



# Improvement and Implementation of Archaeological Predictive Modeling on DoD Installations

Project #  
03-167

## Background:

The Department of Defense (DoD) has a compelling need to know where archaeological sites are on military installations to secure maximum access to land for mission requirements. In 2001, **Legacy Project 01-167: Evaluation of Archaeological Predictive Modeling on DoD Installations**, examined the use of DoD models (see the Project 01-167 factsheet for more information). Based on the final report from that project, the Legacy Program funded a second phase to determine how to improve and implement the use of archaeological models as a successful cultural resource management tool.

## Objective:

The objective of the second phase of the project was to hold a workshop for installation cultural resource managers to come to a consensus on how DoD can more fully incorporate models into cultural resource management programs. The workshop addressed four topics: database issues, modeling techniques, modeling and compliance, and the role of spatial analysis.

The secondary objective of the project was to identify and create products or tools that assist installations in developing models, improving existing models, or use models to more effectively in order to:

1. Manage resources,
2. Improve stewardship, and
3. Facilitate compliance with environmental and historic preservation laws.

## Summary of Approach:

Workshop attendees included professionals with expertise in modeling, military installation cultural resources management, and environmental and historic preservation compliance. Participants were divided into three breakout groups to facilitate the identification and creation of the proposed products and tools:

1. Group 1 identified ways to build better models by examining appropriate use of technology, database design, data quality, and modeling techniques.
2. Group 2 looked at incorporating modeling into the planning, NEPA, Section 106, and tribal consultation compliance processes to support the military mission.
3. Group 3 discussed modeling, archaeology, and stewardship with a focus on the role of research in resource management, synthesizing existing data into management decisions, and focusing preservation activities on “important” sites.

## Benefit:

Upon completion, this project will benefit DoD by determining how to more efficiently and effectively manage limited cultural resources funds by incorporating modeling into existing DoD environmental programs. The results of this analysis can substantially reduce time and money by providing successful models for eliminating unnecessary costly inventory and evaluation projects.

## Accomplishments:

The workshop summary produced the following recommendations and observations:

1. Shift modeling efforts away from a focus on predicting site locations
2. Use modeling to better evaluate and resolve adverse effects on sites affected by military activities.
3. Use modeling as a tool for decision-making to focus funding and efforts on fewer, more important, archaeological sites.
4. Incorporate modeling into existing military environmental programs and systems to achieve significant savings.
5. Incorporate modeling into the fabric of compliance and historic preservation laws, mandates, and regulations.

The next step is to inform senior DoD leadership and DoD installation managers about the usefulness of modeling. This will be accomplished through the distribution of a workshop report; by presenting the workshop results at professional meetings and conferences; by creating a PowerPoint presentation to show to senior DoD management; and by documenting current efforts within the DoD that are using models as site evaluation tools.

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This factsheet, the 01-167 report, and the forthcoming workshop and outreach materials are available online at:  
<https://www.denix.osd.mil/denix/Public/Library/NCR/archaeology.html>