

CERP

Comprehensive Everglades Restoration Plan

Cultural Resources Overview and Survey Strategy

Environmental Settings Typical of Archaeological Sites



Oak Hammock



Willow Pond Next to Slough



Willow Pond



Limestone Ridge



Sinkhole



Slough

PURPOSE

As part of the Comprehensive Everglades Restoration Plan (CERP), the U.S. Army Corps of Engineers, Jacksonville District, and the South Florida Water Management District, will construct projects that cover large acreages and will affect cultural resources. As a result, the Corps requested an updated archaeological survey strategy to more effectively isolate probability areas and locate sites in the region.

Development of the survey strategy included:

- Background research to provide an overview of known sites
- Evaluation of past survey procedures
- Identification of site probability variables
- Development of a regional survey approach

SURVEY STRATEGY

Beginning in the 1970s, the use of aerial photography has proven the most productive strategy for site survey in the unique regions of southern Florida. Combining this approach with a variety of other data sources has been very effective in locating potential sites.

TOOLS FOR IDENTIFYING PROBABILITY AREAS

Historic aerial photographs, historic maps, Government Land Office (GLO) maps, USACE War Department maps, Digital Elevation Models (DEM), soil type maps, and others.

HIGH PROBABILITY SITE LOCATIONS IN SOUTHERN FLORIDA

Archaeological sites in the CERP area are common in slightly elevated areas within a wet environment. Pond margins, tree islands, upland hammocks, ridges, sinkholes, and slough margins exhibit Moderate to High Site Probability. In drier areas along the northern, eastern, and western portions of the CERP area, elevated sandy rises, knolls, and ridges can also contain sites.

• TREE ISLANDS

Tree islands can range in size from a fraction of an acre to hundreds of acres. They often have an elongated "tear drop" shape that resulted from water flow patterns in pre-drainage times.

• PONDS

Small ponds occur in current or former marsh and swamp environments and often contain, are surrounded by, or lie adjacent to, archaeological sites.



PRE-DRAINAGE LANDSCAPE

Originally, most of southern Florida was wetter than today, with slight rises in elevation dotting the region. These rises, or tree islands, of various types have a High Probability for containing archaeological sites.



ALTERATION OF THE LANDSCAPE

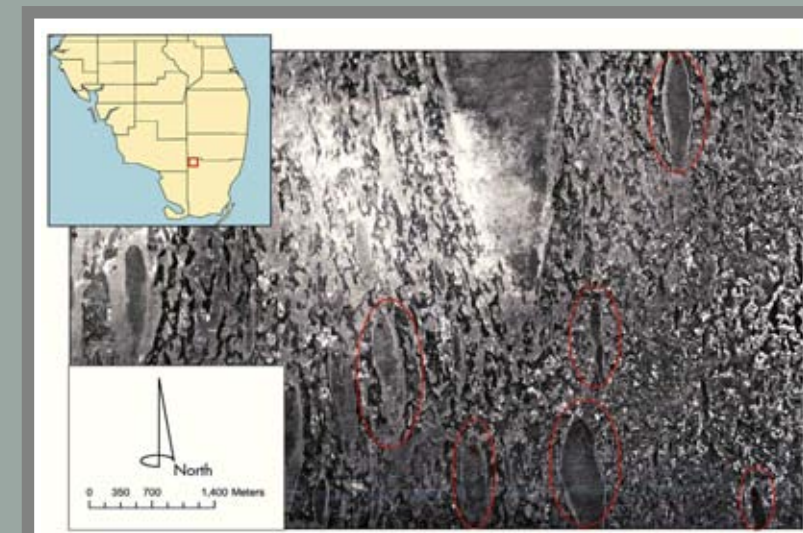
Compartmentalization and related water management activities have altered water levels and resulted in many changes. Evidence for this can be seen in alterations to vegetation, topography, water depth, and water flow over time.

SUMMARY OF RESULTS

The key to identifying archaeological sites in the CERP project area lies in an understanding of the pre-drainage environment and the identification of landscape signatures visible today.

HISTORIC AERIAL PHOTOGRAPHS

In many cases, the distinctive vegetative signatures of the 1940s were replaced with forests of exotic vegetation, agricultural plots, citrus groves, or pasture by the 1970s. Identifying altered and unaltered site probability areas on black and white aerials is best approached using a stereoscopic viewer.



