSING LOCATION ON GUAM**

2014 Draft SEIS: Executive Summary

In this Fact Sheet:

- *What Does the DOD Propose to Do?*
- *Why is the DOD Action Necessary?*
- *What Has Changed from the 2010 Final EIS?*
- *What Was the Methodology Used to Evaluate the Alternatives?*
- *Cantonment and Family Housing Preferred Alternative, Impacts and Mitigations*
- *LFTRC Preferred Alternative, Impacts and Mitigations*
- *Summary of Preferred Alternatives*



This document summarizes the Executive Summary of the 2014 Draft SEIS. For more detailed information on the topics presented here, please refer to the 2014

Draft SEIS, which is available for review at the Robert F. Kennedy Memorial Library, located in the University of Guam, and the Nieves M. Flores Memorial Library in Hagåtña. The 2014 Draft SEIS can also be viewed online and downloaded at the websites listed below.

Download the complete Draft SEIS and related documents at these websites:

JGPO: www.guambuildupeis.us
GovGuam: www.one.guam.gov

What Does the Department of Defense (DOD) Propose to Do?

The DOD proposes to relocate 5,000 Marines and 1,300 dependents from Okinawa, Japan to Guam. The 2014 Draft SEIS was prepared to address this action. In support of the relocated personnel, the DOD proposes to construct and operate a cantonment, including family housing, and an LFTRC on Guam. The 2014 Draft SEIS presents the alternative sites evaluated for the cantonment / family housing and the LFTRC, then evaluates the impacts of the proposed DOD action on the people and the environment of Guam.

Why Is the DOD Action Necessary?

The proposed action is needed to ensure consistency with the new force posture adopted by the DOD in accordance with the 2012 Roadmap Adjustments, which provides for a materially smaller force on Guam than was originally proposed in the 2010 Final Environmental Impact Statement (EIS), while fulfilling U.S. national security obligations to provide mutual defense, deter aggression, and dissuade coercion in the Western Pacific Region.

Why Has an SEIS Been Issued?

The revisions to the military mission in the Western Pacific Region were made after the release of the 2010 Final EIS and 2010 Record of Decision (ROD). Revisions were also made to the training mandate, thereby requiring a revised LFTRC. The 2014 Draft SEIS was prepared to address the revised requirements for the LFTRC and Cantonment, as well as comments from the public received in response to the 2010 Final EIS and ROD.

What Has Changed from the 2010 Final EIS?

Relocated Population Reduced

The 2010 Final EIS estimated the relocation of over 8,600 Marines and 9,000 dependents from Okinawa to the Northern Mariana Islands over the course of five years. The 2014 Draft SEIS now estimates only 5,000 marines and 1,300 dependents to relocate over the next 12 years, a 64% decrease.

Construction Period Increased

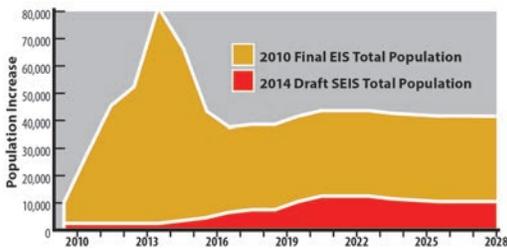
Due to the reduction of relocating personnel, the high expectation of construction activity to accommodate the new residents is no longer necessary and the allotted time span for construction has increased, creating less of a need for off-island workers. Construction is to occur around 2015, and have steady activity from 2017-2023. It is estimated that sufficient facilities will be developed to withhold the first large influx of marines and their families.



Overall Population Influx Reduced

The 2010 Final EIS estimated the peak population increase would be more than 79,000, but peak population increase is now expected to be more than 10,000 due to the decrease in relocating personnel and construction workers.

The 2010 Final EIS suggested there would be more than 33,000 additional Guam residents due to high construction activity and development of the project areas. The direct population influx would be augmented with civilian military workers, off-island construction workers and any population associated with economic growth. The 2014 Draft SEIS estimates approximately 7,400 additional residents, allowing for a smaller and more gradual population increase over time.



