

APPENDIX F

CULTURAL AND HISTORIC RESOURCES

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2002-9656

Planning Division
Environmental Branch

SEP 23 2002

Dr. Janet S. Matthews
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32399-0250

Dear Dr. Matthews:

The U. S. Army Corps of Engineers, Jacksonville District, is proposing to construct the Everglades Agricultural Area (EAA) Storage Reservoirs Project in an area south of Lake Okeechobee in Palm Beach and Hendry Counties. The EAA project is divided into three separate components, for an estimated total of 50,000 acres.

Component A (31,494 acres) is located in North Deem City Quad: T46S/R38E-Section 31; T46S/R37E-Sections 4,23,25,26,35&36; South Okeelanta Quad: T46S/R37E-Sections 4-10,15-22,27-34; T46S/R36E-Sections 15,16,21-28,33-36; T45S/R37E-Sections 5&6; East Little Cypress Swamp Quad: T46S/R36E-Sections 16-21,28-33; T46S/R35E-Sections 13&25 (enclosure 1).

Component B (9,246 acres) is located in Deem City Quad: T47S/R38E-Sections 8-10,15,16,17,21&22; North Deem City Quad: T47S/R38E-Sections 5,6,8-10; T46S/R38E-Sections 19-21,28-33; T46S/R37E-Sections 23-25,35&36 (enclosure 2).

Component C (8,884 acres) is located in Little Cypress Swamp Quad: T47S/R34E-Sections 1-4,9-16,22-24; Goddens Strand Quad: T47S/R34E-Section 26&27 (enclosure 3).

A review of the Florida Master Site Files in June 2002, showed no recorded sites in Components A and B. There are nine known prehistoric sites within the boundaries of Component C. An additional five sites are in close proximity to Component C. Infrared satellite photos and site visits to each of the three areas show that all three components have been heavily impacted by rock plowing and agricultural practices. However, the southern one-third of Component B (North Deem City Quad:

T47S/R38E-Sections 15,16,21&22) shows evidence of tree hammocks and should be considered a high probability area.

Based on the history of land use and agricultural disturbance of the proposed reservoir locations, we feel that it is unlikely that any unimpacted historic properties exist in the proposed areas of Component A and northern two-thirds of Component B. However, we recommend that a Phase I lineal survey be conducted in Component B. This survey would in the southeast portion, along the L-6 borrow canal, which is the boundary for the Everglades Wildlife Management Area & Conservation Area 2A, to locate and identify any historical properties. A Phase II Survey should be conducted in Component C of the known historical sites, in order to evaluate the significance and eligibility for nomination to the National Register of Historic Places. If you concur that these surveys are necessary, the individual components will be considered separate and equal entities, for both archaeological surveys and contractual reasons. This work will be conducted in compliance with the Natural Historic Preservation Act of 1966, as amended (PL 89-665); the Archaeological and Historic Preservation Act, as amended (PL 93-291); and Executive Order 11593. We seek your concurrence with this determination.

If you have any questions regarding this, please contact David Pugh at 904-232-1361. Please respond within 30 days after receipt of this letter.

Sincerely,

James C. Duck
Chief, Planning Division

Enclosure

Copy Furnished:

Ms. Angela Prymas, Project Manager, South Florida Water
Management District, 3301 Gun Club Road, West Palm Beach,
Florida 33416-4680

Secretary
 International Relations
 Elections
 Corporations
 Office of Cultural Affairs
 Office of Historical Resources
 Office of Library and Information Services
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FLORIDA DEPARTMENT OF STATE
 Jim Smith
 Secretary of State
 DIVISION OF HISTORICAL RESOURCES

December 13, 2002

Mr. James C. Duck, Chief
 Planning Division, Environmental Branch
 Jacksonville District Corps of Engineers
 Post Office Box 4970
 Jacksonville, Florida 32232-0019

Re: DHR Project No. 2002-09656
 Everglades Agricultural Area Storage Reservoirs Project
 Palm Beach and Hendry Counties

