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HISTORIC PRESERVATION ON THE UNITED STATES ARMY BASE ON KWAJALEIN ATOLL

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Kwajalein Atoll, Marshall Islands

The U.S. Army maintains a base on Kwajalein Atoll in the Republic of the Marshall Islands which includes land on all or portions of 11 of the islands in the atoll. The base's historic preservation program is a unique blend of the historic preservation statutes and regulations of Republic of the Marshall Islands and the United States and Army cultural resource regulations. This historic preservation program has evolved and expanded over the past 20 years to incorporate historic preservation considerations in planning and development, cultural resource maintenance, cultural resource identification and documentation, and public education programs.

Kwajalein Atoll has over 110 islands surrounding the world's largest lagoon. The U.S. Army maintains a 1,361 acre base on the atoll which includes land on Kwajalein, Roi-Namur, Ennylabegen, Meck, Illegini, Legan, Eniwetak, Omelek, Ennugarret, Gagan, and Gellinam islands (Figure 1). Within the base boundaries there are over 105 known properties that are eligible for the Republic of the Marshall Islands National Register. This paper discusses how the historic preservation program on the base evolved and the role the program plays today.

HISTORIC PRESERVATION ON KWAJALEIN BASE

Until 1986, the development U.S. Army's historic preservation policies at their base on Kwajalein roughly paralleled the development of historic preservation planning on other U.S. Pacific bases and within the Pacific Trust Territories. Cultural resource planning and management was limited, but these years produced some of the first studies specially designed to specifically to flag historic properties as re-

sources in need of preservation (Denfield 1980, Thompson 1984 a and b). The demise of the Trust Territories and the establishment of the Republic of the Marshall Islands resulted in changes in the U.S. Army's approach to historic preservation on their Kwajalein base.

During the earliest post-Trust Territory years (1986 to 1993) cultural resource management activities informally followed existing U.S. Historic Preservation statutes and regulations. During this time, attention focused on efforts to identify and document the existing prehistoric cultural resources and respond to the on-going construction and development on the base. Historic preservation efforts were confined to archaeology included the completion of a variety of survey level identification studies within the base's boundaries (Athens 1984, Craib et al 1989) and a number of memorandum, reports, and papers associated construction related surveys and monitoring (Watanabe 1986, Streck 1987a, and c, Shun and Athens 1987).

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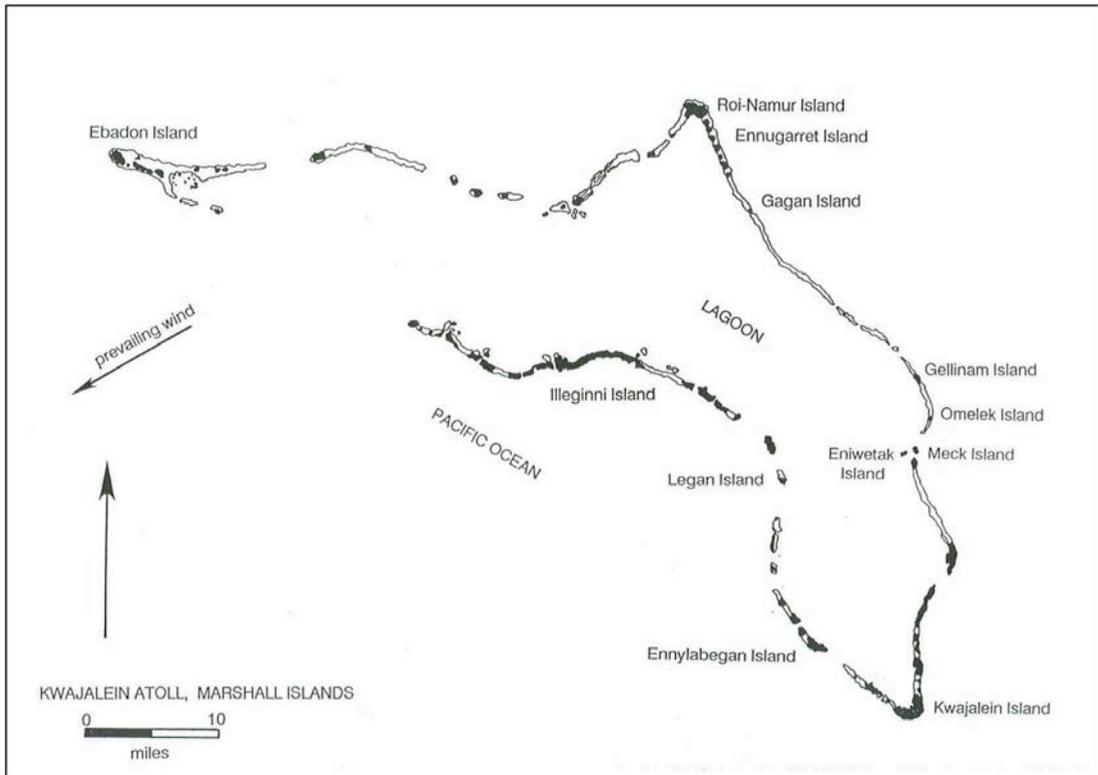


