

Environmental Quality – Overseas Installation: Marine Corps Base Camp Smedley D. Butler

Introduction

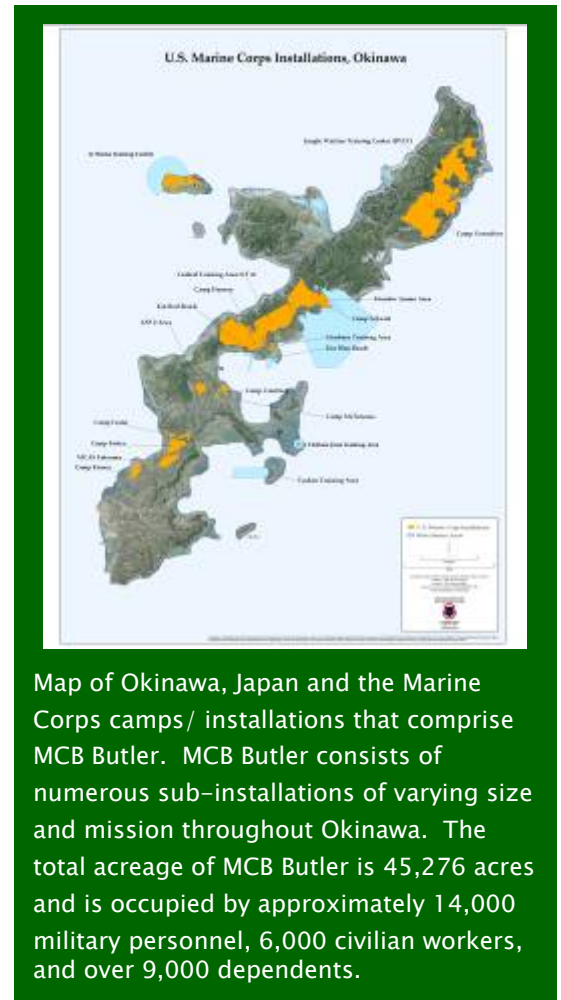
Marine Corps Base Camp Smedley D. Butler (MCB Butler) is the base support command for United States (US) Marine Corps ground forces on Okinawa and at Camp Fuji on Honshu Island, Japan. MCB Butler is unique and complex, consisting of numerous sub-installations of varying size and mission:

- Camp Courtney
- Camp Fuji
- Camp Gonsalves/Jungle Warfare Training Center (JWTC)
- Camp Hansen
- Camp Kinser
- Camp Lester
- Camp McTureous
- Camp Schwab
- Central Training Area
- Henoko Ordnance Ammunition Depot
- Higashionna Ammunition Storage Point II
- Ie Shima Training Facility
- Kin Red Beach and Kin Blue Beach
- Marine Corps Air Station (MCAS) Futenma
- Tsuken Jima Training Area
- Ukibaru Jima Training Area

The total acreage of the MCB Butler facilities and training areas is 45,276 acres and is occupied by approximately 14,000 military personnel, 6,000 civilian workers, and over 9,000 dependents in base housing.

MCB Butler provides training in various environmental habitats: from a subtropical rain forest in northern Okinawa, Jungle Warfare Training Center (JWTC), home for over 20 threatened and endangered species protected under the Japanese Environmental Governing Standards, to coastal eco-systems, home for approximately three threatened and endangered species. There are over 3,000 species of flora and fauna, of which approximately 260 are rare, threatened or endangered, which can be found on MCB Butler. In addition, there are significant archaeological sites some that date over 6,000 years.

MCB Butler's Environmental Program has been a key component to growing the relationship with the local Japanese community and showing the people of Okinawa the positive US military efforts have had as good neighbors. As an overseas installation, MCB Butler strives to go above and beyond that of a US installation to minimize environmental impact on the community and to show that MCB Butler is sensitive to local cultural beliefs.



Background

MCB Butler has met the environmental challenges of managing a program with numerous camps, diverse ecosystems (e.g., rainforest and coastal systems), numerous fence-lines throughout the island, diverse military training requirements, and remote location, while balancing the need to foster good community relations with Okinawa and Japan.

