

FY 2016 Secretary of Defense Environmental Awards

Camp Pendleton

INTRODUCTION

The Cultural Resources Management (CRM) program of the Virginia Army National Guard (VAARNG) is dedicated to the conservation of all historic resources across the state's training sites and armories—but the preservation of the past never stops them from engaging with the cutting edge of technology and modernization to achieve that goal. At the 325-acre Camp Pendleton, part of the Virginia Beach Military Complex, the CRM program has been essential to large-scale transformations to achieve energy resiliency and security that is critical to the readiness of VAARNG and all other military branches in the area. CRM involvement in these projects is vital because Camp Pendleton is listed in its entirety on the National Register of Historic Places (NRHP) as a historic district and includes several contributing cultural landscapes. Whether the aim is simplifying the regulatory burden or revolutionizing the modern capabilities of the installation, the VAARNG CRM program remains oriented to future needs without sacrificing respect for the past.

ACCOMPLISHMENTS

Over the past 2 years, the CRM program at Camp Pendleton has vigorously pursued program goals in support of both historic preservation and the VAARNG's energy modernization initiatives. The CRM and Sustainability operations have been seamlessly blended to meet all VAARNG's operational and compliance needs. Camp Pendleton becoming an "island" of energy resiliency, capable of supporting the Virginia Beach military complex in the event of manmade or natural disaster. While such an undertaking is a challenge anywhere, it's especially complex at Camp Pendleton, because of its NRHP status. The CRM program and Sustainability staff have coordinated extensively to ensure this transformation's success. The CRM program recently completed an archaeological survey of the training site to allow for required infrastructure changes, while also retrofitting historic buildings with modern systems to achieve VAARNG's energy conservation objectives.

Judging Criteria



Program Management



Orientation to Mission



Impact & Outcomes



Technical Merit



Stakeholder Interaction



Transferability



One of the most important efforts has been establishment of a new Programmatic Agreement (PA) with the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP). Prepared with guidance from NGB; the PA has been signed by NGB and is circulating for signature with these agencies. The PA, an effort 6 years in the making, outlines an alternative process for complying with Section 106 requirements that's tailor-made to the needs of VAARNG. It dramatically streamlines the CRM oversight and consultation processes for historic resources, including the entirety of Camp Pendleton's structures. A 2016 external EPAS inspection noted that the CRM program is meeting every goal stated in the VAARNG Integrated Cultural Resources Management Plan (ICRMP).

The CRM program staff is further bolstered by collaboration with the natural resources and compliance sections of the Environmental office. Any projects proposed by trainers, planners or facility managers are vetted by the full environmental team, with CRM compliance embedded in all VAARNG operations to avoid adverse impacts to historic properties wherever and whenever possible. The CRM program's GIS database is also routinely used by trainers and planners to guide their operations. In turn, the CRM program prioritizes areas for any needed surveys or evaluations to facilitate training expansion or development. In general, the CRM program aims to stay 2 years ahead of proposed projects on the installation, creating the flexibility to complete cultural resources surveys when needed without stalling project implementation; this has been imperative at Camp Pendleton in particular.

CRM compliance is deeply rooted in Camp Pendleton operations and the CRM program's success in demonstrating VAARNG commitment to preservation is reflected in the SHPO's approval of the PA. Positive working relationships with the SHPO and ACHP have given Camp Pendleton the ability to facilitate and support current and future mission needs within the historic district. The installation's compliance record is exemplary, with all activities reflected in the current ICRMP and integrated with Camp Pendleton's Sustainability Plan and the Energy

Security Plan. The PA also represents a major resource savings in costs and time by minimizing Section 106 project-by-project reviews for many activities—from routine maintenance to rehabilitation following set treatment protocols. Integration with Sustainability has also benefited the CRM program in upgrading historic buildings on post. VAARNG has championed use of Energy Savings Performance Contracts (ESPC), which provide for major capital investments that are repaid with the energy cost savings those investments create. ESPC were used to complete the total \$38.4 million in energy, HVAC and building envelope upgrades completed during the awards period, including many buildings on Camp Pendleton.

