



Integrating Archaeological Models: Management and Compliance on Military Installations

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Background:

As a federal agency, the Department of Defense (DoD) is required to comply with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) when planning for actions that may adversely impact the human environment, including places that are listed in or eligible for listing in the National Register of Historic Places (NRHP).

Every year, DoD installations invest significant time and funding to comply with these mandates. Federal agencies across the board are under increasing pressure to reduce budgets even though demand for DoD military training and development has increased. With the convergence of these two forces, the issue of how to manage cultural resources, including archaeological sites and other kinds of historic properties, without compromising mission objectives has become paramount. Archaeological predictive modeling is a tested means of providing objective data that can be used for streamlining compliance with NHPA and NEPA.

Objective:

The first component of this study was designed to explore ways in which DoD installations can use predictive modeling to reduce the time and expense associated with compliance, while enhancing overall cultural resources management (CRM) planning and stewardship capabilities.

The second component of the study is an initial attempt to expand archaeological modeling to include the concept of site significance as well as location. Over the past several decades, military installations have identified tens of thousands of archaeological sites as part of general or project-specific planning. The presence of a large number of unevaluated sites has now begun to impose constraints on the military mission at some installations. This is especially true for installations where there have been changes in military training strategies and where Base Realignment and Closure (BRAC) actions and consolidation of missions will require evaluation and mitigation of effects to large numbers of archaeological sites. Case-by-case archaeological testing of many thousands of sites in order to determine their eligibility to the NRHP would be very expensive and very time-consuming. This study presents an approach for addressing the significance of archaeological sites on a programmatic, rather than a case-by-case basis to develop what is, in essence, a significance model.

Summary of Approach:

The project team worked with Eglin AFB in Florida and Fort Drum in New York to apply their existing archaeological predictive models to mission planning and historic preservation compliance. The team also assisted the installations in beginning a dialog with their stakeholders/consulting parties about these applications, and developed concept drafts for programmatic agreements (PAs) to implement these applications. The project team also worked with information from the Utah Test and Training Range (UTTR), administered by Hill AFB, to evaluate the feasibility of developing significance models. As proposed here, a significance model is a set of computer algorithms for sorting archaeological sites within a database into provisional management categories based on their potential to yield particular types of information, their traditional cultural values, and other important characteristics as defined by an installation.

Benefit:

Once executed, the PAs will be used by the installations to improve and streamline their historic preservation compliance activities, as well as lower the risk of mission delays due to cultural resource issues. The proposed significance models will serve as a tool that shifts archaeological predictive modeling efforts away from the current exclusive focus on site location and eliminates case-by-case evaluations of site significance. The models provide a more programmatic approach to evaluating site significance and establish a more effective framework for installation resource management decision-making.

Accomplishments:

The report, *Integrating Archaeological Models: Management and Compliance on Military Installations*, provides innovative and programmatic approaches to improving and streamlining military installation environmental compliance responsibilities, particularly in terms of Section 106 of the NHPA. These approaches were designed for efficient integration into existing installation compliance protocols and procedures.

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