MCB Butler's environmental staff consists of over 35 US and 29 Japanese civilian employees. MCB Butler has the second largest environmental staff on Okinawa, second only to the Okinawa Prefecture Government. Amongst Department of Defense (DoD) component environmental offices in Japan, MCB Butler has the highest ratio of Japanese to US civilian employees which helps us interface with local environmental agencies and counterparts. In fact, MCB Butler has the only DoD local national archaeologist on staff in Japan.

MCB Butler routinely partners and shares data with the prefecture government and local municipalities to protect the natural and cultural environment of Okinawa. For example, the Marine Corps has partnered with the Okinawa Prefecture Government and the Japanese Ministry of the Environment in mongoose trapping efforts through a Joint Committee agreement which has maximized efforts to remove this predator of Okinawa's native and rare species.

Significant environmental plans include MCB Butler's extensive update to the Integrated Natural Resources and Cultural Resources Management Plan, completed in-house in 2008. This plan was jointly written by American and Japanese scientists. MCB Butler also completed its Energy and Water Conservation Campaign Plan in 2007 which is a roadmap to meet the goals of the recently passed Executive Order (EO) 13423, *Strengthening Federal Environmental, Energy and Transportation Management*.

Environmental Quality Accomplishments

Environmental Management System (EMS): MCB Butler Is Leader in Developing Innovative EMS Utilizing a Regional Approach.

MCB Butler has been a leader within DoD in developing an innovative EMS utilizing a regional approach to environmental management. An overarching system is used to manage environmental programs at MCB Butler and has been expanded to the Marine Corps Bases Japan (MCBJ) level which includes Camp Fuji and Marine Corps Air Station (MCAS) Iwakuni. While camps and stations must adhere to the Commander's Environmental Policy and MCBJ management plans, standard operating procedures (SOP) and directives, camps/stations are able to establish their own unique objectives and targets based on their own practices and associated environmental impacts.

The MCB Butler EMS policies and procedures are developed in coordination with practice owners, and are implemented with top-level attention. The MCBJ environmental policy statement, procedures, and training are translated into Japanese and made available on the MCBJ EMS web site for the Japanese workforce. An MCBJ EMS base order charters an EMS Core Team and a Commander's Environmental and Energy Management Review Board (CEEMRB). MCB Butler is the only Department of Navy installation that fully integrates Energy Conservation into EMS in accordance with EO 13423.

The Core Team meets concurrently with the Utilities Conservation and Appraisal Board (UCAB) to address energy issues and to guide the implementation and maintenance of the EMS. The CEEMRB also serves as a senior UCAB and adopts and implements environmental policies and energy conservation measures. The

CEEMRB is chaired by the Commanding General of MCB Butler, Major General (MajGen) Krusa-Dossin, and includes senior MCBJ staff members.

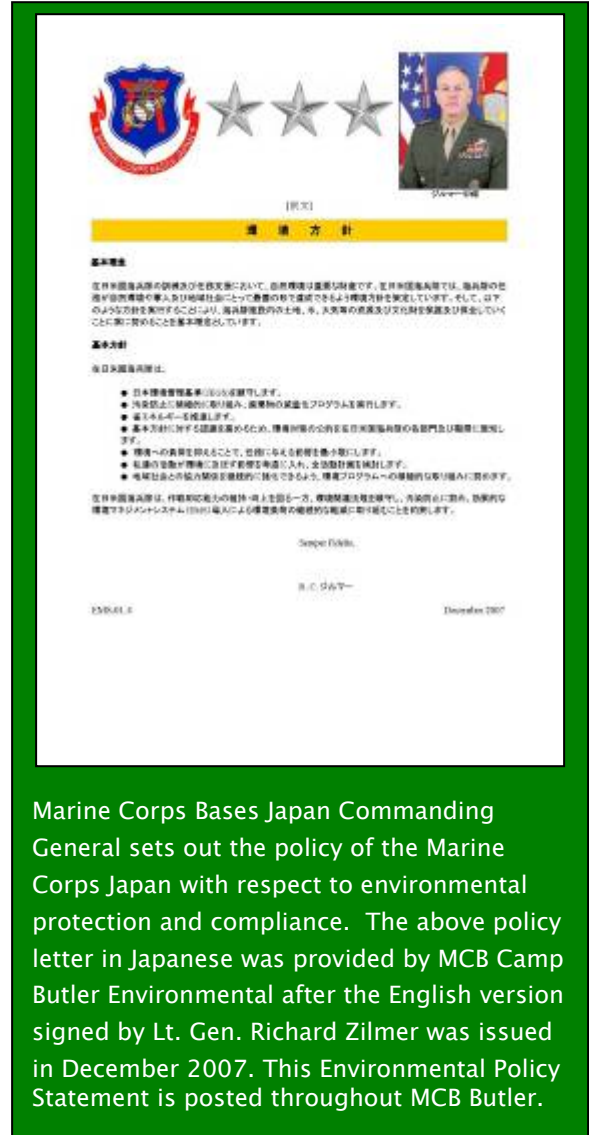
The MCB Butler’s EMS was validated by Headquarters Marine Corps in July 2008 and was found to be in full compliance with the eighteen elements of a Marine Corps EMS. The US Environmental Protection Agency (EPA) also validated that MCB Butler was in conformance with the requirements of the Marine Corps EMS standards during their environmental compliance evaluation (ECE) in August 2007.

