



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

**MILITARY RELOCATION TO GUAM AND CNMI  
PROGRAMMATIC AGREEMENT (PA) MEMO 1**

<p><b>Project:</b> Supplemental PA Memo MCBCB Forest Enhancement Sites (FES) –Installation of ungulate fence and design studies and construction of irrigation wells</p>	<p><b>Date:</b> July 11, 2023 <b>Comment Period Open Until:</b> August 25, 2023</p>
<p><b>Project Location:</b> Finegayan, Dededo, Marine Corps Base Camp Blaz (MCBCB)</p>	<p><b>Prepared By:</b> MCBCB PWD</p>
<p><b>PROJECT SUMMARY:</b></p>	
<p>The proposed project is for the installation of ungulate fencing in the Taguac FES and design studies and installation of irrigation wells in the Caiguat and Taguac FES (formerly referred to as North Finegayan and Finegayan Forest Enhancement Sites). See Figure 1.</p> <p>The proposed project is identified in Appendix E of the 2011 <i>Programmatic Agreement among the Department of Defense (DoD), the Advisory Council on Historic Preservation, the Guam State Historic Preservation Officer, and the Commonwealth of the Northern Mariana Islands State Historic Preservation Officer Regarding the Military Relocation to the Islands of Guam and Tinian (PA)</i>. Additionally, the requirement for this action is stated in the 2015 <i>Biological Opinion for the Department of the Navy’s Relocation of the U.S. Marine Corps from Okinawa to Guam and Associated Activities on Guam</i>, and subsequent amendments to this document.</p> <p>In accordance with Stipulation IV.E.2.a, this PA Memo presents information to offer the Guam State Historic Preservation Officer (SHPO) and the public an opportunity to provide comments on the identification and evaluation of historic properties and the finding of effect.</p>	
<p><b>PROJECT LOCATION:</b></p>	
<p>One section of the proposed ungulate fence will connect to the existing South Haputo fence, fully enclosing the southern Taguac FES. The other section of the proposed fence will form the entire perimeter of the Taguac extension. The project is located within a section of the former Naval Base Guam Telecommunications Site (now MCBCB) that was previously used for recreational activities including hunting and hiking. The ungulate fence APE measures approximately 3 acres and includes a corridor approximately 3.6 miles long and no more than 6 feet wide. Portions of the APE were previously consulted with the Guam SHPO on July 9, 2021, for forest enhancement actions, which included invasive plant removal and native plant out planting (RC2022-0952) and on October 7, 2020, for the installation of T-posts for the South Haputo fence.</p>	

**1** This PA Memo is required by Stipulation IV.E.2.a. of the PA as a means for interested members of the public to provide comments on the identification and evaluation of historic properties. Stipulation IV.E.1.b. of the PA requires the DoD to take into account comments received within 45 days of the date of the delivery of this PA memo to the SHPO and public notification via the CRI website.

One proposed well will be located within the Caiguat Forest Enhancement Site, likely along the Route 3A edge of the southern portion of the site. A second well will be located within the Taguac FES, potentially along the Haputo Loop road separating the northern and southern sections of this conservation site. Each well footprint is anticipated to include less than 0.5 acres and will, to the greatest extent possible, rely on existing access paths cleared as part of the ungulate fencing installation or during access path clearing described in previous PA Memo for Forest Enhancement Sites submitted to the Guam SHPO on July 9, 2021 (RC2022-0952).

The proposed activities are situated on the limestone plateau above the western cliffs of northern Guam. The plateau, rising to 150 meters above mean sea level, is relatively flat, with localized depressed areas that may collect some soil. The site is in present-day Dededo. Pre-World War II names for areas within or close to the APE include Taguac, Caiguat, Haputo, Fafalog, and Finaguayac.

**PROJECT DESCRIPTION:**

The intention of the FES actions is to restore limestone forest habitat by controlling invasive species and augmenting existing native plant stands with additional native and endemic plant species. In support of the FES project, an initial step is to control access of Philippine deer and feral pigs, by installing ungulate fencing. The fencing is comprised of T-posts with rigid cattle panels and deer mesh with a height of seven feet. A wire mesh apron along the surface outside the fence prevents pigs from burrowing under the fence.