Dear Mr. Duck:

Our office has received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties listed, or eligible for listing, in the *National Register of Historic Places*, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

We have reviewed the briefly described referenced project proposal. A review of the Florida Master Site (FMSF) data indicates that fourteen (14) previously recorded archaeological sites (8HN4, 8HN44, 8HN45, 8HN46, 8HN47, 8HN48, 8HN49, 8HN50, 8HN51, 8HN52, 8HN53, 8HN54, and 8HN55) are located within Component C. Please note that 8HN4, the Pepper Mounds site, was not addressed in the project correspondence from your office. Information contained in FMSF Survey No. 4869 – *Archaeological and Historical Assessment of the Everglades Stormwater Treatment Areas, Hendry and Palm Beach Counties, Florida*, Robert S. Carr, 1996 indicates three (3) sites (8HN46, 8HN50 and 8HN51) were determined not to be potentially eligible for listing in the National Register. This office concurred with that finding in 1996. The remaining ten (10) sites were identified as being potentially eligible in the 1996 report and this office concurred with that recommendation. Site 8HN49 contains human remains and 8HN44 may possibly contain human remains. Site 8HN4, the Pepper Mounds, located in Section 4, T47S-R34E may also contain human remains, and may be potentially eligible for listing in the National Register.

We note that Components A and C were subjected to Phase I level investigations during the referenced 1996 survey, and Component B has not had a cultural resource assessment survey conducted. Because no sites were encountered in Component A and it has been heavily

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Mr. James C. Duck, Chief
December 13, 2002
Page 2

affected by sugar cane and sod cultivation practices, no additional cultural resource investigations have been proposed. Our office concurs with this recommendation, with the following conditions: the project manager(s) has completed Archaeological Resource Managers training offered three times a year by our Bureau of Archaeological Resources and the Florida Park Service (please see <http://dhr.dos.state.fl.us/bar/arm>); and Mr. William Burger, the Water Management District's archaeological consultant, is on-call and performs periodic monitoring throughout the construction phase of the project.

Component B has also been heavily impacted by sugar cane and sod cultivation practices, and will, therefore, be subjected to limited Phase I surveys along the L-6 borrow canal and a 20-acre parcel in the mid-section around a water source and possible tree-island identified on Enclosure 2. Our office concurs with this recommendation provided the conditions as stated above are met by all responsible entities.

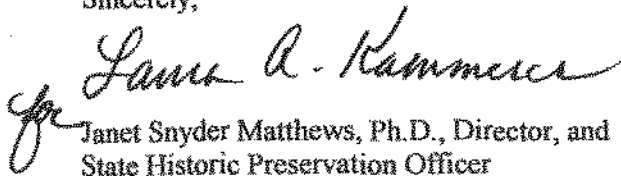
The proposal indicates that Component C will be subjected to professional Phase II survey investigations. We concur this recommendation. The Phase II investigations should include at a minimum: relocation of the eleven previously recorded sites that may be potentially eligible for listing in the National Register; establishing site boundaries for the ten sites; and evaluating the National Register eligibility of each site. The resultant survey report(s) must conform to the specifications set forth in Chapter 1A-46, *Florida Administrative Code*, and will need to be forwarded to this office in order to complete the process of reviewing the impact of this proposed project on historic properties.

The results of the investigations will determine if significant historic properties could be affected by this project. If significant remains are located, the data described in the report and the consultant's conclusions will assist this office in determining measures that must be taken to avoid, minimize, or mitigate adverse impacts to historic properties eligible for listing in the National Register.

Please note that the U.S. Quadrangle Map names are all incorrectly identified on the Enclosures 1-3. They correct names are as follows: Everglades 1 NW, Everglades 1 NE, Everglades 1 SE, Everglades 2 SW, Everglades 2 NW and Everglades 2 NE.