The MCB Butler practice inventory is the most thorough in the Marine Corps. A two-tiered system is used. The top tier is the MCB Butler inventory tracked through the Marine Corps’ web-based system (PRISM). At this level, a unique practice, aspect, impact combination is identified only once. This gives our Commander a birds-eye view of the potential environmental risks. The second tier is a camp/station practice inventory that is tracked using the MCBJ EMS SharePoint web site. This allows the camp/station environmental staff to add details that will assist them in making risk determinations at a more local level.

MCB Butler audit procedures are second to none. Our ECE Desktop Procedure outlines our compliance evaluation and EMS conformance audit procedures. To ensure a superior level of compliance and in order to stay up to date on current trends in the environmental field, MCB Butler invites scientists and professionals from the US EPA to assist with the ECEs and EMS audits. Five members from various EPA Regions inspected MCB Butler using a 2,000-question checklist. The EPA team looked at MCB Butler programs and procedures and evaluated them according to the Japan Environmental Governing Standards and Marine Corps policy. This was also our opportunity to learn from them about emerging technologies, upcoming requirements, and innovative new practices. During past audits, EPA was invited to perform the MCB Butler ECE Self Audit which included an EMS conformance audit. During past audits with Headquarters Marine Corps and EPA, MCB Butler was praised for having a well organized, mature environmental program management.

Contractors are fully addressed in the MCB Butler EMS. A comprehensive contractor/vendor packet is provided in English and Japanese to all active contracting agencies at MCB Butler. This packet includes a letter of instruction, a general awareness training guide, and EMS/environmental awareness brief, MCB Butler environmental and emergency contact information, and a service agreement.

MCB Butler has implemented an awareness campaign that includes informative web pages. The web pages allow Marine units to access everything needed to complete their mission with minimal impact to the environment. This includes environmental contact information, training information, management plans, desktop procedures, SOP, policies, directives, and much more. Many of these documents have been translated for our Japanese workforce. These web sites have proven to be very valuable to the MCB Butler Marines.



Marine Corps Bases Japan Commanding General sets out the policy of the Marine Corps Japan with respect to environmental protection and compliance. The above policy letter in Japanese was provided by MCB Camp Butler Environmental after the English version signed by Lt. Gen. Richard Zilmer was issued in December 2007. This Environmental Policy Statement is posted throughout MCB Butler.

Training: MCB Butler Environmental Training Provides Outstanding Service to Over 5,400 Marines, US and Japanese Civilians, and other DoD Personnel on Okinawa.

MCB Butler provides outstanding environmental education, professional development, and awareness training to the Marines, US and Japanese civilians, and other DoD Services on Okinawa. The large concentration of Service personnel on the island drives a need to find creative ways to overcome barriers that restrict training availability. The remote location and high travel cost often hinders environmental education and training opportunities. There is also a need to conduct training in both English and Japanese to support a diverse workforce. MCB Butler overcomes these barriers and improves awareness of environmental issues in the community.

Environmental Training instructors provided internal training to over 3,016 personnel with the formal Environmental Compliance Course (ECC) as the focus. This training was for personnel responsible for oversight of unit environmental requirements and hazardous waste management. Specialized internal training courses were also provided on Ozone Depleting Substances, National Environmental Protection Act (NEPA), Erosion Control, Polychlorinated biphenyl (PCB) Awareness for Transformer Handlers, and Spill Response.