Figure 1. Map of Kwajalein Atoll (after Kuttruff 1996).

At the same time, the Army was developing a document to assess the environmental impact of the proposed actions and activities on the base at Kwajalein. These efforts culminated between 1989 and 1993 with the completion of the *Final Environmental Impact Statement for Proposed Actions at U.S. Army Kwajalein Atoll* (United States Army Strategic Defense Command: 1989) and the *Final Supplemental Environmental Impact Statement – Proposed Actions at US Army Kwajalein Atoll* (US Army Space and Strategic Defense Command 1993).

In combination, the two documents required that the U.S. Army replace their use existing American statutes and regulations with a set of standards and procedures which, while providing environmental and cultural resource protections, would reflect the special relationship that existed between the United States and Marshall Islands governments. In addition, for cultural resources, the Army was also required to develop a Memorandum of Agreement to provide for cultural resource review and con-

sultation on routine activities and draft a Historic Preservation Plan.

The drafting of the environmental standards and procedures document began in 1991 and continued until August of 1995, when the final version of the *Environmental Standards and Procedures for United States Army Kwajalein Atoll (USAKA) Activities in the Republic of the Marshall Islands* (US Army Space and Strategic Defense Command 1995) was published. For the first time, a document existed, called the UES, which provided standards and procedures for cultural resource management that incorporated both Marshallese and American civil and military regulations.

The UES was not intended to be a static document, and provisions were written into it to allow for its annual review by all involved US and RMI agencies. The effect of this annual review on the cultural resources portion of the document over the last decade has been the incorporation of standards that are increasingly more sensitive to Marshallese historic preservation concerns.

The development of a Programmatic Memorandum of Agreement (PMOA) that structured and streamlined the review and consultation process for on going operations, routine maintenance and mission related activities took longer to put into place. This agreement, between the U.S. Army Space and Strategic Defense Command, the U.S. Army Kwajalein Atoll, The Advisory Council on Historic Preservation, and the Republic of the Marshall Islands was adopted in February of 1996. Eventually the contents of the PMOA would become part of a Document of Environmental Protection (DEP) called Protection of Cultural Resources, which was subject to review every five years.

As the UES and the PMOA were approved and the standards and procedures within them were implemented, historic preservation activities on the base increased. The mid-90s saw a growth in knowledge of the cultural resources contained within the base. Surveys and research programs, funded through the U.S. Army's Legacy Program and archaeological surveys, site evaluations and data recovery operations related to construction increased as planning incorporated cultural resource review and consultation into its processes.

The work during the mid-90s included survey and documentation of World War II structures (Panamerican Consultants 1994), a survey of Cold War Era structures (US Army Space and Strategic Defense Command Historic Office 1996), and an ethnographic study of Marshallese traditions (Carucci 1996). Compliance driven archaeological surveys identified prehistoric sites in locations that had not been previously studied or even seriously considered as possible locations for survey (Beardsley 1994, Craib and Allen 1998), site evaluation excavations of Japanese defensive positions yielded information on the course of the Battles of Kwajalein and Roi-Namur (Kuttruff 1996).

