

FISCAL YEAR 2006
SECRETARY OF DEFENSE ENVIRONMENTAL AWARDS
U.S. ARMY NOMINATION

FORT DRUM, NY

CULTURAL RESOURCES MANAGEMENT, INSTALLATION



SUSTAINING THE ENVIRONMENT FOR A SECURE FUTURE

INTRODUCTION

Fort Drum is home to the Army's 10th Mountain Division, which has played important roles in U.S. military operations in Iraq and Afghanistan and is currently the most deployed division in the Army. Fort Drum's population includes 15,000 Soldiers and 2,500 civilians. Fort Drum also supports approximately 20,000 reservists and 9,000 active duty from all services for training purposes.

Fort Drum Military Reservation is located 10 miles northeast of Watertown, N.Y. and encompasses a single contiguous property totaling 107,265 acres. Fort Drum is located in the North Country region of New York, on the banks of the Black River just east of Lake Ontario. The installation's landscape is a mix of glacial deltaic sand plains, grasslands of the glacial lake plain, northern hardwood forests of the Adirondack lowlands and a small portion of Black River alluvial flood plain.

Fort Drum's mission is to "provide equitable, efficient and effective management of Fort Drum resources to support readiness and mission execution of combat-ready forces, while providing for the well-being and security of Soldiers, civilians and family members; improving infrastructure and preserving the environment."

Cultural History

Today, the Fort Drum cultural resources management (CRM) team manages the entire installation, which encompasses over 200 prehistoric and 700 historic archaeological



Fort Drum is home to the Army's 10th Mountain Division.

sites, with 151 currently potentially eligible, five National Register of Historic Places (NRHP) listed archaeological districts and one NRHP listed historic district.

The earliest human occupation of Fort Drum appears to be associated with the shoreline and fossil islands of Glacial Lake Iroquois, whose beaches remain as the sands of the Pine Plains delta. Stone tools discovered at Fort Drum from the Paleo time period include a Clovis Point, two prismatic blades and a tool kit that matches the Paleo boat building assemblage discovered at the U.S. Navy training area on San Clemente Island, Calif.

Prehistoric occupation of the area was continuous from the Paleo time period to the present. An archaeological inventory survey at Fort Drum has identified over 200 Native American ancestral places. The Fort Drum archaeology program is a resource for archaeologists and the wider public to gain a better understanding of the origins of the St. Lawrence Iroquoians, ancestral people to Fort Drum's Native American consultation partners, the Oneida Indian Nation, the Onondaga Nation and the St. Regis Mohawk Tribe.

Intermittent encounters in the Fort Drum region between Native American governments, societies, residents and European explorers, missionaries and settlers began in the mid-16th century and continued until the treaty of Canandaigua opened



Fort Drum Soldiers conduct squad maneuver training in and around hardened cultural resource sites.

the area for Euro-American land speculation and settlement after 1797. Fort Drum was part of the northeast land development after the War of Independence. Several tracts of land were sold to wealthy French emigrants and James LeRay de Chaumont, a friend of Benjamin Franklin, purchased the acreage that included Fort Drum. By 1807, James LeRay de Chaumont and his children moved to the site of the LeRay Mansion where they entertained distinguished guests including President James Monroe and Joseph Bonaparte – brother of Napoleon.

The Army first expressed interest in the Fort Drum region when it leased large sections of the area for a series of training exercises beginning in 1907. At the commencement of World War II, Pine Camp, as it was then called, underwent a huge expansion in which 75,000 acres of land was purchased by the federal government.

BACKGROUND

The CRM team is charged with identifying and protecting all of the ancestral places and historic archaeological sites potentially eligible for the NRHP that occur on Fort Drum. The CRM team has fully embraced the mission of Fort Drum and has gone beyond the first goal in the Integrated Cultural Resources Management Plan (ICRMP) of minimizing cultural resources disruption to military land use by offering pro-active support to Soldier training. The program staff have concluded that the objectives of the mission commanders and those of the cultural resources program are not mutually exclusive and are in fact very often aligned. Likewise, in the last two years Fort Drum has planned for nearly \$1 billion in new construction and experienced no delays due to conflicts with cultural resources and incurred no damage to any cultural properties.

The primary management tool for accomplishing the goals and objectives of the Fort Drum CRM program is the ICRMP, first signed at the end of 2001. The draft of the updated plan is complete



Significant archaeological sites on Fort Drum include the original brick clamp where the bricks for the LeRay Mansion were made.

and is currently being reviewed by the various stakeholders. The CRM staff use the plan and its policies and guidelines on a daily basis for the management of the program.

The Fort Drum CRM team, which is part of the Environmental Division within the Directorate of Public Works (DPW), consists of a cultural resources manager, the archaeological survey coordinator and a curator/outreach specialist. The CRM team relies heavily on cooperation from the Integrated Training Area Management (ITAM) Land Rehabilitation and Maintenance (LRAM) program. The CRM team also draws on the skills of two geographic information system (GIS) analysts and the Fort Drum forester.