Project Areas Reduced

Preferred Alternatives Require No Additional Land Acquisition by the DOD.

Cantonment Area: With the average relocated population 64% less than expected, the size of the cantonment area has been reduced. However, the function is the same as described in the 2010 Final EIS, including housing for military personnel and their dependents, and base operations facilities.

The footprint described for the cantonment area in the 2010 Final EIS was around 2,580 acres. However, the 2014 Draft SEIS describes the need for only 1,452 acres. The 2014 Draft SEIS concludes that instead of requiring the acquisition of 688 acres of non-federal



land, there is now no need for the additional property.

Live-Fire Training Range Complex (LFTRC):

The operational requirements are consistent with the 2010 Final EIS. The 2010 Final EIS described a need for over 5,529 acres of land located at Route 15, where 4,439 acres consists of mostly

ocean. The 2014 Draft SEIS describes only 3,966 acres needed for the Northwest Field and 3,701 acres over the ocean. The 2010 Final EIS proposed the acquisition of more than 1,000 acres of non-federal land located at Route 15, but the 2014 Draft SEIS notes that this amount of range utilization is not needed.



Utilities and Infrastructure: In the 2010 Final EIS, estimated utility demand reflected the anticipated increase in population. The 2014 Draft SEIS revised the estimated utility demand to reflect the reduced increase in population and reduced facilities requirements for power, potable water, wastewater, and solid waste disposal. The proposed action includes on-site utilities to support the cantonment / family housing and LFTRC facilities, off-site utilities to connect proposed facilities to existing infrastructure, installation of connecting information technology / communication (IT/COMM) lines, and an upgrade of existing off-site infrastructure where necessary.

The 2014 Draft SEIS calls for the modification of two existing off-site school facilities:

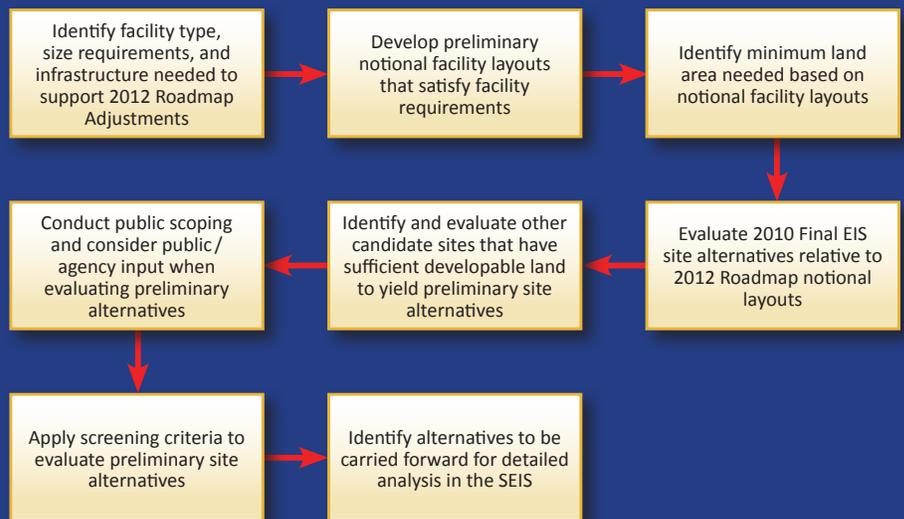
- Expansion to the Department of Defense Education Activity High School located at the Naval Hospital site in Central Guam; and
- Depending on the chosen alternative, Anderson Middle School located at Anderson Air Force Base (AAFB) will either be expanded or repurposed to an elementary and middle school.

Upgrades would include new structures, open space, and parking.

How Were the Alternatives for the LFTRC and Cantonment / Family Housing Identified and Evaluated?

The methodology used to identify preliminary alternatives for the Cantonment and LFTRC facilities is shown below. It included a search for land areas on Guam that are large enough to accommodate the proposed facility, and the application of appropriate screening criteria to represent the essential operational and mission requirements of the relocating forces. The DON developed separate sets of screening criteria for the cantonment, family housing, and LFTRC components of the proposed action.