All of the work completed during this period was done by sub-contractors who arrived on island to complete the fieldwork and then departed to finish their final reports. These sub-contractors often left behind them substantial additions to a growing collection of ar-

tifacts, field notes, and photographs, which were largely without cataloging or curation. As the resource database became more complex, it became increasingly difficult for environmental personnel to determine what, if any, cultural resources were likely to be present in any location on the base. In addition, the large amounts of new information stretched the staffing resources available to assist in drafting the final document required for the base's cultural resource management program.

In 1997, Boris Deunert was sub-contracted to act as a resident cultural resource manager. One of his first tasks was to assist drafting the final document required for the cultural resource management program: the Historic Preservation Plan. This draft document was used to govern all historic preservation activities from that date.¹

In many ways the Draft Historic Preservation Plan reiterated the language found in the UES and in the DEP. However, the document also set the priorities for historic preservation, listed all the known cultural resources of the base, defined areas of cultural sensitivity, and set the standards for how all historic preservation activities were to be accomplished.

In addition to his work with the Historic Preservation Plan, Deunert used an existing system, for insuring excavations on island did not dig up utilities, to track all excavations conducted on the islands and monitor those which were occurring in areas which could potentially contain cultural resources. Deunert's fieldwork is only available in the form of memorandum held on Kwajalein or at the Historic Preservation Office in Majuro. However, the volume is formidable; he completed over 77 monitoring projects between 1997 and mid 2001. In 1998, Deunert initiated and oversaw a program which inventoried all standing historic structures on the base and assessed their condition. He also organized the artifacts, field notes, reports, photographs and other documentation from over a decade's worth of archaeological work and inventoried them.

HISTORIC PRESERVATION TODAY

The historic preservation program on Kwajalein Army base remains an evolving entity. At the present time, the management of these cultural resources is governed by 3 documents:

- a. *Environmental Standards and Procedures for United States Army Kwajalein Atoll (USAKA) Activities in the Republic of the Marshall Islands*, 10th Edition (January 2006)
- b. *Historic Preservation Plan for United States Army Kwajalein Atoll* (August 2006)
- c. *Document of Environmental Protection - Protection of Cultural Resources*, DEP-04-001 (November 2004)

The *Environmental Standards and Procedures for United States Army Kwajalein Atoll (USAKA) Activities in the Republic of the Marshall Islands*, 10th Edition (2006), sets standards the historic preservation program must accomplish.

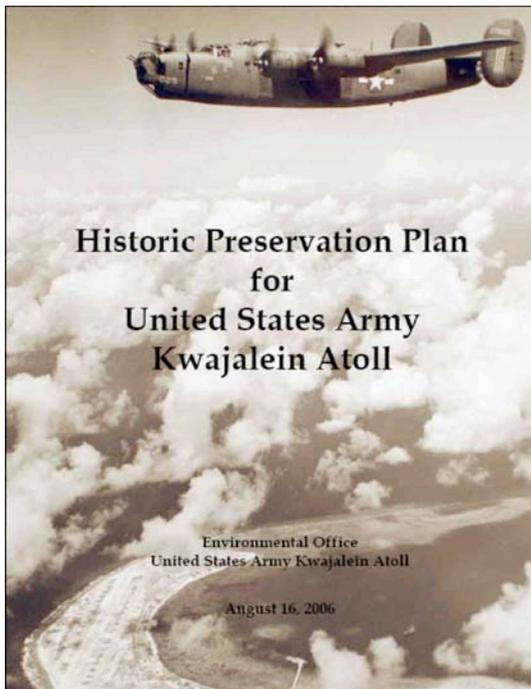


Figure 2. Cover of Historic Preservation Plan for United States Army Kwajalein Atoll (*US Army Kwajalein Atoll, Environmental Office 2006*). The cover art used depicts a B-24 Liberator flying over Kwajalein Island in June 1944. This photograph is one of the over 4,000 that have been gathered together by volunteers on Kwajalein to form a photographic archive of the base. This image is part of the Air Force

Collection at the US National Archive, College Park, MD.