To fully represent the achievements of the CRM program over the past 2 years, the scale of transformation on Camp Pendleton must be understood. As a critical component of the Virginia Beach military complex, the State Military Reservation, Camp Pendleton is the epicenter of a massive effort to establish energy security and resiliency. VAARNG has commenced the formal investment-grade audit to establish a micro-grid at the site, intended to take the installation off-grid while slashing energy consumption by nearly half. A solar array is also currently being constructed on an installation parking lot. The plan further involves use of fuel cell technology to create a FEMA 6 launchpoint and a Joint Operations Command Center (JOCC) emergency staging point resistant to grid, electro-magnetic pulse (EMP) and cyber attacks. The new fuel cells being considered have a 10-year lifecycle and would supply both power and water in the event of emergency and grid interruption for the VAARNG, Navy and Marines, creating eight megawatts of power in a very small footprint. The installation has worked with private industry, including Google, Walmart and Apple, to explore the viability of fuel cells being used by those companies. The cells themselves will be installed along high pressure gas mains. Notably, the only emissions produced by fuel cells are ozone and water, and the energy production cost is over 60 percent less than natural gas. The fuel cells are anticipated to be operational in FY18. Camp Pendleton is also implementing its new Energy Security Plan for



VAARNG with approval from NGB and the Army Corps of Engineers. This plan establishes an operating system behind the Guard Network to protect responsiveness in the event of a significant natural or manmade disaster.

This effort is complicated by the need to preserve Camp Pendleton as an historic district. For several years, in addition to clearing the path for the energy infrastructure development, the Sustainability and CRM staffs have collaborated on upgrading the WWII-era buildings to be energy efficient by installing new HVAC, lighting, insulation, roofs, windows and more, while still maintaining aesthetic integrity. Currently, this joint team is working with local power companies and consulting with the SHPO to remove electrical poles and power lines to bury utilities for greater security. This effort also supports Dominion Power’s project to erect off-shore wind towers as a renewable energy source.



Historic Structures

The CRM program has worked closely with the SHPO to renovate the WWII-era buildings at the installation. They were designed to be temporary during the 1940s, and as such, were built without insulation, and with only basic heating, electrical and plumbing systems. Continuous adaptations for use had also resulted in varying levels of upgrading among the buildings. In addition to modernization, Camp Pendleton’s historic district has also undergone significant rehabilitation to include replacement of deteriorated wood sash windows, addition of insulation and other similar projects. The new PA actually simplifies these kinds of maintenance and renovation projects going forward, as the installation has established preferred treatment methods and materials that will preserve the historic integrity of the buildings while meeting the post’s current and future needs.



Camp Pendleton’s NRHP eligibility stems largely from its historic importance, rather than from the architectural significance of the facility’s buildings. The installation has extensive historic associations, including use as a state and federal military support property. Several buildings are especially notable, including the Governor’s Cottage, a bungalow that was once the post commander’s house but became a

refuge and resource for Virginia governors dating from the mid-20th century. Since then, the cottage has been the location for state visits, vacations, meetings and entertainment events. Elsewhere on the installation, the structures reflect the evolution of Virginia’s military history, from World War I through the present.



The entirety of Camp Pendleton is listed as an historic district and features several notable structures. The Governor’s cottage, built in 1912, initially served as the commandant’s cottage, then began to be used by Virginia governors after WWII. It has been updated with a new roof, new HVAC system, and insulation, using roofing materials consistent with historic appearance and installing ductwork without interruption to interior spaces.

Six years ago, the CRM program completed documentation and evaluation of all structures on Camp Pendleton, coordinating with the SHPO to assess most of the buildings at the district level and to evaluate the more significant buildings on an individual basis. Based on survey results and with information from an earlier structural analysis of Camp Pendleton’s infrastructure, many buildings were identified as needing repair and modernization, an ongoing process. Around 25 percent of Camp Pendleton’s structures were fully rehabilitated over the past few years with many more receiving individual updates as needed. With its seaside location, extreme weather conditions and ground moisture are a perennial concern on Camp Pendleton, and the CRM program found that in many cases, underpinnings and floorboards were decaying due to moisture trapped under many buildings where skirting around the foundation piers had been installed. While these structural repairs were



addressed, the CRM program also coordinated with architectural and engineering staff and the SHPO to move forward on renovations to the buildings to support needed office and classroom space.

Throughout the installation, electrical and HVAC systems were upgraded to high-efficiency, energy-conserving systems. In many cases inefficient window-box air conditioning units, detracting from the buildings' historic appearance, were removed with the introduction of central air conditioning systems, and original chimney and stovepipe heating systems were replaced while character-defining detached chimney stacks were retained. Over the past few years, roofs have been replaced throughout the district using historically representative green asphalt shingles. Other envelope upgrades, particularly doors and windows, required more consideration. The CRM program successfully negotiated a solution to these costly rehabilitations with the SHPO. The divided light, double-hung sash wood windows with expressed muntins originally used in Camp Pendleton's construction proved to be incredibly costly to replicate today. Non-historic window replacements, however, had been made in earlier decades, and these changes had not adversely impacted the district's NRHP eligibility. As a compromise, the CRM program proposed installing historically accurate muntin-style windows on buildings that bordered main roadways on post, while

buildings interior to the complex could be rehabilitated with a double-pane integrated-muntin style window. Buildings that are considered individually eligible for the NRHP would also be updated with historically accurate features. In some cases, these buildings required specialized materials. The replacement of Camp Pendleton's chapel doors, for instance, involved a custom order based on the design of the original doors discovered in archival photographs. This balanced maintenance treatment was approved by the SHPO, allowing the CRM program to conserve its funding and resources to reach more buildings throughout the post.