Sites that met operational and mission requirements were then evaluated against a set of 18 Environmental Resource Areas to determine potential environmental and socioeconomic impacts. In cases where impacts are significant, mitigations have been proposed.



Environmental Resource Areas Evaluated for Impacts

- | | |
|-------------------------------------|--|
| 1. Geological and Soil Resources | 11. Visual Resources |
| 2. Water Resources | 12. Ground Transportation |
| 3. Air Quality | 13. Marine Transportation |
| 4. Noise | 14. Utilities |
| 5. Airspace | 15. Socioeconomic and General Services |
| 6. Land / Submerged Land Use | 16. Hazardous Materials and Waste |
| 7. Recreational Recourses | 17. Public Health and Safety |
| 8. Terrestrial Biological Resources | 18. Environmental Justice and the Protection of Children |
| 9. Marine Biological Resources | |
| 10. Cultural Resources | |

Cantonment / Family Housing Alternatives

The 2010 Final EIS proposed four alternative sites, all located in the same vicinity near Finegayan. With the reduction in required acreage, the 2014 Draft SEIS identified four cantonment alternatives: Finegayan, South Finegayan, AAFB, and Barrigada. The 2014 Draft SEIS concluded that the previously considered Apra Harbor and Anderson South alternatives did not meet the criteria established for the current evaluation.

2014 Draft SEIS Preferred Alternative A:

Finegayan is the most effective site for the cantonment because the land area suits the amount of facilities needed, and can also provide walkable access and protection from ongoing construction. The site is a 1,452-acre single adjoining parcel of already federally owned land.

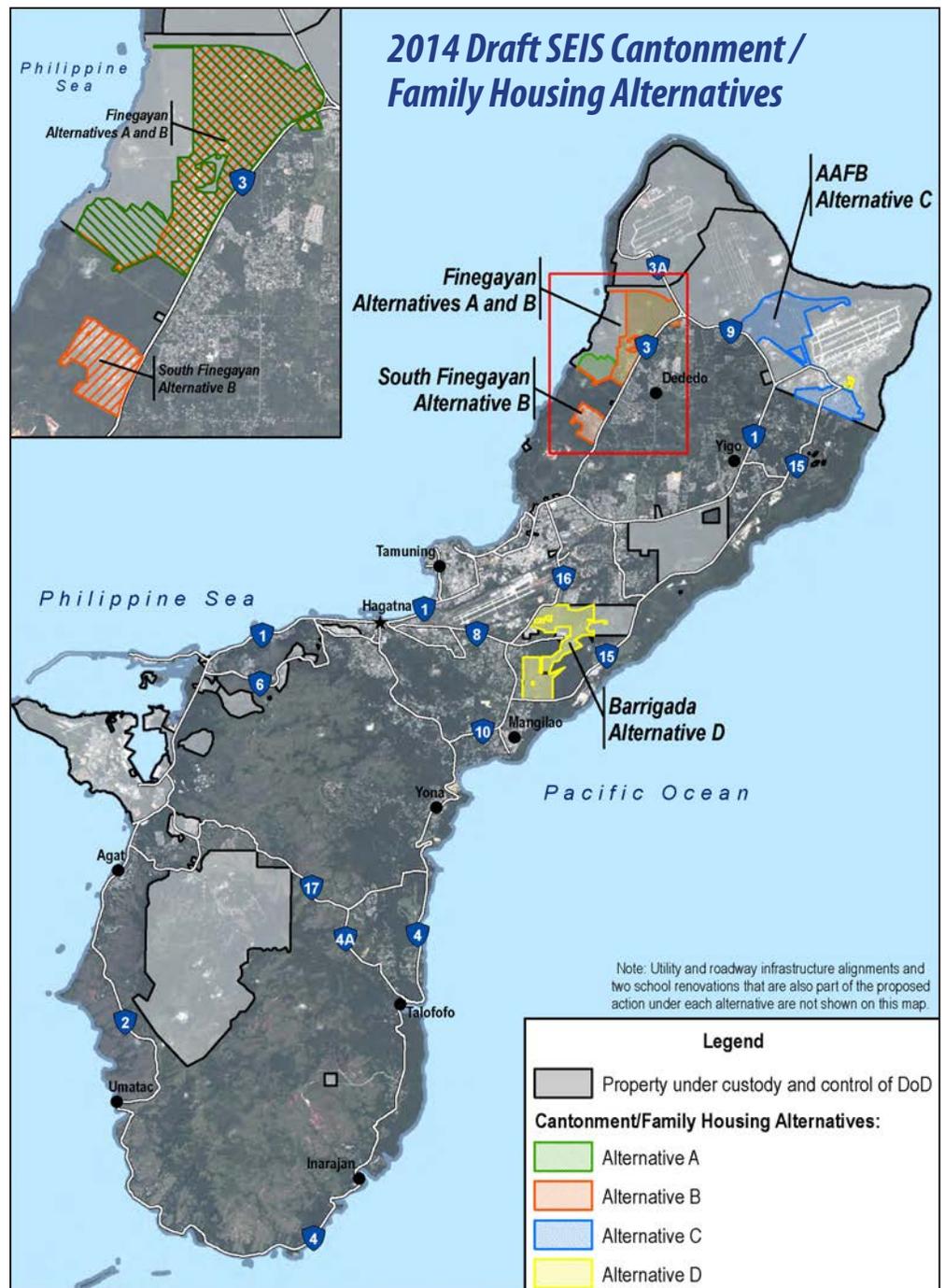
Alternative B: South Finegayan is considered appropriate due to its close proximity to the cantonment area, which allows easy access to the area and supporting facilities for the community.