External training was provided by subject matter experts to over 2,200 personnel in a diverse range of environmental topics. Of note were courses such as the following:

- Leadership in Energy and Environmental Design (LEED) by the University of Florida,
- Environmental Management System (EMS) Lead Auditor training,
- Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour initial certification, 8-hour refresher certification training, and Incident Command System (ICS) 300 & 400 courses by the US Coast Guard,
- Environmental and Quality Sampling Course, Hazardous Waste Generator, and Overseas Hazardous Waste Facility Operations, and Facility Response Training by NAVFAC, and
- Defense Hazardous Material Waste Handling Course, and Green Procurement by the US Army.

Training was provided to over 100 Okinawa farmers on the proper use of pesticides, pollution prevention, and environmental protection. Briefs on recycling, illegal dumping, energy conservation, recycle pick-up schedule, solid waste pick-up schedule, bulk waste pick-up guidance, environmental issues and general fun facts for kids were developed for local Marine Corps media resources. In addition, a waterproof “Environmental Pocket Guide for the Marine in the Field” was developed and published as a durable field reference guide and for training units prior to deployment or range training. Japanese Ground Self Defense Forces were also provided environmental training in Japanese prior to operating on our Marine Corps controlled ranges. MCB Butler expanded awareness information opportunities by translating the hazardous waste management poster, oil water separator management poster, Spill Management Guide, Environmental Field Training Guide, and the handling of hazardous materials and wastes guide for use by the Japanese workforce. The spill management guide is of special note for utilization of English and Japanese language in a unique format to clearly provide information in a single binder for both US and Japanese personnel working in joint operations.



MCB Butler Environmental Training is conducted in both English and Japanese to support a diverse workforce. In this photo, MCB Butler Environmental demonstrates how to contain a damaged oil drum. Photo courtesy by Kaori Tanahara.

Cultural Resources: Cultural Resources Supports Construction of Consolidated Club while Strengthening Community Relations with local Japanese Agency.



This is the archaeological feature (pit house) which was discovered during construction of MCB Butler's Consolidated Enlisted Club. This rare discovery was evidence of prehistoric architecture in the form of pit houses built by the Japanese Neolithic tribe, known as Jomon. MCB Butler worked closely with the local Japanese Cultural Resources Management Authority during this project.

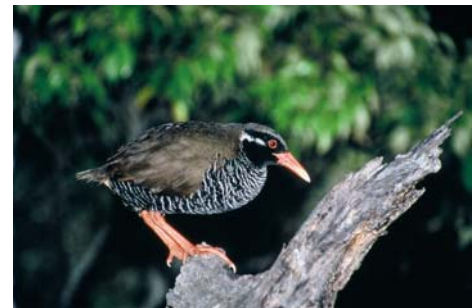
During the construction of a new 43,000 square foot Consolidated Enlisted Club on Camp Foster, significant cultural resources were discovered in 2008. An extensive archaeological investigation and excavation were conducted while construction continued in unaffected parts of the archaeological site. The archaeological survey marked a total of 27 areas of excavation, of which seven areas resulted in findings of archaeological resources.

The most remarkable discovery was evidence of prehistoric architecture in the form of pit houses built by the Japanese Neolithic tribe, known as *Jomon*, which are rarely unearthed in the southern part of Okinawa.

MCB Butler worked closely with the Social Education Section of the Chatan Township Board of Education to determine the appropriate manner of mitigation for the areas of cultural properties. This project serves as an example of excellent program management by involving the appropriate Marine Corps and local agencies during construction while preserving a significant local Japanese cultural resource.

Natural Resources: Natural Resources Management Highlight MCB Butler's Protection of Endangered Species and Habitat.

MCB Butler continues to ensure that natural and cultural resources conservation measures and Marine Corps activities on mission lands are integrated and consistent with DoD stewardship requirements. To successfully carry out the natural resources management program, MCB Butler continuously seeks to gain new information regarding protected species and how to continue to support the military mission.



Natural resources have benefited immensely by MCB Butler's natural resources management. For example, the JWTC contains some of the most pristine habitats in Okinawa. The JWTC is located in northern Okinawa and is home for approximately 20 Threatened/Endangered and Protected species, such as the Okinawa Rail pictured here. A predator of some of these species is the Small Indian Mongoose (*Herpestes javanicus*), which is an invasive exotic animal, first introduced to southern Okinawa in 1910 to control rats and poisonous snakes. Since then, the mongoose population has increased and expanded to northern Okinawa which began preying on Okinawa's native and rare species.

