Mission: The Pacific Missile Range Facility (PMRF) is the world’s leading multi-dimensional integrated training and test range, capable of supporting surface, subsurface, air and space operations simultaneously. PMRF’s mission is to enhance readiness of US and Allied forces by conducting safe and effective test and training events in an operationally realistic environment. It conducts the largest multi-national naval fleet training evolution in the world. PMRF ensures through proactive engagement and planning, that all training and testing evolutions, new construction or other changes to the PMRF landscape are performed with the directive that protection of historic and cultural resources as contained in the Integrated Cultural Resource Management Plan (ICRMP) is paramount.

Location and Acreage: Located within the Hawaiian archipelago on western shores of the Island of Kaua‘i, PMRF “Main Base”, also referred to as “Barking Sands” occupies a 7.5 mile, 1/2 mile wide strip of coastal land separated from its remote mountain sites on the ridges inland of the base by a plain now in agriculture. The working area of the base is the expanse of the Pacific Ocean to the north, south and west with varying water depths from 20 to 2,500 fathoms, underwater instrumentation covering 1,100 square miles of underwater training range, and a missile defense testing temporary operating area of over two million square miles. PMRF in total occupies a total of 1001.6 hectares (2,475 acres) at the following five separate sites:

- Barking Sands encompasses 864 hectares (2,134 acres) of the coastal fringe of the Mānā Plain along Kaua‘i’s western shore.
- Kamokala Ridge encompasses 30 hectares (74 acres) at the inland edge of the Mānā Plain at the base of Kamokala Ridge.
- Mākaha Ridge encompasses 99 hectares (244 acres) at the seaward end of a high ridge atop the central mountain mass of the island.
- Kōke‘e encompasses five discontiguous parcels totaling 9.3 hectares (22.9 acres) within Kōke‘e State Park, also atop the central mountain mass of the island inland above Mākaha Ridge.
- The Port Allen facility encompasses about 0.4 (1 acre) of warehouse space and pier space located near the mouth of the Hanapepe River.

PMRF oversees training events from unit level to multi-national exercises, while simultaneously conducting research, development, testing and evaluation (RDT&E) programs of U.S. Navy, other Department of Defense (DoD), and other Federal agency programs. The Main Base is located on Kaua‘i’s Mana Plain, historically associated with an extensive wetland separated from the coastal beach by high sand dunes. Barking Sands abuts a 2,833 hectares (7,000 acres) agricultural zone to the inland side.

Civilian and Military Population: Approximately 90 military, 140 govt. civilian, 518 Operations & Maintenance (O&M) contractor personnel, and 182 contractors representing over 25 companies provide services to specific functional groups or for specific program support. The staff is concentrated at Barking Sands, and provides the command and control center for
RDT&E, fleet training - including anti-submarine warfare, submarine commander qualification and the world's largest multi-national exercise, RIMPAC.

**Historical Context:** Hawaiian legends reveal this area as the first to be visited by the ancient fire goddess Pele who ventured from Tahiti with her royal entourage – on her way to her current dwelling place within the bowels of the active volcanoes on the Island of Hawai‘i. PMRF is commonly known as “Barking Sands” and gains its nickname from the special quality of the sands in the area that emit a “woofing” or barking noise when agitated or stepped on. The Hawaiian name for the area is Mānā and is rich in traditional cultural history, as well as touting an exciting military past. While the foot of Nohili Dunes at the north end of PMRF was the western-most gathering-spot for Native Hawaiians from other Kaua‘i villages for centuries, it was also revered as the legendary entrance to the afterlife where Hawaiian souls would journey to the fabled resting place in the northwest end of the island chain. The airfield that was to become PMRF played a key role in aviation achievements and technological advancements.