Alternative C: Andersen Air Force Base allows for appropriate accommodation for both cantonment and family housing within the same installation.

Alternative D: Barrigada has sufficient developable land available that allows for a standalone cantonment area while still being in close proximity to family housing facilities.

Environmental Impacts of Preferred Alternative A at Finegayan

Impacts to the environment from both short-term construction and long-term operations have been evaluated for each alternative in the 2014 Draft SEIS. Alternative A Finegayan is found to have the fewest impacts overall. However, there are expected to be significant to moderate impacts to the following six environmental resource areas: terrestrial and marine biological resources, water resources, cultural resources, utilities, socioeconomics, and environmental justice.



Impacts		Mitigations	
Impacts to Terrestrial and Marine Biological Resources			
Vegetation:	Construction of the housing facilities would result in a significant but mitigable impact to the vegetation due to the development of 1,020 acres of limestone forest.	Forest enhancement, ungulate management (which would consist of exclusion fencing and active control), non-native and invasive vegetation removal, and area habitat planting.	
Conservation Areas	Construction would result in significant but mitigable impacts to conservation areas due to the conversion of Overlay Refuge lands into a developed area. Cantonment operations would result in significant impacts to the Haputo ERA due to increased usage by military and civilian personnel.	Designate Naval Magazine (NAVMAG) Ecological Reserve Area (ERA), expand of Orote Peninsula ERA. Introduce fencing, educational signage, educational materials regarding area biological resources, and monitoring of visitor use.	
Nearshore Water	The Northern District WWTP is non-compliant with secondary treatment standards required by its permit. The projected increase in wastewater flow during construction and operation would result in direct significant impacts to Nearshore Water until upgrades are completed.	 <p>The DOD will implement water conservation measures and improvements to existing DOD water systems. Additionally, the DOD proposes to assist the Guam Waterworks Authority (GWA) with funding for WWTP upgrades, and in part develop an implementation plan to assist with public infrastructure improvements which are needed to sustain the alternative. \$106,400,000 has been appropriated for civilian water and wastewater improvements on Guam. Specific projects utilizing these funds will be coordinated with the OEA Economic Adjustment Committee (EAC).</p>	
Impacts to Water Resources			
Groundwater	Cantonment operations would bring long-term significant impacts to annual groundwater production. An increase to 1.7 million gallons withdrawn per day would cause localized impact to the Northern Guam Lens Aquifer (NGLA).		
Impacts to Utilities			
Wastewater Treatment	The Northern District WWTP is non-compliant with secondary treatment standards required by its permit. The projected increase in wastewater flow during construction and operation would result in direct significant impacts to Nearshore Water until upgrades are completed.		
Potable Water	Cantonment operations would result in short-term local impacts to the sub basin within the NGLA but less significant impacts to the overall NGLA. Increased amounts of withdrawal from the NGLA could result in higher levels of chloride concentrations.		
Impacts to Socioeconomics and General Services			