The proposed 3.6 mile long Taguac fence line is situated primarily along maintained roads and paths. The fence can be woven through existing vegetation to minimize disturbance. A maximum of three feet on either side of the fence may be cleared to accommodate the fence. If vegetation is removed along the fence line it will be cut above the ground surface. T-posts will be installed every 6 to 8 feet to support the fence panels, mesh and equipment and personnel gates. T-posts will be installed with a maximum depth of 3 feet 8 inches. The vehicle access gates will include a narrow concrete pad to prevent erosion at access points. Ground disturbance at the concrete pad location will include vegetation removal to a depth of 6 to 12 inches.

An additional required step in the forest enhancement work is to outplant native plant species. Newly outplanted seedlings and plants must be watered to ensure establishment; the proposed wells will support the outplanting effort by providing consistent water supplies for the young plants.

Well activity will include vegetation clearance to access well study locations, placing geotechnical borings (via auger) and mechanized excavation for sample collection, and placement of survey markers for topographic support. The irrigation well requires only a small concrete pad to support the pipe and pump system. No chlorination facilities or housing will be needed as the well does not need to meet safe drinking water standards. Geotechnical boring work for water well test boreholes entails drilling 25.4 centimeter (10-inch) to 30.5 centimeter (12-inch) diameter boreholes. Geotechnical work for finishing water production wells entails widening test boreholes to 45.7 centimeter (18-inch) to 55.9 centimeter (22-inch) diameter production boreholes. The water well test

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borehole and production borehole depths vary, generally range from 140 meters (460 feet) to 180 meters (590 feet). Samples of subsurface materials are collected from borings for laboratory analysis. Boreholes determined to be non-productive will be abandoned in accordance with Guam EPA requirements. Boring locations were determined by project planners to offer the best project feasibility while avoiding historic properties and sensitive natural resources.

**IDENTIFICATION OF HISTORIC PROPERTIES:**

The 2011 PA describes the overall efforts taken to identify historic properties in Stipulation IV, including archival research, oral studies, and interviews. Archaeological survey has been conducted within the Caignat and Taguac Forest Enhancement Sites (FES). Regulations do not require survey of an entire APE or identification of all historic properties, and 36 CFR Part 800.4(b)(1) states that a reasonable and good faith effort to carry out appropriate identification efforts shall be made. The 2011 PA directs the PA Memo process to allow for members of the public to provide input on the identification and evaluation of historic properties. The input sought by the process is for the identification of historic properties, and assistance in identifying issues relating to effects of the project on historic properties. Enclosure 1 is a list of references for identification efforts in and near the APE. Figure 2 illustrates the scope of these efforts. Majority of the historic properties within the Caignat and Taguac FES are Latte Period artifact scatters (pottery and/or lithics) and subsurface features (middens). Historic period sites within the FES range from WWII to the Cold War Era, which are mainly composed of historic bottle scatters.

Consistent with the consultation on MCBCB Forest Enhancement Sites (RC2021-0952), proposed forest enhancement activities will be archaeologically monitored and will adhere to the FES summary archaeological monitoring plan in support of Long-Term Forest Enhancement Related Activities consulted with the Guam SHPO. All known sites eligible for the National Register of Historic Places (NRHP) will be flagged and avoided and a 10-meter buffer will be established around each historic property. Cultural resource awareness training will be provided to all personnel performing forest enhancement activities. Furthermore, a 30-meter buffer on either side of the ungulate fence line will provide allowance to move the fence in the event a potentially significant archaeological discovery or natural resource needs to be avoided.

In accordance with Stipulation VI.F. of the 2011 PA, the Department of Defense has retained a full-time archaeologist to provide site checks, oversee coordination and execution of the archaeological mitigation measures in the 2011 PA and to provide quality control. This individual is on-staff at MCBCB, and is designated to respond to and report any inadvertent discoveries to the Signatories, Invited Signatories, and Concurring Parties per Stipulation XII of the 2011 PA.