If you have any questions concerning our comments, please contact Laura Kammerer, Historic Preservationist Supervisor, at (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,


Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

JUL 1 2008

Regulatory Division

Mr. Mitchell Cypress, Chairman
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, Florida 33024

Dear Mr. Cypress:

The purpose of this letter is to request government to government consultation with the Seminole Tribe of Florida (Tribe) on the U.S. Army Corps of Engineers review of the South Florida Water Management District's (SFWMD) proposal to discharge fill material into the waters of the United States for the construction and operations of stormwater treatment areas on Compartments B and C of the EAA.

The proposed scope of consultation would include the following items: 1) Construction of stormwater treatment areas on Compartments B and C of the EAA; and 2) The Department of Interior's review of the SFWMD's request for an interim land use change associated with use of Compartments B and C which were purchased with Farm Bill funds for Everglades Restoration. These items are described in the "Draft Environmental Impact Statement to construct Stormwater Treatment Areas on Compartments B and C of the EAA," dated June 2008. This document was previously provided to representatives of the Tribe on June 6, 2008.

With your approval, we would like to invite the Department of Interior to our consultation session. We believe it is very important to have their agency represented to discuss the land use changes and how it affects the goal of the project.

Please notify Mr. Jeffrey Collins, Jacksonville District's Regulatory Tribal Liaison, regarding your availability to meet with project team members. Mr. Collins can be reached by electronic mail, jeffrey.s.collins@usace.army.mil, or by telephone at 321-504-3771, ext. 13.

Sincerely,


Paul L. Grosskruger
Colonel, U.S. Army
District Commander

Copies Furnished:

Mr. Craig Tepper, Director, Environmental Resource Management,
6300 Stirling Road, Hollywood, Florida 33024

Mr. Willard Steele, THPO, Department of Historic Resources,
Ah-Tah-Thi-Ki Museum, HC-61, PO #21-A, Clewiston, Florida
33440

Ms. Joan Lawrence, Department of the Interior, FIU, SERC, OE
Building, 11200 SW 8th Street, Room 165, Miami, Florida 33199

Mr. Stacy Myers, South Florida Water Management District, Post
Office Box 24680, West Palm Beach, Florida 33416

Mr. John Shaffer, South Florida Water Management District, Post
Office Box 24680, West Palm Beach, Florida 33416

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Jim Smith
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. James C. Duck, Chief
Planning Division, Environmental Branch
Jacksonville District Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

December 13, 2002

Re: DHR Project No. 2002-09656
Everglades Agricultural Area Storage Reservoirs Project
Palm Beach and Hendry Counties

Dear Mr. Duck:

Our office has received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties listed, or eligible for listing, in the *National Register of Historic Places*, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

We have reviewed the briefly described referenced project proposal. A review of the Florida Master Site (FMSF) data indicates that fourteen (14) previously recorded archaeological sites (8HN4, 8HN44, 8HN45, 8HN46, 8HN47, 8HN48, 8HN49, 8HN50, 8HN51, 8HN52, 8HN53, 8HN54, and 8HN55) are located within Component C. Please note that 8HN4, the Pepper Mounds site, was not addressed in the project correspondence from your office. Information contained in FMSF Survey No. 4869 – *Archaeological and Historical Assessment of the Everglades Stormwater Treatment Areas, Hendry and Palm Beach Counties, Florida*, Robert S. Carr, 1996 indicates three (3) sites (8HN46, 8HN50 and 8HN51) were determined not to be potentially eligible for listing in the National Register. This office concurred with that finding in 1996. The remaining ten (10) sites were identified as being potentially eligible in the 1996 report and this office concurred with that recommendation. Site 8HN49 contains human remains and 8HN44 may possibly contain human remains. Site 8HN4, the Pepper Mounds, located in Section 4, T47S-R34E may also contain human remains, and may be potentially eligible for listing in the National Register.