Population Change	The population change due to the relocation would be significant during the construction and operational periods and is estimated to be 5.6% higher than without the proposed action. At a steady state the population increase would be at a 4.1%.	These changes are not necessarily negative and may have beneficial outcomes, such as increased tax revenues. Therefore no mitigation is proposed.	
Public Services	During construction all public service agencies would require an estimated additional 130 employees which would create a 2.9% increase in baseline staff levels. This would be a short term effect lasting from 2021 to 2023. A total of 14 agencies would be significantly impacted by Guam's population increase.	Potential mitigation measures would continue to support the efforts of the Civilian Military Coordination Council (CMCC) to help develop recommendations which would influence workforce population levels and population growth before public service capabilities are exceeded.	
Sociocultural Issues	Because the magnitude of the impacts could vary substantially, impacts to sociocultural issues are conservatively classified as significant.	Conduct orientation briefings for all incoming personnel, their families, and contractors regarding cultural sensitivity in the area. Develop construction sequencing to influence workforce population levels in an effort to minimize sociocultural impacts.	
Impacts to Cultural Resources			
Historic Properties	Construction would have significant but mitigable effects to 24 historic properties and undetermined effects to 10 un-elevated buildings. Vegetation removal may result in impacts to culturally important natural resources. The operation of the cantonment/ family housing facilities would result in potential indirect effects to one National Register of Historic Places (NRHP) and potential Traditional Cultural Property due to increased recreation use.	Data recovery and enforcement of stipulations to identify and evaluate the historic properties and coordinate with the State Historic Preservation Office (SHPO), concurring parties, and knowledgeable traditional practitioners.	
Impacts to Environmental Justice and Protection of Children			
Socioeconomics	Temporary population growth may stress certain sectors of the Guam economy, and short term impacts to health services would be significant, particularly on low-income populations. However some benefits would occur due to increased employment opportunities.	Support from the DOD in providing project-related employment, population forecasts to help identify shortfalls in Guam's public services, and assistance in identifying federal programs and funding sources that would help GovGuam to address shortfalls.	
Public Health and Safety	The number of public health and safety professionals required to maintain current levels of service would increase by more than 2%. When considering the current level of service, with the existing deficiencies in facilities, equipment, and staffing, there would be potential significant impacts to public health and safety agencies, and the low income populations they serve, during construction and beyond.	Potential mitigations would be the same as previously described under socioeconomic services along with an appropriated \$13,000,000 for a regional public health laboratory by the FY2014 Consolidated Appropriations Act.	



LFTRC Alternatives

The 2010 Final EIS proposed over 5,529 acres of land located at Route 15 for the project area, where 4,439 acres would be mostly ocean. This has been reduced to only 3,966 acres for the Northwest Field and 3,701 acres over the ocean. Acquisition of more than 1,000 acres of non-federal land located was required initially at Route 15, but the 2014 Draft SEIS notes that this acquisition is no longer needed.