**DETERMINATION OF EFFECT:**

The results of the DoD’s identification efforts indicate that while there are historic properties present within the Caignat and Taguac Forest Enhancement Sites, the proposed forest enhancement activities will have no effect upon them. Thus, consistent with 36 CFR Part 800.4(d)(1), the project warrants a “no historic properties affected” finding.

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**3** This PA Memo is required by Stipulation IV.E.2.a. of the PA as a means for interested members of the public to provide comments on the identification and evaluation of historic properties. Stipulation IV.E.1.b. of the PA requires the DoD to take into account comments received within 45 days of the date of the delivery of this PA memo to the SHPO and public notification via the CRI website.

Precautionary monitoring procedures and other archaeological investigation shall follow the applicable forest enhancement work plan provided by the Government in accordance with previous SHPO consultations regarding Forest Enhancement activities. If historic properties or archaeological materials are identified during the course of the project, the DON will follow the procedures outlined in the work plan and in Stipulation XI of the 2011 PA. If comments received during the PA Memo process result in new information regarding historic properties, consultation will continue pursuant to the 2011 PA. Otherwise, PA Memo #2 will not be required as there will be no mitigation proposed.

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**4** This PA Memo is required by Stipulation IV.E.2.a. of the PA as a means for interested members of the public to provide comments on the identification and evaluation of historic properties. Stipulation IV.E.1.b. of the PA requires the DoD to take into account comments received within 45 days of the date of the delivery of this PA memo to the SHPO and public notification via the CRI website.

**Enclosure 1**

Athens, J.S.

2009 *Archaeological Surveys and Cultural Resources Studies on Guam and the Commonwealth of the Northern Mariana Islands in Support of the Joint Guam Build-Up Environmental Impact Statement. Volume I: Guam.* Prepared for Department of the Navy, Naval Facilities Engineering Command, Pacific, Pearl Harbor, Hawai‘i.

Church, M.K., J.H. Hokanson, J.D. Gallison, and M.H. Jennings

2009 *Cultural Resources Survey of 297 Acres at Andersen Air Force Base, Guam, Contract number F41924-03-D-8599, Task Order 0031.* Prepared for David T. Lotz, Environmental Flight, Andersen Air Force Base, Guam. e2M engineering environmental Management, Inc., Englewood, Colorado.

Dixon, B., S. Walker and R. Schaefer

2011 *Cultural Resource Investigations Conducted in the Territory of Guam Supporting the Joint Guam Build-Up Environmental Impact Statement: Final Archaeological Surveys on Guam 2008-2009 at Air Force Barrigada, Proposed Live Fire Training Range, Andersen South, and Naval Base Guam.* Prepared for Naval Facilities Engineering Command, Pacific Division, Pearl Harbor, Hawaii. TEC Inc., Honolulu, Hawaii.

Dixon, B., and R. Schaefer

2014a *Reconstructing cultural landscapes for the latte period settlement of Ritidian: A hypothetical model in northern Guam.* In *Guam’s Hidden Gem: Archaeological and Historical Studies at Ritidian*, edited by Mike T. Carson, pp. 54-73. British Archaeological Reports, International Series 2663. Archaeopress, Oxford.

2014b *In-Fill Identification and Evaluation of Cultural Resources for Project J-200, Andersen Air Force Base, Guam.* Prepared for Naval Facilities Engineering Command, Pacific. Cardno TEC, Inc., Honolulu.

Grant et al

2007 *Results of Cultural Resource Inventories for Establishment and Operation of An Intelligence, Surveillance, Reconnaissance, and Strike Capability and the Deployment of Red Horse Squadron, Andersen Air Force Base, Guam.*

Haun, A.E.

1988 *Archaeological Reconnaissance Survey and Field Inspections of Relocatable Over-the-Horizon Radar Sites on Guam, Mariana Islands, Micronesia.* Prepared for Wilson Okimoto and Associates, Inc., Honolulu, Hawaii. Paul H. Rosendahl, PhD, Inc., Hilo, Hawaii.