We note that Components A and C were subjected to Phase I level investigations during the referenced 1996 survey, and Component B has not had a cultural resource assessment survey conducted. Because no sites were encountered in Component A and it has been heavily

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Mr. James C. Duck, Chief
December 13, 2002
Page 2

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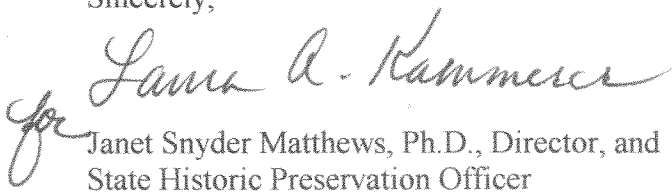
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Sincerely,


Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

METHODOLOGY FOR BUREAU OF ARCHAEOLOGICAL RESEARCH (BAR) PHASE I SURVEY OF COMPARTMENT A-1 FOR THE CENTRAL EVERGLADES PLANNING PROJECT (CEPP)

Prepared by Daniel Seinfeld, Ph.D., Archaeologist III, Bureau of Archaeological Research

The scope of work presented in this document includes Phase I survey on the 16,593 acres of South Florida Water Management District Land in Compartment A-1. This methodology was developed through consultation with the United States Army Corps of Engineers (USACE) as well as the Seminole and Miccosukee Tribes of Florida. The method is designed for the specific environment found in compartment A-1 and to be in accordance with the concerns of Seminole and Miccosukee representatives. Phase 1 archaeological survey will find and assess resources, including unmarked burials, before plans and specs are completed. This early detection of archaeological resources will save costs involved in altering construction plans while they are in process.

Project Area Description

Compartment A-1 has been heavily farmed by sugarcane agriculture for decades. Aerial photographs from the early 1940s show that the area once featured tree islands and open swampy areas, much as is seen in other less-disturbed areas. Approximately seventy years of mechanized agriculture have obscured these features on the landscape. Compartment A-1 now consist mostly of fallow sugarcane fields. This level of disturbance is different from other compartments in the CEPP.

Archaeological work in the Everglades has demonstrated that the majority of sites occur on tree islands (Carr 1974; Ehrenhard 1978; Schwardron 2006). Any archaeological methodology in the disturbed landscape of Compartment A-1 must assess the presence and integrity of these tree islands and potential artifact concentrations. Work must also test a sample of locations off of tree islands to test if the predominant model for Everglades archaeological sites is accurate for this survey area.

Objectives

The primary objectives of the proposed Phase I survey work include:

- Identify and locate archaeological and historical resources.
- Assess the integrity of archaeological and historical resources.
- Identify and locate unmarked burials, if present.
- Assess if remnant tree islands contain discrete concentrations of archaeological resources.
- Assess site size.

- Determine intrasite variability in artifact densities. If there is intrasite variability, it would suggest that sites are somewhat intact.
- Assess the types of sites and their temporal/cultural period(s) of affiliation.
- Assess the presence of sites potentially eligible for the National Register. Determine the presence of calcrete layers related to human occupation.
- Identify and assess potential sub-calcrete midden layers.

Field Methodology

Archaeologists will identify and locate cultural resources using shovel test pits and surface inspection. Much of the survey will be pre-planned using geo-referenced historic aerial photographs to identify locations of tree islands and other features on the landscape that are likely to contain sites, such as sloughs, streams, and deeper bodies of water. In accordance with the wishes of the Miccosukee Tribe of Florida, there will be no curation of artifacts. We will instead pursue analysis and quantification of artifacts while in the field.