Range Utilization

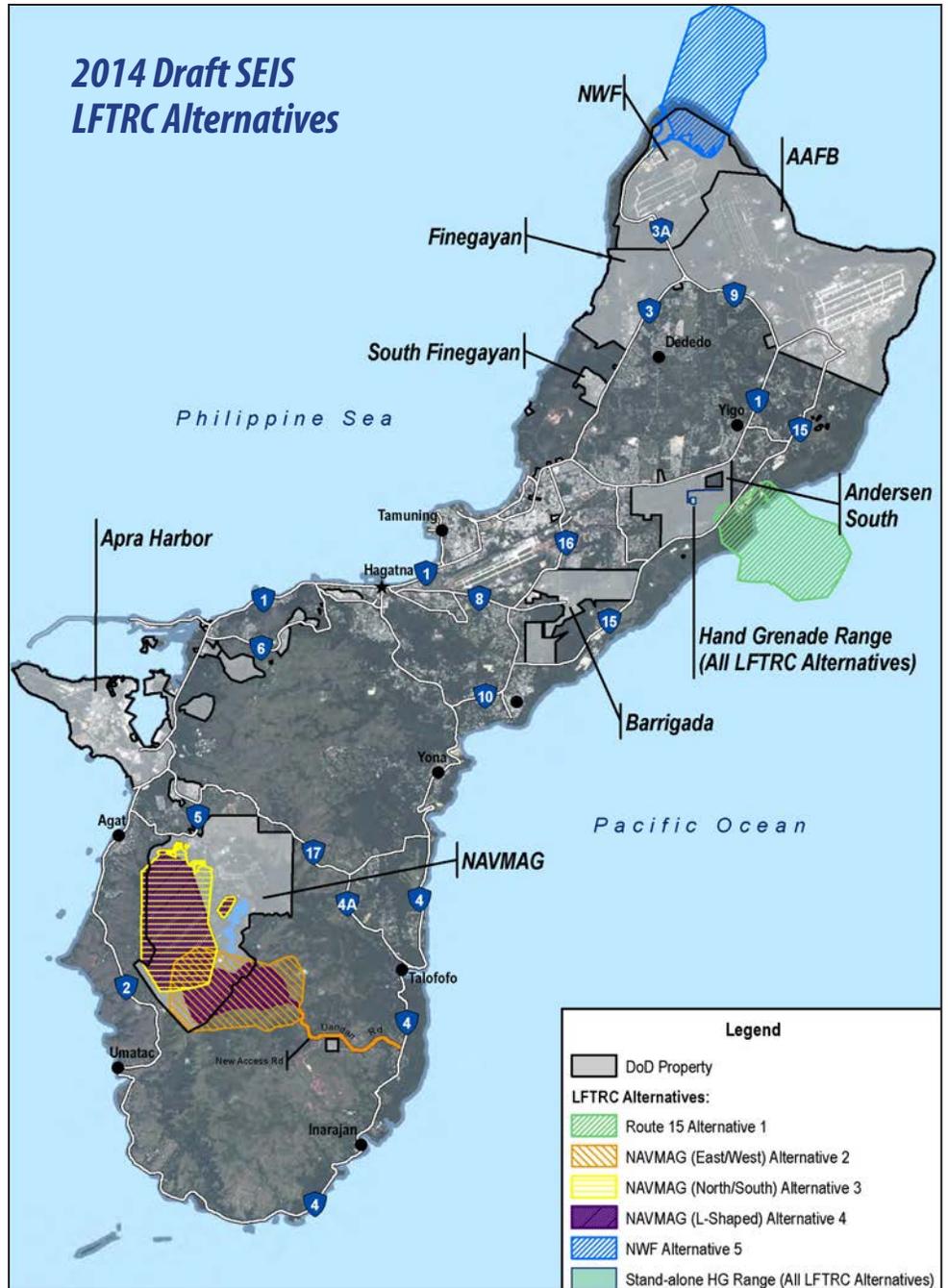
Consistent with the 2010 Final EIS, the proposed action would include construction and operation of training ranges and control facilities to meet the requirements of weapons training for the Marine Force.

Night training is estimated to occur twice per week during qualification period and require consecutive firing days. The estimated annual usage of ammunition is approximately 47% less than analyzed in the 2010 Final EIS. The demand for joint use of the ranges would not change due to the reduced number of Marines, but would be reduced in use of operation (39 weeks per year instead of 45).