Major Resource Features

To date, over 80 percent of the land on Fort Drum has been inventoried. Among the most notable of Fort Drum's many cultural resources are:

- The LeRay Mansion and Historic District, which features five original historic structures that are listed on the NRHP.
- Five former villages assimilated by Fort Drum in 1941, currently registered and protected as National Register listed historic archaeological districts.
- A 30-acre lithic scatter with over 400 hearth features dating to the Early Woodland period.

- A St. Lawrence Iroquoian Village including six long houses dating to the mid 16th century.
- Paleo sites from the glacial lake shorelines and fossil islands including one with a possible boat building tool kit.



The LeRay Mansion is one of the six Fort Drum historic and archaeological districts listed on the National Register of Historic Places.

Collaborative Partnerships

Fort Drum CRM staff have invested heavily in developing cooperative relationships with various colleges and universities, as well as with their counterparts at other Department of Defense (DoD) installations and federal agencies. The Cultural Resources program has used a system of creative partnerships to strengthen the scientific excellence of the program at no cost to the government. Currently three Ph.D. theses are focused on Fort Drum sites. This research not only provides site evaluation, but brings the expertise of the dissertation committees to the installation. The Fort Drum CRM program has continued to set and fulfill high standards of scientific excellence including annual presentations at the Society for American Archeology meetings.

CRM staff also coordinate consultation between Fort Drum and federally recognized tribes with ancestral ties to Fort Drum properties. Their programmatic emphasis on stakeholder involvement and inter-agency cooperation has resulted in a number of formal agreements and numerous informal collaborations that leverage support and increase program accomplishments.

These partnerships include:

- Site visits and ongoing consultation addressing collections issues and site interpretation with the St. Regis Mohawk Tribe, Oneida Indian Nation and Onondaga Nation.
- Geo-archaeology and earthworks research with the New York State Museum.
- Paleomaritime partnerships with Bard and Hamilton Colleges, Colorado State University and the Buffalo Museum of Science.
- The Predictive Modeling Working Group with the U.S. Air Force and SRI Foundation.
- The Soldier Training for Cultural Preservation Project with Dartmouth College.
- Faunal analysis and electron microscopy with students from St. Lawrence University.
- College credit for students who work on Fort Drum archaeological survey crews through the State University of New York (SUNY), Potsdam.

PROGRAM SUMMARY

All ongoing administrative and programmatic objectives of the ICRMP are actively managed, and each goal has been met or exceeded in the last two years. The current revisions to the ICRMP will raise the bar even higher. Current ICRMP goals and objectives are outlined below:

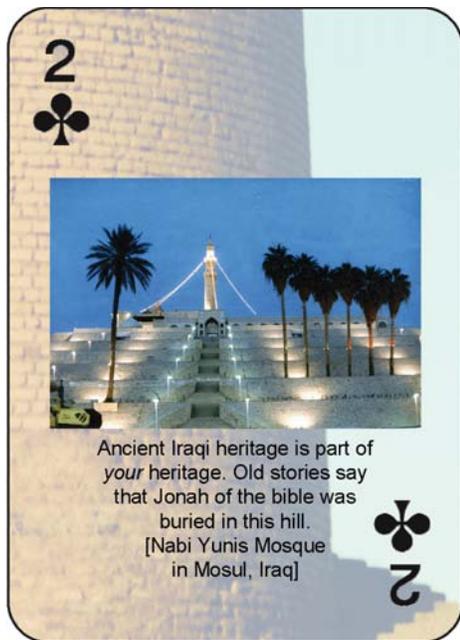
- Comply with federal and state laws and regulations governing the treatment of cultural resources while causing the least disturbance to the military mission.
- Review Fort Drum actions in accordance with the National Historic Preservation Act of 1966 and National Environmental Policy Act to ensure minimal impacts to significant cultural resources.
- Protect and monitor NRHP eligible archaeological sites.
- Curate cultural resources collections in accordance with federal and state regulations.
- Consult with partners in cultural resources management, including the New York State Historic Preservation Office (SHPO), the Advisory Council and federally recognized Native American tribes.

ACCOMPLISHMENTS

In addition to the traditional cultural resource preservation program, Fort Drum CRM staff have made significant and often innovative gains through mission enhancement, awareness training, inter-office coordination and application of innovative technologies.

Cultural Resource Preservation In Theater Soldier Training Project

This program relies on a two-pronged approach of educational outreach and resource avoidance training. The CRM staff have developed various training aids including playing cards and Army Combat Uniform (ACU) pocket cards with key cultural resources messages.



Example of a "playing card," which is designed to educate and promote awareness of sacred cultural treasures in theater.

The cards promote identification of and respect for sensitive cultural resources when Soldiers are deployed, which can go a long way towards winning the hearts and minds of the local population. The training aides are intended for distribution DoD-wide with 40,000 decks of playing cards and 50,000 ACU cards in the first printing.