FIELD APPROACH

Archaeological assessment survey includes the following:

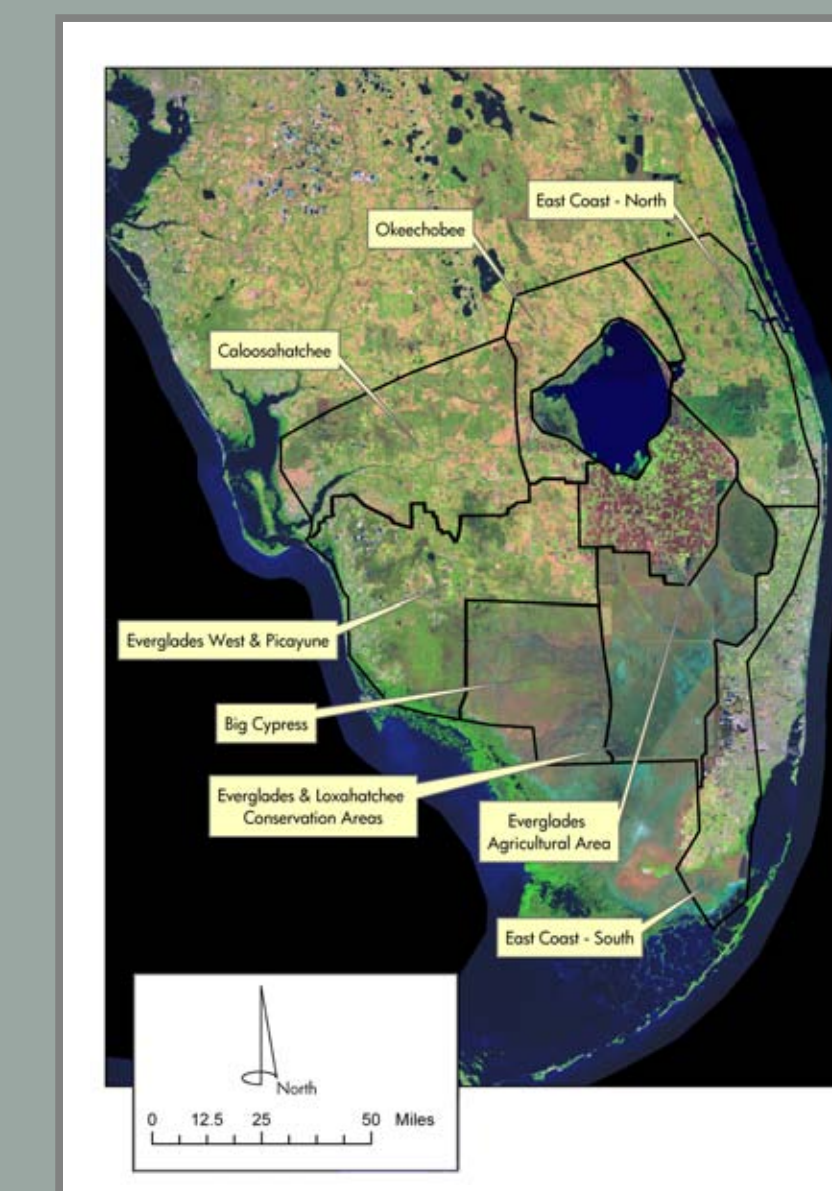
- Initial reconnaissance survey
- Systematic subsurface testing
- Judgmental subsurface testing
- Site bounding
- Data collection
- Mapping