Alternatives

The 2010 Final EIS presented seven alternatives for the LFTRC. However, the Route 15B and Finegayan alternatives were eliminated. The Route 15B alternative is not associated with a sufficient amount of airspace and cannot be mitigated without unacceptable modifications to the training area. The Finegayan alternative was eliminated due to the impact of arrivals and departures out of the Guam International Airport. The following alternatives continued towards screening in the 2014 Draft SEIS:

Alternative 1: Route 15 has sufficient land area and airspace while still within close proximity to all cantonment



alternatives, accommodating civilian access to historical sites and trails.

Alternative 2: NAVMAG East/West would have sufficient land, sea, and airspace with the acquisition of 1,894 acres of non-federal land.

Alternative 3: NAVMAG North/South has sufficient land, sea, and airspace available, while the cantonment area Alternative D is within close proximity.

Alternative 4: NAVMAG L-Shaped is

acceptable due to available existing land and airspace.

2014 Draft SEIS Preferred Alternative 5: Northwest Field has all of the sufficient areas needed to support all range facilities. It also provides existing development and does not require new land acquisitions.

Environmental Impacts of Preferred Alternative 5 at Northwest Field

Impacts to the environment from both short-term construction and long-term operations have been evaluated for each alternative in the 2014 Draft SEIS. Alternative 5 Northwest Field would have significant to moderate impacts to four Environmental Resource Areas: Geological and Soil Resources, Land and Submerged Land Use, Terrestrial Biological Resources, and Cultural Resources.

Impacts		Mitigations
Impacts to Geological and Soil Resources		
Topography	Construction for this alternative would result in long-term significant impacts due to major form changes to the surface elevation for the MPMG Range.	Mitigation is not feasible for this impact because there is no other way to level the surfaces needed.
Impacts to Land and Submerged Land Use		
Public Access	LFTRC operations would result in a significant impact to public access to the Ritidian Unit of the National Wildlife Refuge (NWR) in the form of access restrictions to the land and submerged lands within the Surface Danger Zones (SDZ).	The DON would coordinate with the US Fish and Wildlife Service (USFWS) to ensure that the portion of the SDZ overlaying the Ritidian Unit is compatible with the purposes of the NWR. Access restrictions would be limited to the minimum SDZ area and period of use required for the LFTRC.
Impacts to Terrestrial Biological Resources		
Vegetation	201 acres of vegetation would be lost to LFTRC development.	Forest enhancement
Conservation Areas	Significant impacts due to the conversion of 225 acres of Overlay Refuge lands to a developed area.	Designate Naval Magazine (NAVMAG) Ecological Reserve Area (ERA), expand of Orote Peninsula ERA
Impacts to Cultural Resources		
Culturally Significant Properties / Sites	Construction would result in potential direct effects to 20 historic properties and undetermined effects to one un-elevated site. LFTRC operations would result in restricted access to two NRHP archaeological sites and changes in use to three eligible sites, which would ultimately degrade the integrity of the sites.	Develop Range Mitigation Plans to identify and evaluate the historic properties





