2019 SECRETARY OF DEFENSE ENVIRONMENTAL AWARD
ENVIRONMENTAL QUALITY – OVERSEAS INSTALLATION
MARINE CORPS BASE CAMP SMEDLEY D. BUTLER

INTRODUCTION

Marine Corps Base Camp Smedley D. Butler (MCB Butler) is a dynamic collection of installations and training areas widely distributed throughout Okinawa, Japan. This creates various unique challenges requiring creativity and flexibility to excel as environmental leaders in the Pacific.

The island of Okinawa, Japan is a key training location for the Marine Corps. MCB Butler's innovative soil erosion efforts have been instrumental in protecting this vital coral habitat. *Photo by Maurice Dudley*

As the base support for III Marine Expeditionary Force (III MEF), MCB Butler provides training areas and support for current and future combat readiness. III MEF is a Marine-Air-Ground Task Force deployable to conduct operations across the spectrum from humanitarian assistance to potential contentious operations. MCB Butler is also the command support element for Marine Corps Installations Pacific, which encompasses Marine Corps Installations in Hawaii, Japan, and Korea. Supporting more than 32,000 active duty military and civilians and encompassing over 40,000 acres, MCB Butler provides unique training opportunities in various environmental habitats: from the only U.S. Marine Corps Jungle Warfare Training Center (JWTC) to the only U.S.-controlled live fire ranges in Japan. More than 3,000 species of flora and fauna, of which approximately 260 are rare, threatened, or endangered, and hundreds of archeological sites reside throughout MCB Butler. The complex types of training and facilities supported by MCB Butler necessitate a robust environmental program skilled in supporting military readiness while balancing environmental sustainability.

As environmental leaders, it is our mission to support both our units and tenant organizations, and be conscientious stewards of the Japanese lands entrusted to us. As a team, we integrate a customer-oriented attitude into our daily plans, programs, and operations, and motivate our personnel to protect the environment. We support the Marine Corps mission by sustaining an aggressive and innovative environmental program that allows for a collaborative environmental stewardship between the U.S. and Japanese governments.

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ENVIRONMENTAL QUALITY ACCOMPLISHMENTS

ENVIRONMENTAL MANAGEMENT

MCB Butler, using in-house staff and resources, maintains a fully implemented Environmental Management System (EMS). We also exceed Department of Defense requirements through the successful integration of a regional EMS, incorporating three different countries: Japan, Korea, and the U.S. Our management review board is chaired by our Commanding General (CG) and attended by senior leaders from all Marine Corps installations within Japan, Korea, and Hawaii. This high level of command support increases the visibility of EMS Objectives and Targets throughout the region, and promotes continual improvement through shared challenges, successes, and lessons learned.

EMS Objectives and Targets are developed with the support of a cross-functional team, which includes Major Subordinate Command and tenant representatives, and are approved by the CG. In FY17 and FY18, MCB Butler exceeded EMS Targets to include the diversion of a combined total of 63% of non-hazardous solid waste; the accurate cradle-to-grave tracking of more than 3,300 hazardous waste containers; and the improved efficiency of our Qualified Recycling Program resulting in the diversion of more than 3,000 tons of recyclable materials.

HAZARDOUS WASTE MANAGEMENT

During FY17, our Hazardous Waste Management Program implemented the installation's hazardous waste risk reduction audits as part of the annual Environmental Management Systems Objectives & Targets. Our hazardous waste personnel were entrusted by the CG to review, monitor, and verify all hazardous waste released for Treatment Storage and/or Disposal Facility in addition to contractor provided service from Defense Logistics Agency-Hazardous Material Management Center. The completed audit resulted in a total review of 2,457 hazardous waste containers and highlighted numerous discrepancies, which ranged from container mismarking, to mixed waste streams and packaging issues. The FY17 audits revealed 496 errors and led to the rejection of 123 containers for final disposition and the subsequent transition from contractor based Hazardous Waste operations to an internally run operation. The successful execution of the risk reduction audits and transition to an internally run operation allowed for 3,353 waste containers to be properly identified and marked for final disposition – accounting for $1,657,000 in disposal cost. Additionally, 164 Hazardous Waste Profile Sheets were reviewed, corrected, and approved; pinpointing issues with incorrect waste coding and identification. This auditing system reduced liability to the Marine Corps by ensuring accuracy and complete cradle-to-grave tracking.

Our coolant recycling system reduces the need for expensive contracts by utilizing in-house personnel and resources.

Our Hazardous Waste Management Program made great strides in reducing the overall amount of hazardous waste requiring disposal. MCB Butler has critical recycling and reuse programs that reduce both waste and its associated disposal costs, and generate revenue for the QRP. During FY18 alone, these programs resulted in disposal cost avoidances totaling more than $950,000 and generated more than $123,000 for MCB Butler's QRP. In FY18, our in-house coolant-recycling program re-formulated 9,773 gallons of used coolant for customer reuse resulting in a cost savings of over $120,000 - $52,000 in savings to Marine Corps units and $68,000 in avoided disposal costs. This program significantly reduces off-site transfers, minimizes risks to the environment, and protects local communities.