Identifying Areas of Probability

Archaeological sites tend to be found on tree islands, which are relatively high and dry areas (Carr 1974; Ehrenhard 1978; Schwadron 2006). Aerial photography is one of the best ways to locate these tree islands. Agricultural land disturbance has obscured, and possibly destroyed, all tree islands and other topographic features in Compartment A-1. We will use modern and historic aerial photographs from the 1940s onward that show landscape features, including tree islands, before the area was extensively disturbed. Other high potential resource zones include extinct river channels and sloughs. As Smith (2007:50–52) noted in his “Cultural Resources Overview and Survey Strategy: Comprehensive Everglades Restoration Project” report, historic aerial photographs can be among the best ways to identify high-probability areas for archaeological testing in south Florida. We will use geo-referenced modern and historic aerial photographs, enabling us to pre-plan loci for archaeological testing. Using a handheld GPS unit, field crews will be able to travel to locations marked on the aerial photographs taken in the 1940s.

Surface Survey

Upon arriving on a testing area, field crews will first conduct a systematic surface survey on the remnant island hammock area. For surface survey, crew members will form a straight line along an east-west axis. Crew members will stand 5–10 meters apart, depending on surface visibility. They will then walk from north to south, covering the area of the remnant tree island. Artifacts found on the surface will be analyzed and photographed as per the guidelines outlined in the “Artifact Analysis” section of this document. Concentrations of surface artifacts (more than one artifact in an approximate 2 meter diameter area) will be recorded with GPS points labeled as “surface artifact concentration.” Each concentration of surface artifacts will be assigned a unique number. The types and counts of artifacts found in each surface artifact concentration, along

with its unique number, will be recorded in the field notes. Surface concentrations incidentally found outside of systematic surface survey areas will be recorded in the same manner. If field crews encounter extensive spreads of surface artifacts, they will note a sample of the artifact types and record an approximate area of the artifact spread on a map.

Shovel Testing

In advance of the fieldwork, we will establish a grid of shovel tests over the remnant island hammock locations located on the historic aerial photographs. All shovel tests will be pre-planned on GIS. Field crews will travel to shovel test loci using our handheld GPS units. Crew members will take GPS points at each pre-planned shovel test location. Shovel tests will be located at 10 m intervals on the remnant island hammock locations and their margins. Crews will dig shovel tests at 50 m intervals in areas away from tree islands. Where possible, site boundaries will be delineated by two shovel tests devoid of artifacts. Field crews will excavate judgmental shovel tests in areas deemed to be of high potential for archaeological resources. Shovel tests will be excavated moving from north to south, starting in the area outside the margins of the island hammock locations.

Shovel tests will measure 50 x 50 cm and will be dug to a depth of at least 1 m, when possible. They may terminate at less than 1 m if crews encounter bedrock or standing water. Soils will be screened through ¼ inch screen. All artifacts will be set aside and analyzed in the field.

Crews will take GPS points at each shovel test using a handheld unit capable of at least a +/- 5 m accuracy. All shovel tests will be assigned a unique number that correlates with GPS points as well as paper maps and diagrams of shovel test locations. Upon completing excavating and analyzing materials each shovel test, crews will backfill the unit and replace all artifacts. They must then place a pin flag near the unit marked with the unique assigned shovel test number.

Field notes will be recorded on write-in-rain field notebooks. The following information is required for each shovel test: the shovel test number, notes on soil type, stratigraphic information, general vegetation within 5 m, the presence/absence of artifacts, identifications and counts of artifacts encountered, and any other pertinent observations. Crews will use Munsell color chars to note the soil characteristics for at least one shovel test in each block of units. Loci containing resources of great interest will be marked using a 2 foot piece of rebar driven into the ground.

In Field Analysis Procedure

In accordance with the wishes of the Miccosukee Tribe of Florida, there will be no curation of artifacts from Compartment A-1. Any collected artifacts must be returned to their original locations. For Phase I survey, we will be conducting in-field analysis of all materials. Artifact collection is allowed if crews encounter an extraordinary item that they think needs more extensive laboratory analysis. All such items would eventually have to be returned to their original location.