Highness, D. and Haun A.E.

1990 *Archaeological Inventory Survey DTS Facility: Barrigada and Finegayan Sites*. Paul H. Rosendahl, Ph.D., Inc., Hilo, Hawai'i.

Kurashina, H., T. McGrath, and H. Manner

1987 *Archaeological Survey of Areas 1, 2, 1-A and 2-A at Northwest Field, Andersen Air Force Base and Naval Communication Area Master Station Western Pacific, Finegayan, Guam, Marianas Islands*. Prepared for Naval Facilities Engineering Command, Pacific, Pearl Harbor, Hawaii. Micronesian Area Research Center, University of Guam, Mangilao, Guam.

Maxwell, J., A.J. Lauer, and T.M. Reith.

2018 *Archaeological Survey of Two Parcels along the West Coast of Guam on Finegayan at Joint Region Marianas*. Prepared for Department of the Navy, Naval Facilities Engineering Command, Pacific, Pearl Harbor, Hawaii. International Archaeology, LLC.

Olmo, R.K., T. Mangieri, D.J. Welch, and T.S. Dye

2000 *Phase II Archaeological Survey and Detailed Recording at Commander, U.S. Naval Forces Marianas (COMNAVMARIANAS) Communications Annex (formerly Naval Computer and Telecommunications Area Master Station, Western Pacific [NCTAMS WESTPAC]), Territory of Guam, Mariana Islands*. Prepared for Department of the Navy, Pacific Division, Naval Facilities Engineering Command. International Archaeological Research Institute, Inc., Honolulu.

Osborne, D.

1947 *Archaeology on Guam: A Progress Report*. *American Anthropologist* 49:518-524.

Reinman, F.

1977 *An Archaeological Survey and Preliminary Test Excavations on the Island of Guam, Mariana Islands, 1965–1966*. Miscellaneous Publications No. 1. Micronesian Area Research Center, University of Guam, Mangilao.

Welch, D.

2010 *Archaeological Surveys and Cultural Resource Studies Conducted in 2007 on the Island of Guam in Support of the Joint Guam Build-up Environmental Impact Statement*. In two volumes. Prepared for Naval Facilities Engineering Command, Pacific. International Archaeological Research Institute, Inc., Honolulu.