The MCB Butler Hawker Battery Reuse Program rejuvenated and returned, free of charge, to units for reuse, 201 batteries during FY17. This generated a total cost savings of approximately $67,000 through the significant reduction of new battery purchases.

During FY17, MCB Butler awarded new shop-rag and parts washer service contracts. These two new contracts reduce both the exposure to hazardous chemicals and the amount of hazardous wastes generated by both activities. The new shop-rag contract services 108 shops across MCB Butler and recycles over 550,000 rags per month. The new parts washer contract services 88 shops, and replaces their solvent-base parts washers with new bio-remediating parts washers.

MCB Butler's Hawker Battery Reuse Program has significantly reduced the amount of battery waste.

NATURAL AND CULTURAL RESOURCES MANAGEMENT

Proper management and protection of Natural and cultural Resources aboard MCB Butler requires a comprehensive inventory of both the plants and animals that inhabit the installation, as well as the culturally significant sites within MCB Butler's many fence lines.

Kuroiwa's Ground Gecko and Great Nawab Butterfly are Natural Monument Species that have been located in the Kushi Watershed area through a flora and fauna survey.

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Terrestrial Natural Resource Conservation

During FY17, in support of MV-22 operations and training area conservation and preservation efforts, significant species surveys were conducted in 13 Landing Zones (LZs) throughout the Central Training Area and Jungle Warfare Training Center. These surveys confirmed the presence of two protected species, the Okinawa Rail and Japanese Wood Pigeon, at 6 and 10 individual LZs respectively. In FY18, the Natural Resources Management Program conducted a flora and fauna survey on Camp Courtney that yielded a total of 279 species of vascular plants and 193 species of terrestrial animals – 3 of which were protected species of hermit crabs.

Additionally, during FY18 the Yanbaru Whiskered Bat – a critically endangered species – was discovered in Okinawa for the first time in 22 years. This bat species was found inhabiting a forested area in the northern part of island in an area recently returned to the Government of Japan from USMC control. This discovery, made by a Kyoto University research team, was directly attributed to the continued efforts of MCB Butler's Natural Resource Conservation efforts.

The location of this isolated pool, known as "Toshingumui" in historical records, was verified during the Sannumata Watershed survey.

Top: Local children and U.S. military planted mangrove species as part of Earth Week.
Bottom: Marines and Sailors with the Henoko Senior Citizen's Association the annual clean-up of Matsuda-No-Hama.

Cultural Resource Preservation

During FY17 and FY18, the Cultural Resources Management (CRM) Program conducted extensive surveys to inventory the cultural resources under its stewardship and maximize efficiency in the management of those resources.

During October 2016, the program concluded its archaeological excavation in support of the Landing Helicopter Deck (LHD) renovation project at Ie Shima Training Facility, exposing evidence of early human agriculture that may be up to one thousand years old. While modern activities disturbed much of the surrounding area, archaeologists uncovered a shallow sinkhole that contained well-preserved evidence of tools used for cooking, providing a rare window into past activities of people living along the west coast of the island of Ie Shima and adding important information to the body of academic knowledge about Okinawan history as a whole.

In February 2017, the survey at JWTC was expanded to include an additional 2,300 acres in the Sannumata Watershed. This survey resulted in the discovery of 44 sites of cultural significance, including a large camphor processing area and a charcoal kiln complex, as well as dwellings and fields associated with historic agriculture. The survey also verified the locations of traditional named places such as Toshingumui, an isolated pool identified in historic records. This survey, combined with a previous survey of the Haramata Watershed, have added significantly to the body of knowledge regarding past activities in northern Okinawa, and laid the groundwork for future surveys at JWTC.

ENVIRONMENTAL STEWARDSHIP

Earth Week

In FY17 and FY18, MCB Butler hosted numerous activities throughout Earth Week at the various camps, which were open to active duty, families, and members of the local community. Activities ranged from beach and community clean-ups to energy and water conservation.

Hosted by Camp Hansen, approximately 100 active duty Marines and Sailors, as well as local children from Kagei Pre-school in Kin Town, participated in the annual Okukubi River clean-up and the Nature Mirai Kan eco-tourism park mangrove planting.

Marines and Sailors at Camp Schwab assisted the Henoko Senior Citizen's Association with the clean-up of Matsuda-No-Hama beach. This annual cleanup focused on removing all trash and debris deposited on the beach over the past year. Following the beach clean-up, the Marines and Sailors assisted in clearing the senior citizen's recreation field of weeds and brush. The clean-up, held in preparation for the Henoko Dragon Boat race, showcases that MCB Butler not only cares about the environment on Okinawa, but also the local traditions.