All artifacts including ceramics, modified bone and shell, lithics, and historic materials will be identified and counted. Field crews will note the identifications and artifact counts for each type in their field notes. Artifacts will be identified to as high a degree of specificity as is possible. Diagnostic artifacts, unique items, and a representative sample of commonly-found artifacts will be photographed to the specifications outlined below in the “*Photography Procedure*” section. Ceramics will be identified based on their type, such as “Belle Glades Plain.” Ceramics that cannot be typed will be identified by their decoration and their temper, such as “Incised, Sand Tempered.” Field crews will also record the presence of calcrete layers in field notes.

Faunal Analysis Procedure

Field crews will note the relative density of faunal material in shovel tests because concentrations of fauna could be indicators of human settlement. We will not pursue a detailed analysis of fauna in the field because the specialized nature of zooarchaeological analysis and variable skill levels of crewmembers. The amount of time needed for such specific analysis is not justified by the poor quality of data that could be recovered. Obvious taxonomic identifications, such as deer ulnae, may be noted but not quantified. In order to assess the density of faunal remains in a shovel test, crews will set aside all faunal material encountered while screening. Using ¼ inch screen will of course bias the data toward larger species. Crewmembers will then assess the volume of faunal remains based on the Table 1 below. Estimated volumes can be based on how much would fit in a gallon bucket or gallon bag.

Table 1. Scale for assessing the volume of faunal remains in the field.

Estimated Volume	Assessment
More than 1 Gallon	Very High Density
Up to 1 Gallon	High Density
Up to ½ Gallon	Moderate Density
Up to ¼ Gallon	Low Density
None	None

Photography Procedure

High-quality photographs of artifacts encountered in the field are essential because we will not be collecting most items. Field crews will photograph diagnostic artifacts, unique items, and a representative sample of commonly found artifacts. Examples of diagnostic artifacts include decorated ceramics, rim sherds, bone and shell tools, and projectile points.

Photographs will be taken on matte backgrounds. A water-resistant, easily-cleaning blue material, such as blue leather, is preferred. All photographs must be taken from the top down with the entire object visible and in focus. The photographs must also have some labeling indicating their context, such as their shovel test number. This label should be small and placed in a corner of the photograph so that it can be cropped out of the photograph. Photographs should also include a scale with centimeter and millimeter markings. All photographs must be taken with a digital camera capable of at least 8 megapixels. All photographs should be at least 1.5–2 megabytes in size.

Human Remains Procedure

Identifying and locating archaeological human remains is one of the primary goals of the survey in compartment A-1. All work involving human remains will proceed in accordance with Section 872.05 of the Florida Statutes. Dr. Daniel Seinfeld, the BAR archaeologist overseeing Section 872.05 compliance, will be leading this Phase I survey on Compartment A-1. We will also have a bioarchaeologist on site to aid in identifying human remains. If human remains are found and they are determined to be greater than 75 years old, they will remain in place and their locations will be documented. Field crews will contact local law enforcement if they find modern human remains.

Remnant tree islands are the most likely areas for discovering human remains. When arriving at a remnant tree island location, field crews will conduct a systematic surface survey to identify artifacts and human remains. If an unmarked burial is encountered, field crews will not conduct shovel testing on the remnant island hammock or within 50 meters of the location of the human remains. They will record the loci of human remains using a GPS.

If human remains are encountered while excavating shovel test pits, field crews will stop digging. They will then inspect the bones to ensure that they are not modern. If there are human remains in a shovel test, there will be no excavation of shovel tests within 50 m of one containing human remains.

Detecting Sub Calcrete middens

Calcrete is a layer of hard calcareous material formed through association with ancient human activity in the Everglades (Schwadron 2006). Archaeologists have encountered Archaic period middens underneath calcrete layers (Masson et al. 1988; Schwadron 2006). These discoveries have changed long-held positions regarding the antiquity of human population of the Everglades. Thus far, no one has discovered sub-calcrete middens at Compartment A-1. Such a discovery could be of archaeological significance, and may have an impact on potential National Register Nominations for sites. It would also be noteworthy if calcrete and sub-calcrete layers are intact despite the agricultural modification in Compartment A-1.