Background: The Integrated Cultural Resources Management Plan for the Pacific Missile Range Facility was updated in September of 2012. Previous archaeological, cultural, and historical studies at PMRF have resulted in the identification of 99 archaeological sites and/or traditional cultural places (TCPs). Three archaeological sites and one TCP are multicomponent, which brings the total count for all the sites across site types to 102. There are 89 traditional Hawaiian, Plantation-period, World War II and Cold War-period archaeological sites, and 13 TCPs, most of which are located within PMRF Barking Sands. Thirty-one of the archaeological sites have been determined eligible for listing in the NRHP. The companion to the ICRMP, entitled the “Cultural Landscape Report” (CLR) was finalized in August, 2011. These documents provide Commander, Navy Region Hawaii, (CNRH) with the toolbox to prepare the CNRH Historic Asset Management Plan (HAMP) initiative, and are invaluable to the Installation for internal education and public outreach. Historic preservation is a very important part of today’s obligations for maintaining key elements of the past. Developing PMRF’s future, with a combination of the ICRMP and CLR is the foundation of that commitment.

PMRF’s eclectic mix of historic landscapes is matched by its support structure for cultural resource management. Specific field services are provided by resident environmental specialist
staff, specialists from Naval Facilities Engineering Command, Environmental (NAVFAC) and specialized contractor support. This combined with the dedication of station Public Works personnel, Range Complex Sustainment Coordinators, the Community Planning Liaison Officer (CPLO), and the Public Affairs Office, provides the required expertise to successfully oversee the base’s Cultural Resource Management program.

PMRF currently utilizes two significant agreements, negotiated on behalf of PMRF through the CNRH and NAVFAC organizations. The first, a Memorandum of Agreement (MOA) signed in 1999, was concurrent with the preparation and finalization of the “PMRF Enhanced Capability EIS”. A draft monitoring plan for ground-disturbing activities and burial treatment plan were included in that MOA with the State Historic Preservation Officer (SHPO). The second is a programmatic agreement (PA) for Navy undertakings in Hawaii, first executed in 2003, and renewed periodically to its current iteration signed in 2012. Signatories include CNRH, SHPO, and the Advisory Council on Historic Preservation; invited signatories include the National Park Service, National Trust for Historic Preservation, Office of Hawaiian Affairs, Historic Hawaii Foundation, O‘ahu Council of Hawaiian Civic Clubs, and the Outdoor Circle.

These agreements have been critical in PMRF’s ability to adjust to the modernization of US defense capabilities, which required infrastructure improvements and modifications to meet constantly evolving mission requirements. Whether ground-disturbance is required for a building foundation or utility line, or an exposure of human remains at an eroding ancient beach-front site occurs, the guidance contained in those documents forms the roadmap to resolution without conflict. Beginning with the NEPA requirements for a new activity, or inadvertent discovery of iwi (human remains) internal communications between the PMRF Staff and NAVFAC counterparts on the Island of O‘ahu is initiated. The situation is assessed and coordinated to ensure a smooth and proper handling of each unique situation.

PMRF has an excellent relationship with the local community and the Native Hawaiian community in particular. Many of the people who work on the installation are descendants of the people that inhabited the area centuries before Western contact, including the regional Burial Council representative for the west side of the Kaua‘i. His presence assures the most rapid communication of any inadvertent discoveries – and respectful protocol is followed throughout the repatriation process. Another example of PMRF’s integration in the community was highlighted when installation staff participated in the development of course curriculum for the Office of the Secretary of Defense (OSD) staff and representatives from other military services. Lessons learned were instrumental in the development of positive working relationship and consultations with Native Hawaiian Organizations. PMRF staff continues to participate in these training courses conducted on O‘ahu.

Summary of Accomplishments: The archaeological record at PMRF spans over a millennia and include cultural resources in the form of burials, habitations, and ritual or ceremonial sites associated with traditional Native Hawaiian settlement, as well as other ethnic groups arriving later during the Plantation-era. Plantation-era and WWII structures of historical and architectural significance are also part of the historic resources inventory of PMRF and share the landscape with Cold-War era buildings, structures, and properties. In fact, PMRF is recognized as an installation that has played a crucial role in developing technology for the nation’s defense during the Cold War era, and continues this critical mission to the present day in missile defense
research, development, testing and evaluation and through unit, fleet and multi-national training evolutions.