The installation is currently evaluating replacement of obsolete vinyl siding with Hardiplank material that approximates the original appearance of wood weatherboard while minimizing maintenance, particularly in an Oceanside environment. Other system modernization has been achieved inside buildings with minimal impacts. Installation of a new efficient HVAC system in the Governors Cottage, for instance, was designed to run beneath the floors and in the attic so that ductwork would not need to be installed within interior spaces, which would compromise the historic appearance of the interior. Where existing HVAC systems are replaced, no additional consultation is technically required, but the CRM program nonetheless notifies the SHPO if even small interior changes are anticipated. With treatments and materials used consistently, this process is largely streamlined, with the PA offering even more simplification for pre-approved processes like window replacement.

Modernization in historic structures serves multiple aspects of the VAARNG sustainability plans; HVAC and lighting systems are typically approached first when evaluating each property for energy upgrades, as these systems often account for more than 60 percent of overall utility use. VAARNG has documented an energy intensity drop of nearly 50 percent per square foot across buildings that have received system and building envelope upgrades. Throughout Camp Pendleton, rehabilitated structures received LED and T8 lighting updates and conversion to natural gas use rather than fuel oil or propane.

The CRM program has been tasked with supporting the construction of new energy infrastructure within



With SHPO approval, old expressed-muntin windows are replaced with integrated-muntin alternatives. This replacement preserves the historic aesthetic while conserving costs and increasing the efficiency and function of the buildings.

the historic district. A unique challenge is the consultation necessary to allow for removal of obsolete power poles as utilities are buried. In many cases, these poles are old, deteriorated, falling down and all but useless as infrastructure. The CRM program is coordinating with SHPO to affirm that the poles and overhead power lines are not contributing features to the historic district. VAARNG plans to install street lighting on wooden poles that evoke the same look as those removed, and where possible, in the same locations where utility poles currently stand. The CRM program also assisted in siting a new solar array currently being constructed on the post, which will help to power the neighboring aquarium. To avoid impacts, the team identified an already paved parking area screened from view from most of the installation as a location that would not impact the district's NRHP eligibility.

Cultural Landscape

Camp Pendleton is recognized in its entirety as a cultural landscape under the NRHP, but also contains individual cultural landscape resources that contribute to its NRHP eligibility. Primary among these are the drill field, original rifle range, and beachfront. This is why the entirety of the installation is an NRHP property, not just the collection of buildings in the cantonment area. Cultural landscapes often take the form of designed gardens or parks, but for Camp Pendleton, the designation is associated with the functional and military history of the training site. The landscapes are still in use, with ceremonies and programs held on the drill field, the current rifle range employed by Navy Seals for canine training and by VAARNG and others for firing practice as well, and the beachfront supporting VAARNG's current rifle range. The evolution of use across the property contributes to its cultural significance. The beachfront has come to be understood as part of the cultural landscape more recently, taking into account its reputed WWII observation points and its natural dune and native grass habitats. Indeed, the beachfront is one of the primary reasons that Camp Pendleton was originally sited where it is. Over time, the beach has evolved from a purely natural landscape to one where human intervention has both preserved and found new ways to use it. The VAARNG rifle range was situated to allow for firing towards the ocean and protected dunes, thereby creating the positional



A view of the beachfront incorporated in the Camp Pendleton cultural landscape. The viewing platform dates to the 1960s.

relationship essential to cultural landscape designation. Today, the beach with its high dunes functions to help protect Camp Pendleton from incoming storms, including winds and rising water.

Archaeological Resources

Camp Pendleton has undergone a Phase I archaeological survey in support of the energy islanding efforts, clearing the way for utility lines to be buried (and power poles removed) throughout the post. Dominion Power, a major utility provider in the region, is seeking to increase renewable energy with the development of wind towers offshore, which require running buried power lines along the Camp Pendleton border. VAARNG and Dominion Power have coordinated their concurrent evaluations.