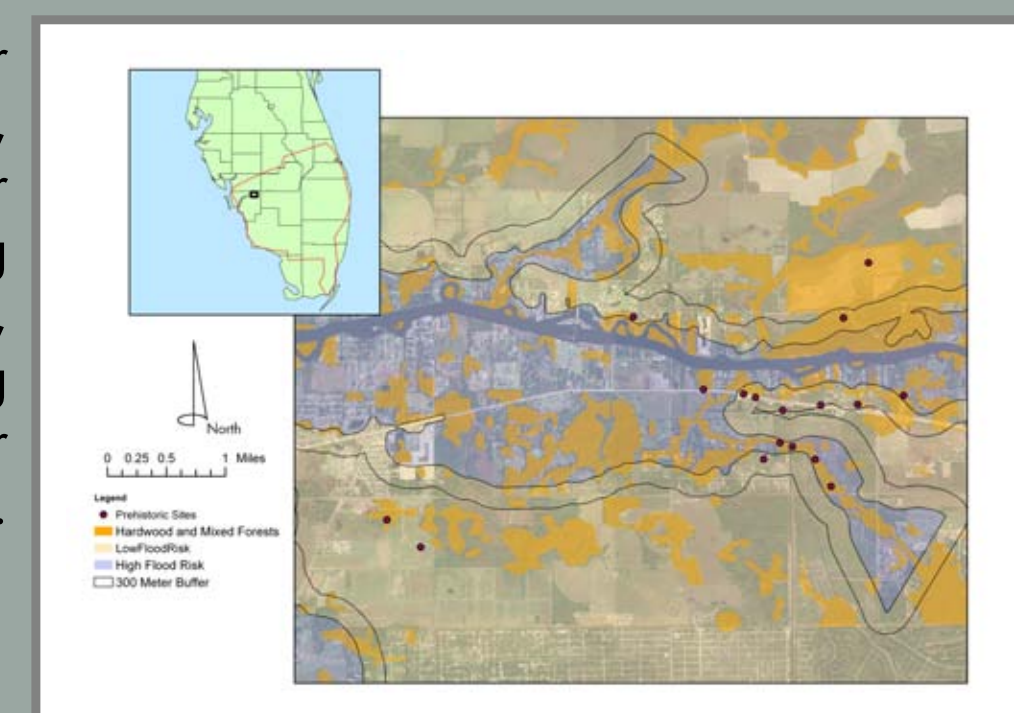
GIS CONTRIBUTIONS TO SURVEY STRATEGY IN CERP

The maps that follow illustrate how GIS data can be used to identify patterns of site occurrence within eight subregions of the CERP area.

CERP SUBREGIONS



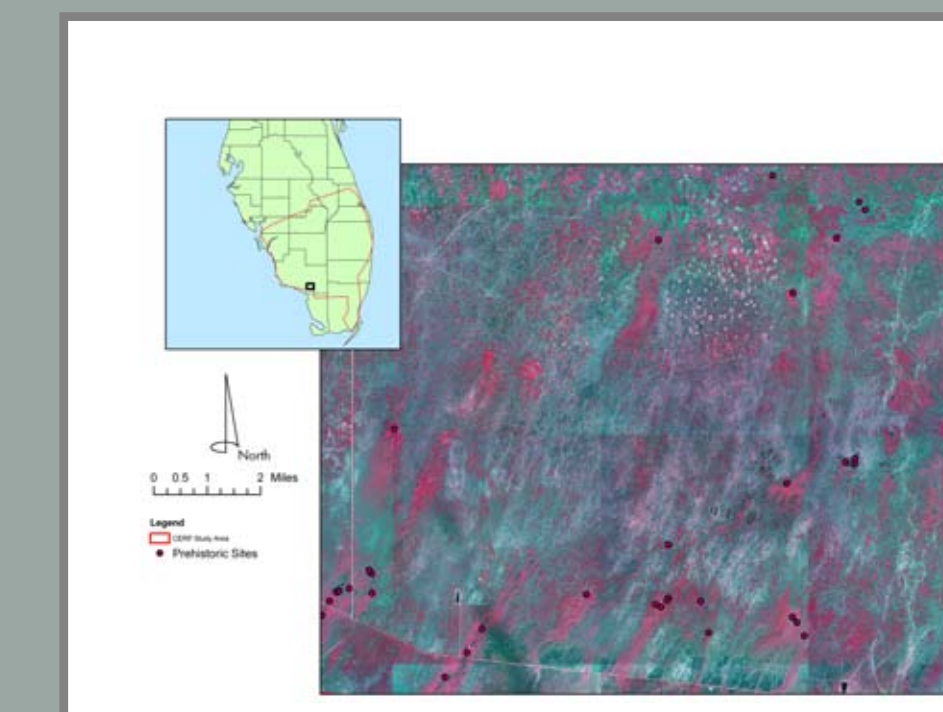
The Caloosahatchee River dominates this subregion. Clearly, the river as a whole was a major draw for local inhabitants. By using vegetation and flood layers in GIS, it is possible to locate areas along the river with a higher potential for precontact activity than others.



