

BEST MANAGEMENT PRACTICES

AN OWNER'S GUIDE TO PROTECTING ARCHAEOLOGICAL SITES



PRESERVING AND
PROTECTING



FLORIDA'S ARCHAEOLOGICAL
SITES FOR FUTURE GENERATIONS



FLORIDA
HERITAGE



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Reconstructed pottery vessel recovered from the Velda site. It dates to the village occupation around A.D. 1000-1500.

Below: Cazuela-shaped ceramic vessel dating back to A.D. 1350-1500, Late Mississippian. Johnson Ceremonial Breaking site, Fort Walton Beach, Florida.





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WHAT IS THE PURPOSE OF THIS GUIDE?

This guide is for owners and managers of archaeological sites. It is written to explain to non-specialists what archaeological sites are like, how they are threatened, and how they can be protected against such threats. It is also written with a few assumptions in mind—

- ◆ Few sites are managed by archaeologists.
- ◆ A large number of archaeological sites are on private lands.
- ◆ The people whose decisions affect archaeological sites over the long term have little experience in site management.
- ◆ Anyone can learn how to care for sites.

We hope this guide will help landowners understand and appreciate the valuable historical resources in their stewardship, provide basic information on caring for archaeological sites, and help owners obtain professional help when needed.

WHAT ARE BEST MANAGEMENT PRACTICES?

Best Management Practices (BMPs) are actions that are considered effective and appropriate. They represent the general knowledge and practice of informed professionals. Best Management Practices are commonly used in agriculture, forestry and other resource management fields, but they have not been widely adopted for archaeology. Here is a short list of some common Best Management Practices for archaeological sites. The rest of this guide explains in detail these and other topics in archaeological site management and provides possible solutions to many common site destabilization problems.

Do:

- ◆ document the archaeological site located on your property.
- ◆ try to protect the archaeological site by stopping destabilizing actions such as erosion.
- ◆ check the condition of the site on a regular basis.
- ◆ contact professionals for help in dealing with your archaeological site.

Avoid:

- ◆ ground disturbing activities in the area of an archaeological site.
- ◆ frequent traffic, either by pedestrians or vehicles, on archaeological sites.
- ◆ using untested methods to stabilize your archaeological site – they may do more harm than good. This guide presents several methods that have been tested for site stabilization.

Lake Jackson Indian temple mound, Tallahassee, ca., AD 1000-1500.



INTRODUCTION

A few decades ago, American archaeologists began to realize that the *archaeological record*, the total accumulation of archaeological sites of all types and all periods, was rapidly disappearing. Sites were being lost to development, erosion, looting, and other natural and cultural factors, but there was little understanding of the scope of the problem or of possible solutions. The value of archaeological sites and other *historic properties*, as they are called in Florida law, was first established as a national policy in the Antiquities Act of 1906. Since then, a comprehensive system of laws and regulations has been developed at the federal, state and local levels to make sure archaeological resources are considered during planning and permitting of major projects.

Additionally, government at all levels has expressed the will of the people to protect these pieces of the past by acquiring sites, managing them for public benefit, and interpreting them for public appreciation and enjoyment. These mandates, and the practices of *cultural resource managers* who implement them, have made a dramatic difference in the rate of loss of archaeological sites, especially on public lands and in large scale projects that require public review and permitting. On private lands, few of these regulations apply to most land uses, so conservation of archaeological sites that are not in public ownership depends on informed and caring landowners.

The tradition of stewardship for private property is well developed in our society, especially among owners of large tracts. The difference between site conservation and site loss usually depends on knowledge and education. Landowners have little difficulty extending their customary care of natural resources to cultural resources, once they understand where the resources are and how they can be protected.

What is Archaeology?

Archaeology is the scientific study of material remains of past human life and activities. *Archaeological sites* are places where people left some sign of their presence. This typically means that *artifacts*, things people made or modified, are present. However, sites can also include changes in the land—a ditch, a levee, a mound. Sites usually contain materials in addition to artifacts, like plant and animal remains, soil, and charcoal.

Portion of an incised pottery bowl, associated with the Ft. Walton culture of northwest Florida, A.D. 1000-1500.



Together, these form an *archaeological deposit*. When people stay in one place for a long time, deposits accumulate, one on top of the other, over decades or centuries. Because people and environments change over time, deposits differ from each other. Moreover, any single deposit may contain evidence of many different activities. Archaeological sites and the artifacts associated with them are messengers from our past. Without archaeological research and excavation, these unique pieces of our history would be lost.