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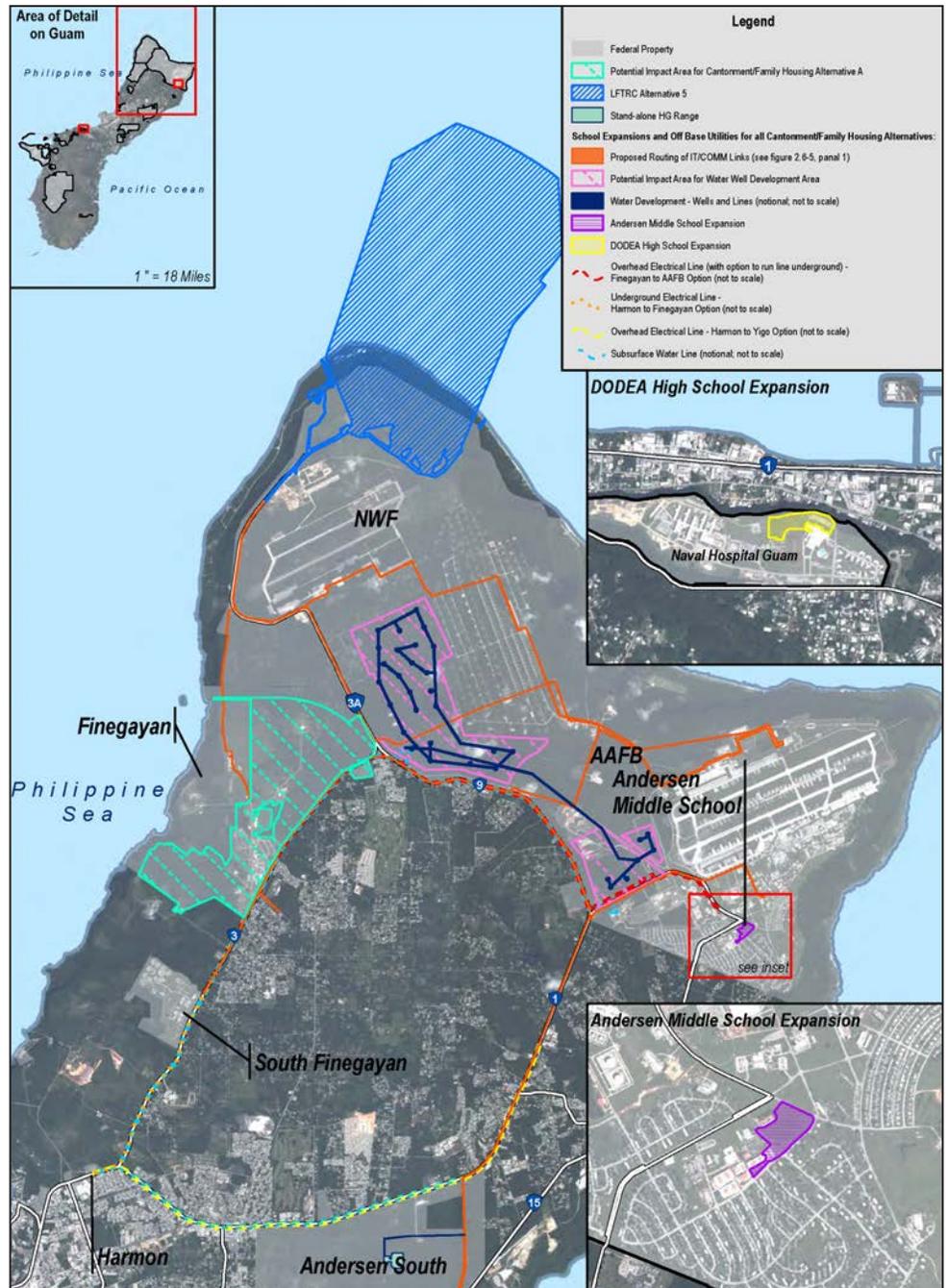
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Summary of Preferred Alternatives

According to the Council on Environmental Quality (CEQ), the Department of the Navy preferred alternative is the one that the agency believes fulfills its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors.

Cantonment Alternative A at Finegayan and LFTRC Alternative 5 at Northwest Field meet mission requirements with the least impact to the 18 Environmental Resource Areas evaluated for the 2014 Draft SEIS.

Mitigation measures to accommodate the increase in population include upgrades to off-site utilities and to two schools, as shown on the map to the right.



2014 Draft SEIS Preferred Alternatives for Cantonment / Family Housing and LFTRC

2014 Draft SEIS Summaries Available Online at www.one.guam.gov

Commenting on the Draft SEIS: *Your Input Matters*

What's New in the 2014 Draft SEIS: *Changes from the 2010 Final EIS*

2014 Draft SEIS: *Executive Summary*

Cantonment / Family Housing: *Summary Fact Sheet*

LFTRC: *Summary Fact Sheet*

Socioeconomic Impacts: *How Will the DOD Actions Affect Guam?*

Mitigation Measures: *How Will the DOD Minimize Impacts on Guam?*

What's Next: *The Next Steps in the EIS Process*



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Definitions for terms and acronyms used in this and other related reports can be found in the *Acronym Guide and Glossary* at www.one.guam.gov.