During the current award period of 2013/2014 financial austerity was paramount throughout the federal government. The need to focus limited resources in the National Defense budget created an environment where programs like Cultural Resources Management of the ICRMP at the installation level were forced to select areas of focus that minimized financial demands. Enhancing those aspects of the ICRMP that mandate outreach, education and subsurface research to give further granularity to the cultural resource mapping of Barking Sands/Main Base became the primary objectives.

Pictured to the left is page 30 of the 2012 ICRMP, depicting original place names. Native Hawaiians had a detailed naming process for both major and minor surface features, and Western influence dramatically changed the character and features of the Mānā Plain wetlands adjacent to Barking Sands.

While the two iterations of the ICRMP and the August 2011 Cultural Landscape Report contain a wealth of detail and information similar to this, the cataloguing of this historic and cultural heritage was not readily available to the general public, or to the civilian, military and contractors that support the installation.

During the award period, the focus was on changing this paradigm and get it “off the shelf” and into a readily accessible electronic format.

**Protection of Eroding Cultural Coastal Berm Deposits (Nohili Dune Site Protection Project):** Under the site-supervision provided by Ms. Antone and NAVFAC HI Facilities Operation Specialist Thomas Nizo at PMRF, development and implementation of physical site protection measures for cultural deposits eroding from sand dunes along the coast was completed. Geotechnical materials included geotextiles, geo-grids, and geo-membranes were used as an interface with sediment to separate, filter, reinforce, protect, and drain the affected area.
Research on sand stabilization projects completed by the military and its contractors in the Middle East led to the inclusion of geo-webbing technology as a site protection measure. No ground disturbance was required to implement the described protective system. The Geotechnical system acts as an interface that will allow security vehicles and pedestrians to traverse the ground surface without disturbing cultural deposits in the dune beneath. This is an excellent example of the transfer of technology from one field application to another. It ensures both the protection of the prehistoric cultural deposits and the ability to continue security patrols for both natural resource management and physical security and safety.

Interpretive Cultural and Historic Signage:

Through the networking created by posting historic and cultural information on the PMRF public CNIC website, PMRF was able to gain additional historic documentation and received positive feedback from the community. With a history that traces far back into pre-Contact times, the Native Hawaiian heritage and legends related to the places known as “Mānā” and “Nohili” are voluminous. Followed by the Plantation Era, Pre-WWII, and the Cold War just to name four historic periods, this incredible story is largely unknown to the local community on the Installation as well as on the Island of Kaua‘i. Thanks to the diligent efforts of Ms. Carly Antone, Archeologist with NAVFAC PAC, this has dramatically changed. Through her research and with historic and current photographs, charts, maps and documents, PMRF now has six (6) premium quality displays in a total of seventeen (17) panels distributed throughout Main Base at locations with the maximum potential exposure to installation personal and guests. These include National Park Service-Quality weather-proof panels that depict “Traditional Cultural Resources”, “Early Historic Era and the Plantation Period”, “The Twentieth Century”, “Nohili Coastal Dune”, “Waiokapua Bay” (known locally as “Major’s Bay”), and “Cultural Resources Management”.

National Historic Preservation Act, Section 110 survey: During the award period, an archaeological inventory survey of over 300 acres in the southern portion of the installation was performed. This comprehensive pedestrian and subsurface survey was conducted to acquire data on historic properties for preservation planning and resource management. Results of the investigation in a forthcoming report will assist in providing a sharper picture of traditional Hawaiian and historic activities that occurred in the area. The archaeological project included surface surveys, shovel test excavations, backhoe trenches, and controlled test excavations. Additionally, numerous archaeological monitoring projects were conducted during construction-related activities to ensure sites exposed are properly documented. Recently,

A Unique Event and Resulting International Cultural Exchange of Good Will: The March 11, 2011 earthquake off the coast of Japan and the ensuing tsunami shocked the world. The marine
debris created by that event was estimated in millions of tons. On 18 January 2013, a PMRF US Navy surface craft was providing routine support services on the PMRF Ocean Range west of Barking Sands when the crew spotted a yellow buoy with both English and Japanese markings, and a telephone number. The crew recovered the buoy and returned to Port Allen at the completion of their mission.