The 2006 *Historic Preservation Plan for United States Army Kwajalein Atoll* (HPP) provides the framework for the cultural resources management program (Figure 2). It sets the preservation program priorities. It provides standards for professional qualifications², fieldwork³, evaluation of eligibility for the RMI National Register, determinations of significance⁴, and collections management.

The *Document of Environmental Protection - Protection of Cultural Resources* (DEP) defines procedures for review of routine base operations. Identifies what routine actions are exempt from review, for example: routine maintenance on structures that are not listed, or eligible for listing, on the RMI National Register; resurfacing of existing paved roads; excavations in portions of the base which were created by post-war dredging and filling; and excavations within existing utility line trenches.

The primary task of the present day cultural resources management program is the incorporation of historic preservation considerations into base and mission operations planning. The second task is the maintenance of existing resources. The third task is the identification and documentation of cultural resources. The fourth is the protection of cultural resources from threats such as theft and vandalism. The final task is public education.

HISTORIC PRESERVATION IN PLANNING

Today, every federally funded activity or program on the base is subject to review for cultural resource affects. The initial phase of the review process involves the determination if an activity can be defined as an “undertaking”. Under current standards an undertaking is defined as an activity or program “that can result in changes in the character or use of cultural resources” (US Army Kwajalein Atoll, Environmental Office 2006: 7-2).

All activities which have been identified as an undertaking are further assessed to determine if the effect is adverse. The preferred option is avoidance of any adverse impacts to cultural resources. Adverse effects include:

physical destruction or damage, removal from original location, changes in use or setting, introduction of historically incompatible elements, and neglect. If the effect is determined to be adverse, a mitigation plan that addresses the adverse effect must be developed and incorporated into project planning.

Once the internal review of a project has been completed, the cultural resource review, determination of affect, and mitigation plan (if required), along with all documentation relevant to understanding the nature and scope of the proposed activity is forwarded to the Republic of the Marshall Islands Environmental Protection Authority and other concerned US federal agencies for their review and consultation.

Comments or requirements received as part of the consultation process are generally incorporated into existing documentation on the proposed activity or program seamlessly. In the event that this consultation process reaches an impasse and an agreement cannot be reached; provisions exist for mediation of any disagreement through the Advisory Council on Historic Preservation.

Since 2003, cultural resource review has been incorporated into all actions taking place on the base. For larger development projects (e.g. new structures and facilities, or programs) the review process is initiated in the earliest stages of project development, usually when planning reaches the point of considering the location(s) of proposed action(s) and continues throughout the planning and design process. This review process culminates in the results of the review and consultation being incorporated into the National Environmental Policy Act (NEPA) documentation for the completed proposal. For smaller projects, the review process is initiated either during the design process (e.g. rehabilitation or maintenance of standing, non-historic facilities) or prior to construction (e.g. repair of electrical lines as a result of failure of existing).

RESOURCE MAINTENANCE

One of the challenges faced by the historic preservation program is the maintenance of

existing resources in a cost-effective manner. In 2003 a project was undertaken to determine the extent and condition of the existing resources. To accomplish this, the artifact collection, historical structures, and archives were all surveyed and recommendations were made to address problems identified (Mead 2004 a and b).

The historic structures survey examined standing structures that were listed, or eligible for listing, on the RMI National Register (Thomas 2004, as cited in US Army Kwajalein Atoll, Environmental Office, 2006: 3-8). These structures included facilities built by the Japanese military between 1941 and 1944 and the facilities built by the American military in 1944-1945. The survey found the condition of the structures varied depending upon local environment, whether the structure was still in use, accessibility, and the amount of battle related damage. There were three concerns identified that were common to virtually all structures: structural problems resulting from on-going deterioration, vegetation management, and lack of documentation on the facilities.