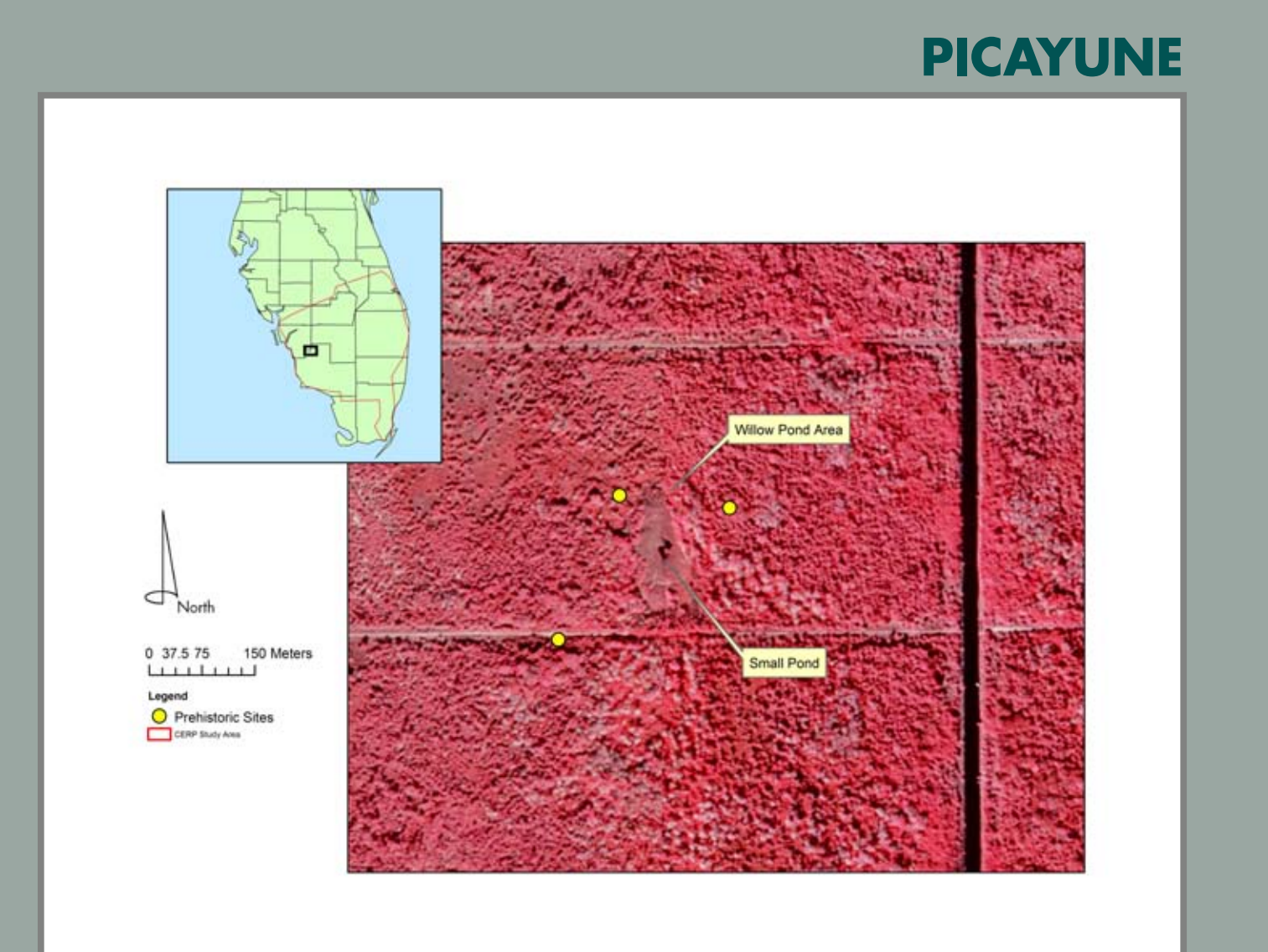
CALOOSAHATCHEE

The figure to the left illustrates eight environmental subregions in CERP.