The Marine Corps has partnered with the Okinawa Prefecture Government and the Japanese Ministry of the Environment in mongoose trapping efforts through a Joint Committee agreement. This has resulted in 555 mongooses being removed from the Marine Corp's Northern Training Area. As a result, MCB Butler communicates frequently and coordinates closely with these local Japanese agencies to maximize efforts to exterminate the mongoose from the JWTC and also northern Okinawa island.

Energy: MCB Butler Completes Energy and Water Conservation Campaign Plan and Combines Efforts with Environmental to Meet Energy Conservation Goals.

In 2007, MCB Butler developed an Energy and Water Conservation Campaign Plan to create a roadmap to meet the goals of the recently passed EO 13423. This campaign plan used MCB Butler's existing EMS to develop action plans to meet both energy and water conservation goals, and investigate alternate vehicle fuel sources in Japan. In 2007, MCB Butler integrated the Energy Conservation program with Environmental Protection, and to the best of our knowledge, MCB Butler is the only Department of Navy installation to merge the two programs.

The merger of the Energy and Environmental Protection sections assisted MCB Butler in investigating and developing a wider scope of projects such as two types of green roofs, grass and moss, which will be installed in the near future to compare the benefits of the different species. Additionally, this initiated a greater emphasis on evaluating new technologies, for example MCB Butler coated several buildings with a highly reflective and insulating material that was derived from the Joint Strike Fighter program for thermal insulation on runways. This is the first application of the substance on a building, and other DoD commands have expressed interest in the results of this energy conservation test project. This coating emits approximately 10 times less Volatile Organic Compounds (VOCs) than typical roof coatings used today.

MCB Butler's Environmental Branch has historically worked with Japanese Universities and outside entities on research projects. Meetings have taken place with Keio University and Hiroshima Institute of Technology (HIT) on possible collaborative efforts for urban heat modeling, solar and wind energy data collection and analysis, and microclimate modeling. The outcome of these projects will help MCB Butler conserve energy and protect the environment.

Additionally, MCB Butler worked closely with Department of Energy (DOE) National Renewable Energy Laboratory (NREL) experts to survey land areas across Okinawa for potential wind energy turbine sites. An outcome from working with DOE is to make JWTC self sustaining for energy which makes it a model for environmental sustainability and will further display to the local Okinawan population that we truly care about this pristine habitat area.

Recycling: Recycling Program Improves Recycling Locations, Increases Recycling, and Reduces Solid Waste by 1 Ton Per Week.

With the sizable amount of personnel and limited landfill space, MCB Butler's recycling program has been instrumental in reducing waste generation and promoting partnerships with the surrounding community to increase recycling. By conducting "Lean Six Sigma" studies (a new DoD efficiency approach) improving recycling locations, implementing a competitive bid process for selling recyclable items, expanding the types of recyclables, and by continuing to educate base personnel, MCB Butler's recycling program increased recycling on Marine Corps camps more than ever. In addition, a new tracking system was developed in-house to identify recycling opportunities. In 2008, more than 2,000 tons of recyclable items were processed by the MCB Butler Recycle Center compared to 1,600 tons of recyclable items in 2007 and 1,300 tons in 2006.

As part of MCB Butler's focus on efficient use of resources, the recycling program offers pick up at multiple ranges for recycling of expended small arms cartridge casings (.50 caliber or less) for all DoD components which is uncommon for an installation recycling program. This saves driving time for those Army and Marine Corp units in Okinawa. As a result of the revenue generated from selling the expended brass, MCB Butler is able to provide recycling services to all Army installations on Okinawa at no additional cost to the Army.

ONE-PAGE NARRATIVE SUMMARY

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Cultural and Natural Resources: MCB Butler routinely partners and shares data with the Okinawa Prefecture Government and local municipalities to protect the natural and cultural resources. In 2007, MCB Butler worked closely with the local Japanese Cultural Resources Management Authority in the rare discovery of prehistoric architecture while facilitating the construction of an important MCB Butler project. The Marine Corps has also has partnered with the Okinawa Prefecture Government and the Japanese Ministry of the Environment in mongoose trapping efforts through a Joint Committee agreement which has maximized efforts to remove this predator of Okinawa's native and rare species.

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