The proposed field methodology includes ways to test for sub-calcrete middens because of their potential significance. Field crews will use a sturdy metal probe to explore the center of each remnant island hammock. Crewmembers will hammer through the first hard layer, down through 50 cm, to determine if it is bedrock. If crews encounter a softer, midden layer under the

hard layer followed by another hard layer (likely bedrock), they will then excavate a 50 x 50 cm shovel test in that location, breaking through the calcrete layer, and digging down to bedrock. Artifact analysis of the supra and sub-calcrete layers will be recorded distinctly. Field crews will also do a limited amount of probing in off-remnant-hammock locations to explore the possibility of calcrete layers away from tree islands.

Summary

The proposed methodology is an adaptation of the one prepared by the USACE. It has been modified to fit the specific conditions in Compartment A-1 as well as to accommodate requests from the Miccosukee Tribe of Indians of Florida restricting the removal of items from the site. The methodology is distinct from the one presented to contractors because the survey will be conducted by Bureau of Archaeological Research staff. Under the proposed method, field crews will complete a Phase I survey using pre-planned shovel test locations determined through analysis of georeferenced historic aerial photographs showing remnant tree islands. All artifact analysis will be conducted in the field, except in special circumstances.

Table 2. How the proposed methodology will address the objectives.

Research Objective	Methodology
Identify and locate archaeological resources.	<ul style="list-style-type: none"> • Shovel testing and surface analysis of artifacts. • GPS points on STPs and concentrations of surface artifacts.
Assess the integrity of archaeological resources.	<ul style="list-style-type: none"> • Look for discrete concentrations of artifacts on the landscape through shovel testing. • Differences in artifact concentrations on remnant tree islands compared to prairie. • Intrasite variability in artifact densities. • Examination of stratigraphy in shovel tests.
Identify and locate unmarked burials.	<ul style="list-style-type: none"> • Surface and shovel test survey.
Assess if remnant tree islands contain discrete concentrations of archaeological resources.	<ul style="list-style-type: none"> • In field analysis and photography of surface and excavated artifacts. • Spatial analysis of artifact densities and distributions.
Identify possible National Register eligible sites.	<ul style="list-style-type: none"> • Assess the presence, size, and integrity of archaeological sites.

	<ul style="list-style-type: none"> • Assess the types of artifacts and cultural periods represented in archaeological sites. • Determine the presence of calcareous and sub-calcareous levels.
Determine site size.	<ul style="list-style-type: none"> • Map the extent of positive shovel tests.
Assess the types of sites and their temporal/cultural period(s) of affiliation	<ul style="list-style-type: none"> • In field analysis and photography of surface and excavated artifacts.
Determine if the site contains a calcareous layer.	<ul style="list-style-type: none"> • Shovel tests and probing.
Determine if the site contains a sub-calcareous layer.	<ul style="list-style-type: none"> • Shovel tests and probing.

References

Carr, Robert S.

1974 The Use of Panchromatic Aerial Photographs for the Detection and Interpretation of Archaeological Sites in South Florida. Tallahassee: Manuscript on file, National Park Service, Southeast Archeological Center.

Ehrenhardt, John E.

1978 *The Big Cypress National Preserve, Archeological Survey Phase I*. Tallahassee: Manuscript on file, National Park Service, Southeast Archeological Center.

Masson, Marilyn A., Robert S. Carr, and Deborah S. Goldman

1988 The Taylor's Head Site (8BD74): Sampling a Prehistoric Midden on an Everglades Tree Island. *The Florida Anthropologist* 41(3): 336–350.

Schwadron, Margo

2006 Everglades Tree Islands Prehistory: Archaeological Evidence for Regional Holocene Variability and Early Human Settlement. *Antiquity* 80(310): 30.

Smith, Greg C.

2007 Cultural Resources Overview and Survey Strategy: Comprehensive Everglades Restoration Project. New South Associates Technical Report 1502.