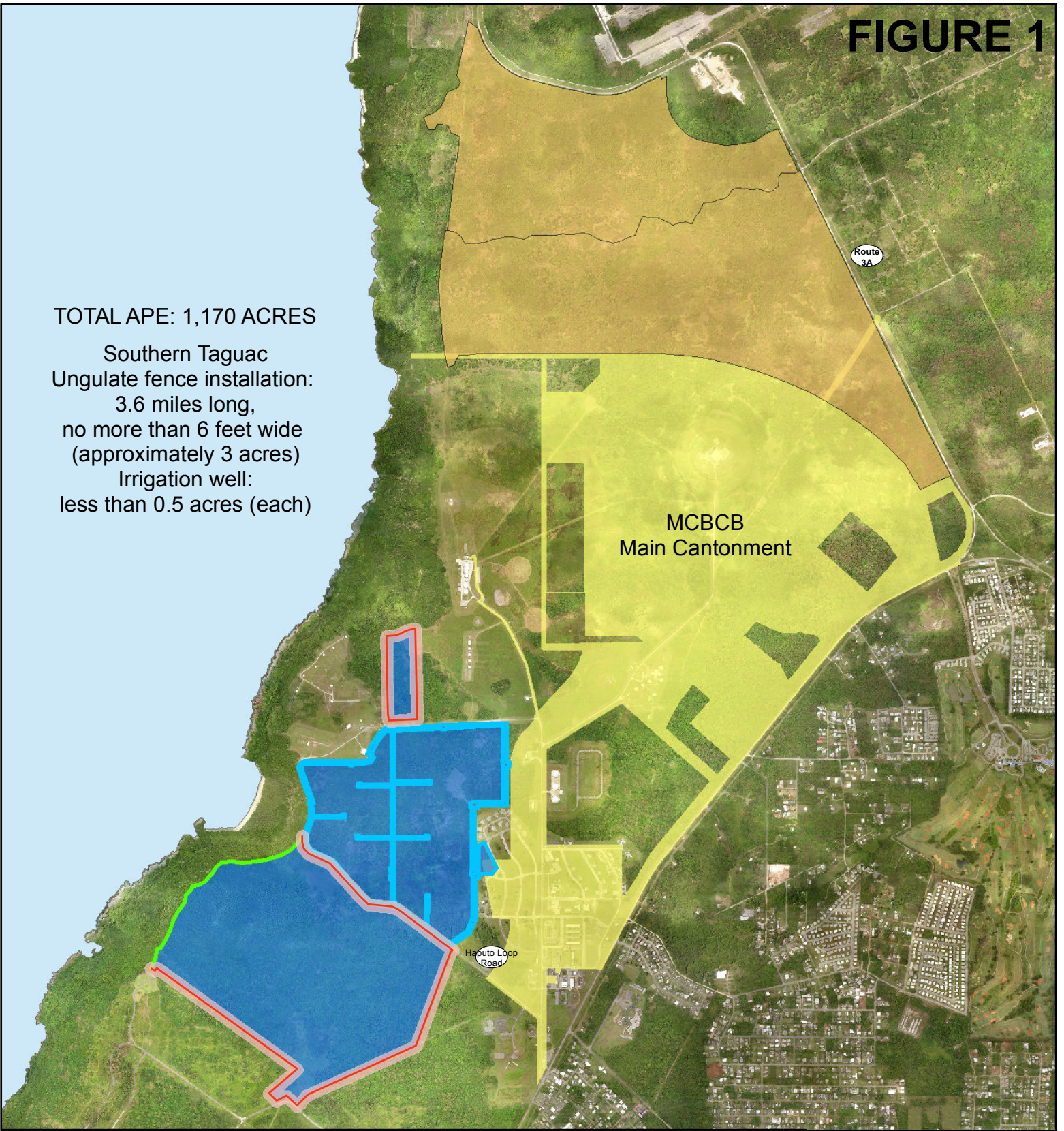
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**6** This PA Memo is required by Stipulation IV.E.2.a. of the PA as a means for interested members of the public to provide comments on the identification and evaluation of historic properties. Stipulation IV.E.1.b. of the PA requires the DoD to take into account comments received within 45 days of the date of the delivery of this PA memo to the SHPO and public notification via the CRI website.

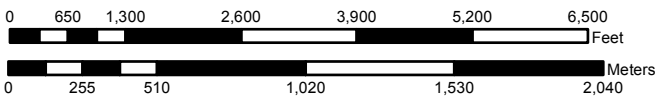
# FIGURE 1

TOTAL APE: 1,170 ACRES

Southern Taguac  
 Ungulate fence installation:  
 3.6 miles long,  
 no more than 6 feet wide  
 (approximately 3 acres)  
 Irrigation well:  
 less than 0.5 acres (each)



## Irrigation Wells and Ungulate Fence Installation in Caiguat and Taguac Forest Enhancement Sites



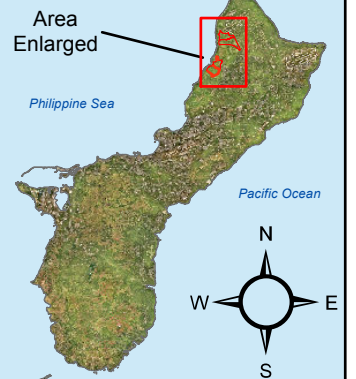
PREPARED BY:  
 Naval Facilities Systems Engineering Command  
 Marianas at Marine Corps Base Camp Blaz  
 (MCBCB)  
 DATE: 12 June 2023



Coordinate System:  
 Geographic  
 Projection:  
 Transverse Mercator  
 Datum:  
 WGS 1984