BIG CYPRESS



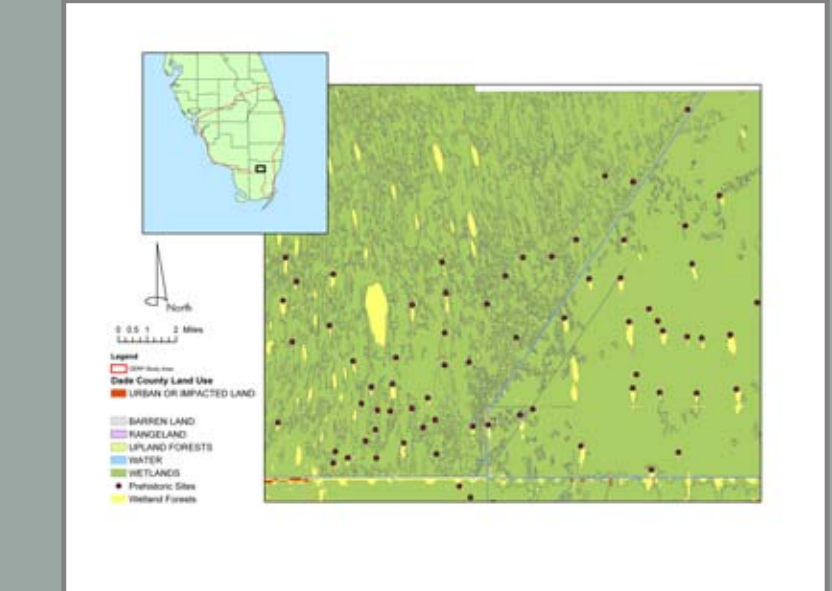
Infrared aerials are very productive tools for use in the Big Cypress subregion, as site locations appear bright pink in color and associations with hardwood hammocks are more readily visible than on other aerial images.



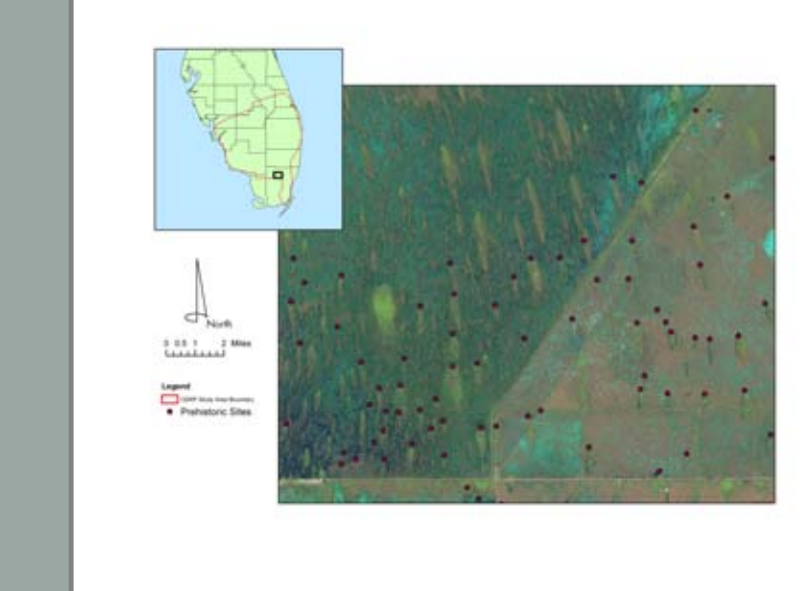
PICAYUNE

Limestone depressions that collect water can have young cypress or willow trees in the lowest areas. For example, in the Picayune study area, these ponds are easily identified using infrared photography, color aerials, 1940's aerials, and color enhanced aerials.

EVERGLADES



Landuse



Vegetation Map

By using the color aerial, it can be seen that the majority of precontact sites lie at the north end of tree island landforms. To further aid in identifying these tree islands, a land use/cover shapefile can be loaded into GIS. Wetland Hardwood, Wetland Mixed, and Wetland Coniferous forests represent areas of highest site potential.

A Joint Effort Between The Following