At the southern end of the island, military members and the local community gathered to clean-up Ginowan's Tropical Beach and Park. This event led to the removal of 200 pounds of debris and brought together approximately 150 military and local community members, giving them a shared purpose and allowing them to create new relationships. Overall, the various Earth Week activities foster positive interactions between the military community and Okinawan citizens through collaborative environmental stewardship efforts.

Members of OPG gathered at Chibuga Spring on Camp Foster to learn about how MCB Butler is preserving critical Okinawan cultural assets.

HOST NATION COORDINATION

The annual Environmental Forum brings together resource managers, scientists, and engineers from the Okinawa Prefectural Government, Department of Environmental

Affairs (OPG) and the MCB Camp Butler Environmental Affairs Branch. The forum consists of two parts – an informational exchange on environmental projects and site visits to areas throughout Okinawa, including on the Installation.

In both FY17 and FY18, OPG was provided a tour of our recycle facility and visited noteworthy cultural sites located on Camp Foster. One of the cultural sites visited, Chibuga Spring, is recognized as a local folklore cultural property by Chatan Town. Dating back to the 16th century, Chibuga Spring is a significant cultural center for Tamayose Old Village. For centuries, Chibuga Spring supplied surrounding villages with fresh drinking water and irrigation for farming, and it is an important part of sacred ceremonies. In 2004, MCB Butler, supported by funds from the Department of Defense Legacy Program, joined the Tamayose Residential Community Group and the Chatan Town Board of Education in a project to restore the spring to its original state. Today, the spring appears much as it did 200 years ago, and remains a place of deep cultural significance for local citizens. The Environmental Forum continues to be a great success and serves as an example of the Marine Corps' commitment to continued environmental stewardship and support of the U.S.-Japan alliance.

Collaborative Partnerships

MCB Butler has forged numerous collaborative partnerships with various local and government agencies. Because the boundaries of MCB Butler cross into several local municipalities, our Cultural Resources Management Team coordinates with twelve individual Boards of Education, which oversee municipal cultural resources and assets.

Throughout FY17 and FY18, the Cultural Resources Management Team conducted five separate Board of Education consultations on four different projects where significant cultural resources exist. During one coordination effort, MCB Butler's Cultural Resources Management Team worked closely with the Ie Shima Board of Education during a cultural asset survey at the Ie Shima Training Facility. We also coordinated with local archaeologists from the Ginowan City Board of Education and members of the Aragusuku Hometown Association for access to the West Futenma Housing area of Camp Foster as part of a land return to the Government of Japan. Close coordination with the local Boards of Education ensures Host Nation concerns are addressed early in the project planning process and adds to the greater body of archaeological surveys and knowledge for Okinawa.

Our Natural Resources Program Manager also maintains valuable relationships with the local government and non-government organizations, such as the Naha Environment Conservation Office of the Ministry of the Environment, OPG, municipal governments, and Conservation and Animal Welfare Trust. Regular meetings on mongoose eradication, Okinawa Rail conservation, and invasive species management were attended throughout FY17 and FY18. These meetings share lessons learned in control and conservation efforts, as well as new methods and techniques to be applied inside and outside of the military fence line.

RADON MANAGEMENT

MCB Camp Butler continues its efforts to minimize exposure of military and civilian personnel to radon through its sampling, mitigation, and maintenance program. In FY18, we performed radon testing for more than 2200 rooms in 200 buildings, performed radon mitigation diagnostics in 5 buildings, and mitigated radon in 10 buildings on MCB Camp Butler and MCAS Futenma. We continue to require radon resistant new construction to be incorporated into the design of new buildings. In addition, we inspect and maintain approximately 550 radon mitigation systems on Marine Corps Bases in Okinawa once every six months. MCB Butler has become a test-bed for Oakridge National Labs and are using results from MCB Butler to shape the radon testing and mitigation industry.

AIR MANAGEMENT

MCB Camp Butler continues to minimize air emissions through testing and environmental management practices. In FY17, we developed an SOP so the refrigeration shops could properly manage leak monitoring and repairs for refrigerant-containing equipment. In FY17 and FY18, we performed semi-annual air emissions monitoring for approximately 60 boilers on MCB Camp Butler, MCAS Futenma, and CATC Fuji. In addition, annual VOC monitoring was conducted for one paint facility on MCB Camp Butler.

CONCLUSION

Despite the challenges of being in a remote overseas location with a unique environmental and political climate, MCB Butler continues to be a leader in enhancing environmental quality while sustaining the Marine Corps' ability to effectively train and maintain readiness. Our outstanding waste minimization efforts are especially important because of our isolated location and limited landfill space. The success of our Hazardous Waste Management Program has resulted in significant cost savings to the Marine Corps and demonstrates our dedication to protecting the environment entrusted to us. We continuously strive to ensure that our program supports military readiness through our extensive Natural and Cultural Resources Management Programs, which are critical to effective training. The success of stakeholder interactions is reflected in MCB Butler's numerous partnerships and collaborations with local municipalities and agencies, continually improving relations between the people of Okinawa and the Marine Corps, and supporting the U.S. – Japan alliance.