The artifact and archival collections were surveyed together. The results of this survey found that these collections were not accessioned or cataloged to US federal standards, misidentified, had lost original proveniences, and were housed a non-climate controlled facility which had serious pest problems. The survey found that while, between 1998 and 2000, there had been an effort to organize these collections; this organization system had been abandoned in 2001 and gaps existed in the organized material indicating portions of it had been removed.

In 2004, steps began to be taken to address the problems identified during the surveys. The initial step was the development of a collections management plan (Mead 2004c). This plan documented the Scope of Collections and Acquisitions Policies and provided the standards and procedures for collection accessioning, cataloging, storage, and accountability

The second step was finding an appropriate facility to house the collection and serve as an historic preservation laboratory and office

space. In 2004, construction began to rehabilitate an existing, abandoned structure on the base serve as a dedicated, climate-controlled storage facility, laboratory, and office (Figure 3). Construction was completed in early 2005 and the collections and archives were moved to the facility after a period of quarantine to insure no pests were introduced to the new facility (Figure 5).



Figure 3. Cultural Resource Facility on Kwajalein..

As part of the new facility, significant investments were made in computer equipment, software, laboratory equipment, and curatorial supplies. The primary software purchases include GIS software upgrades and the purchase of the ANCS+ version of Re:discovery™ a relational database cataloging program which met the standards for U.S. federal collections management and automated many of the collections management functions (Figure 4).

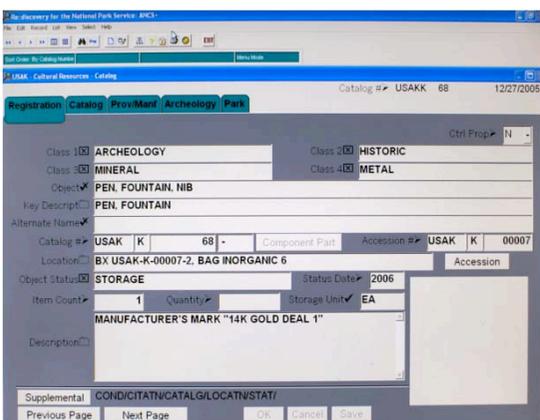


Figure 4. Collections management tasks. Image of the ANCS+ registration screen for cataloging, this program has modules for cataloging of archaeological collections, archives, and images.

The organization, cleaning, identification, re-housing, accessioning, and cataloging of the archival and artifacts collections has been on-going since late in 2005. It is anticipated the work on the collections and archives will continue for another two years. (Figure 6)

The final step was the development of a plan for the historic structures. As funding for rehabilitation, stabilization and/or conservation was very limited, the decision was made to approach the problem from two different angles. The first of approach was designed to address conditions associated with the structures that might be considered neglect. These conditions included identification of structurally unsafe facilities, removal of debris, and vegetation control (Figure 8). Beginning in 2005 a vegetation abatement plan involving selective use of environmentally benign herbicides was implemented. In addition, structures which posed safety hazards were posted with keep out signs. In the current year, a debris removal program is being implemented.

To address the overall large-scale structural problems caused by deterioration and to address the deficiencies in the documentation on the historic structures, it was determined that an on-going annual survey of the historic structures would be implemented (Figure 9). The surveys primary goal was to monitor the structures and identify a prioritized list of "critical" problems and seek funding to address them.⁵ The survey was also intended to gradually gather additional information on each structure; the eventual goal of being to have HABS/HAER quality documentation on the original structure and complete documentation of battle damage and post-war alterations to the buildings. The first annual survey was in 2004. The annual survey program continues to the present (Figure 10).

IDENTIFICATION AND DOCUMENTATION

To date the identification of cultural resources on base property have included two multi-island surveys to identify prehistoric site locations, two multi-island surveys to identify historic site locations, two historic structures surveys, one multi-island ethnographic study,

over twenty pre-construction archaeological site identification surveys, seven data recovery excavations, and over ninety monitoring projects.