"Dr. Rush [Fort Drum cultural resources manager] has assembled an excellent team of specialists and technicians to facilitate the [Training for In Theater Cultural Resources Protection] project, and her success is to be commended."

- Curtis A. Bowling, Director, Environmental Readiness and Safety (DUSD -ATL)



Fort Drum archaeology and LRAM crews worked together to build a replica stone cone mosaic tower and Middle Eastern style cemetery as avoidance targets for Fort Drum's Adirondack Range 48.

The second prong is resource avoidance. In partnership with ITAM, the Fort Drum cultural resources team has constructed two mock Middle Eastern archaeological sites and two Middle Eastern style cemeteries for realistic Soldier training. They also supported the Air National Guard by designing and constructing avoidance targetry at the Adirondack Range.

Site Hardening Techniques

In order to support mission training requirements, CRM staff members have aggressively applied site hardening techniques to protect valuable cultural resources while reutilizing them for training purposes. The alternative, to restrict access to potential sites and limit the scope of activities in surrounding areas, imposes an unacceptable restraint on light infantry maneuver training that is critical to the development of Soldiers' skills. The Fort Drum CRM staff members have done an excellent job in balancing these priorities to the maximum benefit of the Army and the cultural heritage of the installation and larger regional area. Among the projects they have completed or are currently developing are:

- Successfully hardened a NRHP Archaeological District and transformed it into a historic area training opportunity.
- Secured Office of the Secretary of Defense Legacy funding to demonstrate that similar site hardening techniques can be implemented at a wide range of installations.

- Developed a site hardening handbook and video for DoD-wide distribution.
- Presented site hardening methods at 2006 ITAM conference.
- Prepared two National Register eligible sites at U.S. Marine Base Quantico for transformation into training assets and are guiding an adaptive reuse effort for listed World War I trenches at Fort Lee, Va.

Legacy Funded Paleo-Maritime Project

As part of their ongoing research into improved site location and management, the Fort Drum CRM staff developed the first ever context-specific prehistoric site location predictive model that applies to the entire continental United States. They have partnered with four installations and four universities, generating specific, predictive maps for Fort Drum, Hill Air Force Base (AFB) Ranges, Dugway Proving Ground, West Point and Wright Patterson AFB. In order to publicize and share the innovative research that has been conducted, they have established a Web site to serve as a clearing house for all paleo-maritime research and were successful in generating Associated Press coverage of exciting archaeological discoveries on DoD lands. This ongoing effort is continuing to expand, with a goal of encouraging collaborative research on this topic across the United States.

Remote Sensing

The Fort Drum CRM program currently runs the only installation-based remote sensing program in the Department of Defense, frequently partnering with other DoD agencies and installations on various efforts. Among the collaborative projects Fort Drum has participated in are:

- Provided an emergency radar survey at Fort Story in order to open a possible 17th century occupation area as a landing zone for Navy Seal training.
- Supported remote sensing survey of a 19th century plantation for the Huntington District Corps to help with community involvement issues.
- Supported Picatinny Arsenal Hessian Cemetery Perimeter Survey, July 2005.

SRI Predictive Modeling Project

In order to streamline compliance, Fort Drum was selected by the SRI foundation to participate in their Legacy and Strategic Environmental Research and Development Program (SERDP) funded DoD predictive modeling compliance project. Fort Drum routinely uses archaeological predictive models when making management decisions. Therefore, SRI felt that the installation was an excellent example for their pilot study. SRI is developing a programmatic agreement with the SHPO where there will be legal recognition for using Fort Drum's scientific models as a management tool. Not only does this project leverage valuable Programmatic Agreement assistance for Fort Drum from one of the nation's leaders in cultural resources compliance, but it also offers the possibility for increasingly cost effective, efficient and informed management for other installations. These various predictive modeling efforts have saved Fort Drum over \$100,000 per year in survey costs over the last five years. Applied DoD-wide they have the potential to save millions.

CONCLUSION

The Fort Drum CRM team has been very successful integrating their efforts to support the mission of Fort Drum. They continually strive to develop innovative ways to accomplish the goals and objectives of their program more effectively while avoiding unintended conflicts with critical training and Soldier support activities.

The Fort Drum staff feel that cultural resource management is too important for DoD installations to be reinventing the wheel. With that in mind, Fort Drum has used the Legacy Resource Management to actively disseminate ideas and accomplishments, effectively networking with all branches of DoD to collaborate and share information with other installations. The site hardening project and the work at Quantico has demonstrated that Fort Drum methods can be implemented at different installations in different environments with equally successful results.

On the cover: U.S. Army Soldiers from the 10th Mountain Division (Light Infantry), Forward Support Battalion Fort Drum, NY, survey the area for any possible threats at Kandahar Army Airfield, Afghanistan. (DoD photo by SPC Gul A. Alisan)