PMRF, networking with the Pacific Islands Regional Coordinator, NOAA Marine Debris Program and with the Japanese Consulate in Honolulu, ultimately determined the source of the buoy to belong to the Tohoku Region Development Bureau of the Japanese Ministry of Land, Infrastructure and Transport. This buoy had been anchored in not just any Japanese harbor, but the harbor of Kaua‘i’s Sister City in Japan: Iwaki City.

PMRF utilized this opportunity to showcase the buoy, and to raise awareness regarding marine debris as well as fostering cultural exchange. It should be noted that starting in the late 1800’s, a significant immigration from Japan to Hawaii occurred, making up a large portion of the cultural landscape of Kauai today.

Working with the Kauai Mayor’s Office, PMRF organized the dedication of the buoy as a monument to the especially unique relationship between Iwaki City and Kaua‘i. Thanks to Ms. Carly Antone who donated her personal time and skill in the development of galley proofs providing cost savings which combined with volunteer effort and local donations to fund the project while providing National Park quality signage.

The buoy was dedicated on May 19, 2014, and can be viewed on this website as a 6+ minute video:  
http://vimeo.com/95846540

Posting Historic and Cultural Legacy Information on PMRF’s public website: The Cultural Landscape Report is a fascinating collection of facts, photos, documents, legends and narratives. It seemed logical to take the opportunity to share this information in the internet age in a user-friendly and topic-focused format, making it available to Installation staff and the public at large. In much the same way that Ancestory.com is a catalyst for exchange and information sharing, we discovered that interest in our postings also resulted in collecting more historic documentation. This was especially true this year with a trove of “Regulus” era (1960’s) photos of the missile in flight with Navy escorts controlling the first nuclear-capable missile in the Navy’s Cold War inventory:

The historic legacy collection can be view on this site:  
http://cnic.navy.mil/regions/cnrh/installations/pacific_missile_range_facility_barking_sands/about/history.html
**PMRF Cultural Awareness and Diversity Outreach Program:**

PMRF strives at every opportunity to honor local, national and international cultures and traditions in numerous command sponsored events to include Change of Command ceremonies, facility blessings, retirement ceremonies and other special events. These events provide an opportunity to embrace local native traditions such as ceremonial flower lei, food (traditional Luau), songs and dance (Hula). Inviting civic groups, local area charter schools and traveling groups to participate and share in their rich traditions through cultural exchange. Many outreach programs for PMRF are coordinated by the CPLO, who is focused on community outreach and cultural awareness issues.

During the award period, PMRF reopened its shoreline, allowing for fishing and traditional food and plant gathering. In April of 2014 PMRF hosted an Opihi (Limpet) survey. The goal was to record population density of the Opihi. The intangible outcome that resulted from this survey was the education and sustainability concept of native Hawaiian gathering practices known as the Kapu (forbidden) system for gathering resources to participating children and their families. This experience instilled traditional practices in the participants and also will support the conservation of resources.

In recent years, the small Japanese 19th century graveyard located at PMRF gained statewide attention. Reverend Fujita of the Hanapepe Hongwanji transcribed the names (Japanese characters) on the headstones and created a family registry. PMRF connected with surviving family members with the registry resulting in their visit to the site. A project is currently in process to design and install interpretive signage with the list of family names and plot locations at the site.

Monthly ethic events are held to honor diverse cultures that host, support, and employed by the Dept. of the Navy in accordance with Defense Equal Opportunity Management Institute (DEOMI). Recently, a Hispanic Heritage Month celebration event highlighted history, music, food, and traditional customs during the award period here at PMRF. Future events will include a American Indian, Asain and Pacific Islander Heritage events.

Nohili Dunes are of special significance to Native Hawaiians, as sacred burial grounds. Located within PMRF boundaries, the barking sands of Nohili are known throughout the hula world. PMRF hosted a group of forty dancers from the World Hula Conference at the Dunes. (A Conference convenes every four years at each of the main Hawaiian Islands. The event attracts over a thousand people with a common interest of hula). The dancers were taught ‘Nohili E’, and then performed the dance at the base of the dunes. As a steward of Nohili, we at PMRF are privileged to do work of international importance in such a special place.