US Army Corps of Engineers®
Engineer Research and Development Center

Controlled Archaeological Test Site (CATS)

Purpose

The Controlled Archaeological Test Site (CATS) facility at the Construction Engineering Research Laboratory (CERL) in Champaign, IL includes a number of well-documented surface and subsurface features that simulate those found at prehistoric archaeological sites across much of the eastern United States. The facility is specifically designed to help Department of Defense (DOD) Cultural Resource managers, who are required to: (1) identify archaeological sites and other historic properties, (2) evaluate their eligibility for the National Register of Historic Places (NRHP), and (3) ensure that properties that are or may be eligible for the NRHP are not inadvertently demolished, substantially altered, or allowed to deteriorate significantly. Because the dimensions, material composition, and depth of the features of CATS are known, no excavation is required to "ground-truth" (test and verify) the results of geophysical surveys and survey methods, which characteristically use instrumentation to non-intrusively (and cost-effectively) locate and identify archaeological sites.

Specifications

CATS is one of only two controlled archaeological test sites in the United States. CATS measures 50 by 50 meters, and includes simulated prehistoric hearths, storage and cooking pits, burials, house floors, palisades, mounds, embankments, and ditches.

Benefits/Savings

The CATS facility provides a valuable opportunity for systematic, repeated experiments. It offers an excellent setting to test or compare geophysical instruments and software, and to train or evaluate geophysical field technicians. The well-documented features at CATS obviate the need for expensive and destructive ground truthing excavations at real archaeological sites.

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Success Stories

CATS has been used by several researchers to test new geophysical methods. A research team from University of California at San Diego tested shallow seismic reflection and seismic tomography techniques at CATS. In support of that effort, researchers from University of Denver conducted a ground penetrating radar survey. In 2002 and 2003, University of Denver researchers returned to CATS to collect additional data for a Strategic Environmental Research and Development Program (SERDP) project. Also in 2003, Industrial Measurement Systems, Inc. tested a low frequency acoustic imaging system that was based on a concept by ERDC/CERL researcher Dr. Charles Marsh.

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