### Legend

- Ungulate fence installation
- 30 meter buffer
- P-187 Brown Tree Snake fence (RC2022-0013)
- South Haputo fence
- Caiguat Forest Enhancement Site
- Taguac Forest Enhancement Site
- MCBCB Main Cantonment

















# FIGURE 2

**TOTAL APE: 1,170 ACRES**

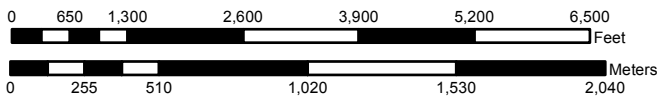
Southern Taguac  
 Ungulate fence installation:  
 3.6 miles long,  
 no more than 6 feet wide  
 (approximately 3 acres)  
 Irrigation well:  
 less than 0.5 acres (each)

MCBCB  
 Main Cantonment

### Cultural Resource Survey

-  Athens 2009
-  Church et al. 2009
-  Dixon et al. 2011
-  Dixon et al. 2014a
-  Dixon et al. 2014b
-  Grant et al. 2007
-  Haun 1988
-  Highness and Haun 1990
-  Kurashina et al. 1987
-  Olmo et al. 2000
-  Osborne 1947
-  Reinman 1977
-  Welch 2010
-  Maxwell, Lauer, Reith 2018

## Irrigation Wells and Ungulate Fence Installation in Caiguat and Taguac Forest Enhancement Sites










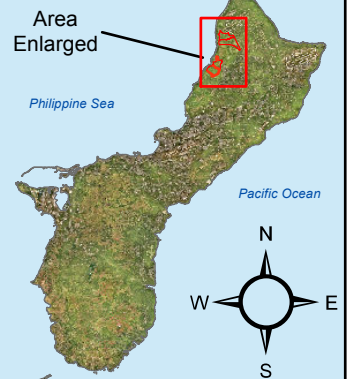
PREPARED BY:  
 Naval Facilities Systems Engineering Command  
 Marianas at Marine Corps Base Camp Blaz  
 (MCBCB)  
 DATE: 12 June 2023



Coordinate System:  
 Geographic  
 Projection:  
 Transverse Mercator  
 Datum:  
 WGS 1984

### Legend

-  Ungulate fence installation
-  Ungulate fence buffer (30 meters)
-  P-187 Brown Tree Snake fence (RC2022-0013)
-  South Haputo fence
-  Caiguat Forest Enhancement Site
-  Taguac Forest Enhancement Site
-  MCBCB Main Cantonment





# Military Relocation PA Memo Comment Form

2023

If submitting via **e-mail**, scan and send to: [criwebcomment@navy.mil](mailto:criwebcomment@navy.mil)

If submitting via **postal mail**, send to:

Attn: CRI Web Comments  
Code EV23, NAVFAC Pacific  
258 Makalapa Drive, Suite 100  
JBPHH, Hawaii 96860-3134

Submitted comments will be posted on the Navy's Cultural Resources Information (CRI) web site. Information presented on the CRI web site is considered public. The sections highlighted in **red** are required to be completed in order for a comment to be posted.

## Privacy Act Statement

Personal information will only be used to contact you regarding the comments you submit. This information will only be shared with another government agency if your inquiry relates to that agency, or as otherwise required by law. We will not create individual profiles or give your information to any private organization. While you must provide a valid e-mail address or postal address, please **DO NOT** include personally identifying information such as a social security number.

By submitting this comment form, you agree not to include content that is offensive in nature, such as profanity, personal attacks on individuals, and racist or abusive language.

**PROJECT: Supplemental PA Memo MCBCB Forest Enhancement Sites (FES) –Installation of ungulate fence and design studies and construction of irrigation wells, Finegayan, Dededo, Marine Corps Base Camp Blaz**

**SUBJECT: PA Memo#1**

**Date:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**CRI User Name** (if you don't want your real name to be posted with your comment on the CRI web site):

\_\_\_\_\_

**E-Mail Address:** \_\_\_\_\_

**and/or**

**Postal Mail Address:** \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_

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