Previous archaeological surveys had been completed at Camp Pendleton, but these tended to be project-driven rather than comprehensive. The current investigation fills in those gaps in the installation survey record. Preliminary findings have indicated five archaeological sites, including one prehistoric site consisting of a lithic scatter near Lake Christine. The other sites are historic or related to building sites.

Programmatic Agreement

The PA being routed for SHPO and ACHP signature is a tool that has been developed over the past 6 years. Originally envisioned to support a streamlined archaeological survey process on Fort Pickett Maneuver Training Center, the CRM program broadened the PA scope to include all VAARNG

properties, present and future, all foreseeable agency actions, and both archaeological and architectural resources. The agreement exempts all documented and evaluated resources or previously surveyed areas with no historic properties from further consulting requirements. In the event of ground disturbance in unsurveyed areas, Section 106 requirements still apply with few exceptions. Regulatory oversight, however, is tremendously streamlined because VAARNG now has the freedom to report annually all projects that follow the standard treatment and maintenance protocols laid out in the PA and all projects for which the CRM program makes a finding of “no historic properties affected”. In the historic district of Camp Pendleton, VAARNG is free to proceed with maintenance and renovations that employ treatments agreed to in the PA. Small-scale ground disturbance in previously disturbed, low probability areas may also proceed without any Phase I surveys. Each annual report will detail actions taken as well as any properties that have been newly evaluated and determined eligible/potentially eligible for the NRHP. For any activity deemed to have an adverse effect, the CRM program and the SHPO, with NGB and ACHP support, have established a letter agreement approach to resolution, rather than the time-consuming, complicated execution of a Memorandum of Agreement.



The CRM program’s work is essential to the smooth, uninterrupted operations on Camp Pendleton as it undergoes unprecedented transformation while still serving current VAARNG needs. The establishment of the new PA is a direct benefit to the training and readiness mission, limiting the regulatory oversight that could delay needed projects and empowering the installation to develop the facilities and sustainability features most essential to VAARNG. Exemptions on routine management and maintenance, as well as the exemption for small-scale ground disturbance in low-probability and disturbed areas, represents a dramatic reduction in the manpower that was once invested in meeting the regulatory burden for every action falling under Section 106 review in the historic district.

The CRM program’s integration with the Sustainability program at Camp Pendleton is also in direct support of VAARNG’s long-term plans. The wide-ranging sustainability efforts on the installation will create a level of energy resiliency and security

that is currently unmatched in the Army National Guard, and those capacities will directly benefit all local military branches and the greater community. Without the dedicated efforts to balance modernization with historic district preservation, the literal sustainability of Camp Pendleton as a VAARNG resource would be at risk. VAARNG has set a high standard in its management of Camp Pendleton, as it is fairly unusual for military installations to be listed in the NRHP in their entirety; indeed, Camp Pendleton is the only installation in Virginia to be fully listed on the NRHP. The CRM program has ably met this challenge, creating an installation that can meet the requirements of a modern post while still anticipating its future and preserving the past.

The combination of ICRMP, PA and Cultural GIS programs has allowed Camp Pendleton’s CRM program to formalize virtually all aspects of resource management and embed those requirements throughout the installation’s operations. The cultural GIS layer has been updated and operationalized to function as a planning tool, rather than simply a database. The CRM program’s work during the award period is particularly visible to other states because of the military outreach and education surrounding Camp Pendleton’s resiliency and security projects. The installation has been able to share its techniques and successes with the wider military community interested in balancing historic preservation with modern needs.

The CRM program’s efforts have benefited tenants on Camp Pendleton as well. A number of the historic district buildings are leased by organizations like the FBI and the Navy, or used by the post’s Youth ChalleNGe program. The CRM program worked with the SHPO and the FBI to renovate a post garage to accommodate FBI boat storage; a reversible design to extend the garage bays was approved by the SHPO. Upgrades to buildings used by the ChalleNGe program have numbered among many of the facilities modernization projects conducted in the past few years. Further, VAARNG coordinated with the SHPO on approving installation of buildings to support Navy SEAL training in the current rifle range area.

Tribal consultation has not been an emphasis for Camp Pendleton’s CRM program, as no tribes have

indicated interest in the area and no tribal-related sites have been discovered to date. The installation's land has been significantly disturbed since its establishment, though VAARNG continues to work with College of William and Mary researchers to ensure that unknown cultural sites are not overlooked or disturbed as the projects on post proceed. Field crews are contracted from the college's Center for Archaeological Research (WMCAR). The students who participate on WMCAR's field crews learn valuable skills and techniques while sharing in the advancement of the field. The primary partner in preservation and stakeholder for the installation is the SHPO, and most of the CRM program's outreach has been focused in this area, particularly as the PA has been finalized.