Our knowledge of the cultural resource base on USAKA is a result of almost 25 years of identification, documentation, and integration of vast amount of on-the-ground data.



Figure 5. Cultural Resource Facility on Kwajalein. Work station in the laboratory facility (left) and collections storage shelving (right)



Figure 6. Collections management tasks. Environmental assistant, I. Maria Geeslin is re-housing artefacts (left) and entering data onto catalog worksheets (right).



Figure 7. Historic structures management. North façade of the Air Operations Building on Roi-Namur, showing evidence of both battle damage and structural deterioration.

Until the last decade, very little attempt had been made to integrating the diverse projects and their associated data into a format that was accessible for historic preservation purposes. Beginning in 1998, Boris Deunert began enter-

ing data into a geo-spatial database (GIS) that integrated the results of his own and previous research. Deunert's system is the core of the resource management program. In recent years, no large scale surveys have been undertaken

and recent work has taken the form of research and fieldwork that generates data that expands and fills in gaps in Deunert's original system.

The GIS data led to the generation of detailed sensitivity maps for virtually every square foot of land within the base. At the present time, this database is so refined that it is often possible to predict the location of cultural resources within 10 horizontal feet and often within less than 1 vertical foot on the islands of Roi-Namur and Kwajalein and within 25 horizontal feet on other islands.

This level of accuracy has taken historic preservation at USAKA beyond simple data accumulation to being an effective tool used in the very earliest states of planning. It is possible to plan activities on the base specifically to avoid cultural resources and these refined sensitivity maps are used in determining project locations years in advance of the design process.



Figure 8. Historic structures management. Traversing mechanism for a 127mm Japanese coastal defense gun in 2004 before and in 2006 after vegetation clearing.



Figure 9. Historic structures management.. Maria Geeslin begins crack mapping on the south façade of a munitions storage chamber on the south shore of Kwajalein.

Recently, two major projects have been undertaken to expand the existing information on the cultural resources. The first of these is a project to transfer the existing GIS data to an up-graded GIS platform. This will include the transfer of the existing database, as well as data from historic research, more recent archaeological fieldwork, and historic architecture and engineering information. Eventually, ethnographic, collections, and anthropological data will also be transferred into the up-graded geospatial relational database.

The second project, begun in 2005, is a volunteer effort by individuals on island interested in the historic of the military base. This project entails obtaining originals or copies of historic documents, photographs, ephemera, and historic objects. To date, this project has gathered together copies or originals of over 4,000 photographs, 5,000 pages of primary documents, and 20 pieces of ephemera (magazines,

advertisements, old orientation manuals, and scrapbooks), and 5 historic objects.

CULTURAL RESOURCE PROTECTION

The question of how to address vandalism, destruction, and theft of cultural resources is an important component in any historic preservation program. Until 2002, cultural resource protection was provided by the UES requirement that the provisions of the U.S. Archaeological Resources Protection Act of 1979 (ARPA, 43 CFR 7) were to be applied on the base for non-Marshallese personnel. This imposed American definitions of cultural resources and significance upon what was a Marshallese cultural resource base. In 2002, the requirement for the implementation of this Act was removed from the UES.

To be more reflective of the unique situation and cultural resources of Kwajalein, a regulation specific to the base was drafted to replace the ARPA requirement. This regulation, *USAKA/RTS Regulation 200-4 Artifacts, Cultural and Historic Property, Historic Sites, and Submerged Cultural Resources* (September 2006), is drawn directly from the *Republic of the Marshall Islands Historic Preservation Act 1991* and the associated 1992 Regulations.



Figure 10. Historic structures management. Maria Geeslin recording data on the sole remaining intact 127mm Japanese coast defense gun on Roi-Namur.

The regulation provides that no one may remove an artifact, or destroy, remove, disturb,

displace, or disfigure any cultural and historic property, historic site, or archaeological resource on the base. The regulation provides that personnel who have lived on island for one year or more may maintain private collections; that collection cannot have resulted from the disturbance of any Marshallese historic or cultural property. In addition, no one may remove any culture resource or artifact from the base by any means without written permission of the USAKA Environmental Office and the RMI Historic Preservation Office.

