

## FACT SHEET

"CURRENT APPLICATIONS"  
PUBLIC OUTREACH SERIES

Funding for this project has been provided through the U.S. National Park Service. This Fact Sheet series provides educational information on current examples of common remote sensing and geographic information system applications being addressed at UNL Center for Advanced Land Management Information Technologies (CALMIT).

# Noxious Weeds Inventory and Mapping at Capulin Volcano National Monument, Fort Union National Monument, and Lake Meredith National Recreation Area

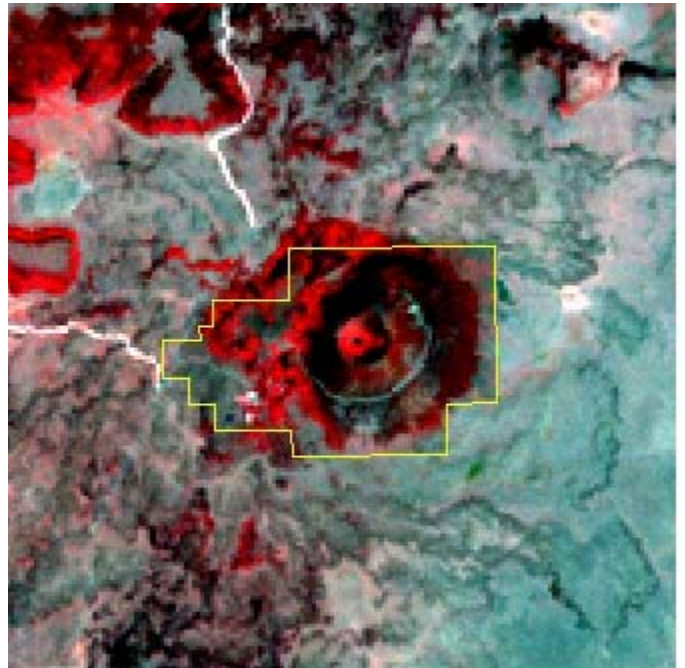
**Principal Investigators** Sunil Narumalani, CALMIT, University of Nebraska-Lincoln ([sunil@calmit.unl.edu](mailto:sunil@calmit.unl.edu))  
Jared Burkholder, CALMIT, University of Nebraska-Lincoln ([jburkhol@calmit.unl.edu](mailto:jburkhol@calmit.unl.edu))  
Gary Willson, NPS Research Coordinator, National Park Service  
Susan Tunnell, Department of Agronomy and Horticulture, University of Nebraska-Lincoln

**Introduction:** The National Park Service needs to identify and delineate areas of noxious weeds within Capulin Volcano National Monument and Fort Union National Monument, New Mexico, and within a portion of Lake Meredith National Recreation Area, Texas. CALMIT will use satellite imagery, aerial photos, and GPS technology to aid in inventory surveys and mapping of these areas. The National Park Service will use this information to assess the effectiveness of ongoing weed management actions and to complete NEPA compliance for the weed management program.

**Methods:** Prior to field surveys, satellite imagery will be utilized to assess the potential areas of infestation. Weed survey maps will be created by collecting location coordinates of weed infestation using GPS technology.

**Data Analysis:** GPS data will be differentially corrected and input in a Geographic Information System (GIS). Data analysis will comprise of areal measurements of the different weed types that are present at the sites. Spatial and attribute data will be available to the National Park Service at the completion of the project.

### Capulin Volcano National Monument September 7, 2000



Landsat Enhanced Thematic Mapper + (RGB = 4,3,2)

### Capulin Volcano National Monument



Photo acquired March 27, 2003

### Capulin Volcano National Monument



Enhanced Digital Orthophoto