PUBLIC EDUCATION

The historic preservation program has a vigorous commitment to public education. Public education efforts are divided into two categories. The first focuses on making personnel aware of how the cultural resources management program affects them and how they do their jobs. The second is oriented toward raising the community's awareness of Marshallese culture, base history and the role of historic preservation.

The first form of public education is formal training programs and periodic informational mailings. These efforts cover such subjects as USAKA/RTS Regulation 200-4, how to incorporate historic preservation procedures into planning and programming, and how personnel are to respond in the event of a discovery of a cultural resource. In addition, all incoming personnel are briefed on the base's historic preservation policies during mandatory Island Orientation.

Efforts at community's awareness take a more flexible format. The Marshallese Cultural Center maintains an exhibit on the culture and ecology of the Marshall Islands year-round. In addition, it also provides programs of dance, crafts, and traditional Marshallese story-telling and lectures on Marshallese and Japanese-Marshallese history on a frequent basis.

In addition, two programs have been designed to introduce archaeology to children. The first, for children 6 and under, is a pretend archaeological excavation, where younger children dig in a sandbox to find artifacts. The second children's program is called "It is not

what we find—it is what we find out” and is intended for school groups. In this program, children use “artifacts”, “site maps”, and “reports” from faunal specialists and C-14 labs to reconstruct what happened on a pretend archaeological site and to learn about the people that inhabited it (Figure 11).



Figure 11. The Kwajalein 4-H Club taking part in the “It is not what you find – It is what you find out program”.

Community awareness efforts for adults include open houses and private tours at the collections storage facility, battlefield tours, exhibit openings, articles in the local paper on recent discoveries, lectures and, most recently, a television short on the cultural resources program. Recently, the exhibit space in the collections storage facility has opened up and exhibits there have included personal artifacts and candid pictures of American and Japanese soldiers who fought during the Battles of Roi-Namur and Kwajalein and an illustrated timeline exhibit of the Battles of Kwajalein and Roi-Namur. An up-coming exhibit is planned on the building of the American base on Kwajalein and its role during World War II.

The historic preservation program at the U.S. Army base on Kwajalein is still very much a work in progress. A resident cultural resource manager oversees the program and handles

much of the day-to-day implementation of the program. The program is well-established with dedicated facilities for exhibits, basic artifact processing and stabilization, and collections management. The procedures for cultural resource review and consultation are in place. Collection management policies and curation standards are in place. Policies are for the protection of resources from vandalism and thefts have been implemented.

ENNOTES

- ¹ While the 1997 Draft Historic Preservation Plan was almost immediately put into effect, the final version was not completed until 2001 and did not officially go into effect until 2003. The original document was revised in 2006.
- ² The HPP standards for professional qualifications are drawn from the US Secretary of the Interior’s Professional Qualifications Standards (US Department of the Interior, 1983)
- ³ The HPP standards for historic preservation work and documentation of same are drawn from US Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation.(US Department of the Interior, 1983)
- ⁴ The criteria for inclusion in the RMI National Register and determinations of significant are drawn from Republic of the Marshall Islands, Historic Preservation Office, 1991. “Regulations Governing Land Modification Activities,” Part III, Section 5 Criteria for Cultural and Historic Property and Section 6 Classification of the Significance Level of Prehistoric, Historic, and Traditional Sites.
- ⁵ Any alterations, repairs, stabilization, preservation, or conservation of historic structures are required by the UES and HPP to be performed in accordance with the Secretary of the Interior’s Standards for Rehabilitation with Illustrated Guidelines for Rehabilitating Historic Buildings (US Department of the Interior, 1992) and Secretary of the Interior’s Standards for the Treatment of Historic Properties (US Department of the Interior, 1997).

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sites and vernacular architecture. She has a master's degree in Archaeology from Boston University.

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