The Value of Archaeological Sites

Archaeological sites are surprisingly common on the landscape and come in all sizes and a variety of types. Archaeological sites in Florida range from large, prominent prehistoric mounds, historic forts and plantations, to smaller sites, such as a historic dump or small scatters of artifacts that represent temporary encampments of Native American people. Regardless of size or complexity, all archaeological sites have the potential to tell us something about people and environments of the past. More than 27,000 different archaeological sites of all periods are already known in



Artist's impression of a Timucuan village located along the St. Johns River, ca., 1450. This scene was modeled after research findings from the Thursby Mound and Hontoon Island, two neighboring archaeological sites.

Florida, and many new sites are recorded in the Florida Master Site File each year. Some archaeological sites are completely buried and remain unknown until accidentally uncovered by digging, or until they are found during an archaeological survey.

Clues to past events and previous ways of life remain in backyards, pastures, forests, hammocks, and streambeds all across the Florida landscape. Pre-European archaeological sites (before A.D. 1500) offer clues to Native American hunting and cooking methods, social organization and family life, artistic and religious expression, and past environments. Archaeological evidence of later cultures, more like our own, also exists. Early European exploration and settlement, and Florida's territorial and statehood growth, left their unique

signatures on and under the ground, creating a Florida landscape that is a mosaic of different natural and historical events.

While the value of archaeological sites is partly scientific, revealing new information about the past, it is also social, providing opportunities for recreation, reflection, and education. Some privately owned sites are unsuitable for visitors; however, there are many alternative ways of interpreting sites for the public. The best-managed sites are not only protected from deterioration, but they are also made available to the public on some basis.

Artifacts in Original Context

The single most important characteristic of archaeological sites is *association*, that is, the relationship between all of its components. Artifacts and other cultural remains that are associated together represent single activities or events that can be revealed through careful excavation and analysis. When artifacts and remains that are from separate time periods or separate events are mixed together, it is difficult or impossible to recreate what happened at the site. This simple fact leads to the most basic principle of archaeological site management. Things should remain



Archaeological feature being excavated with pit contents (potsherds, mica, turtle and deer bone, etc.) left in place to document their context.

in their original location or *context*. When the artifacts and surrounding material are disturbed, archaeological information is destroyed. An artifact might be aesthetic in its own right, but its greatest value—the information about its user that was learned from its context—will be lost if it is removed from its original context. The large part of site management is simple to express, but difficult to achieve—*prevent change*.

Preventing change to preserve original context can require little effort, other than an occasional visit to see that the site is stable and to determine that there is no

threat of disturbance. When disturbance occurs, it is often progressive. Minor erosion on a mound is easy to correct in its early stages; but by the time it is a gully much has been lost, and it is more difficult to prevent further damage. A few small holes from unauthorized digging are a sign that further digging is likely, and steps should be taken early to prevent it. In the following sections we will address some of the more common threats to archaeological deposits and show the best management practices for these particular situations.

The Well-Managed Site

The specific characteristics of a well-managed site will vary according to whether the site is owned by a private landowner or managed by a public land manager, since the available resources will be different for each group. The greatest difference will be the level of public accessibility. For this reason, we have separated the discussion of accessibility into two sections, one for public land managers, the other for private landowners.

Documentation

What are the characteristics of a well-managed site? First, a well-managed site is one that has been documented. Site documentation involves a description of a site's horizontal and vertical dimensions, the characteristics by which it is identified (e.g., the remains of brick foundation walls, a shell deposit, etc.), its cultural association, and so forth. This information can help a private landowner protect the site, or it could help a public land manager in developing a site management plan. A record of a site should be filed at the Florida Master Site File in Tallahassee, a central repository for information on historical resources in this state. This database of archaeological and historical sites is used by planners, consultants, government staff, archaeologists, managers, and owners to determine if sites are within the area of proposed projects that might have an adverse effect. If a site is unrecorded, and many are, the site area may not be recognized in the review and permitting process as something worthy of protection. However, if the site is recorded, it is more likely to be investigated further to determine how it might be protected.

Stabilization

Second, a well-managed site is stable. Every part of the ground surface (especially the upper six inches) is always changing due to disturbances caused by vegetative growth and decay, animal activity, and environmental forces, such as wind and rain. Dynamic topsoil is a natural condition, and is the reason the top several inches of an archaeological site lack good association. The underlying zones, however, are much less active, biologically, chemically, and physically,



An archaeologist identifies, for a young onlooker, animal bones recovered from an archaeological site.

since they are protected by the topsoil and humus layers. Many sites are naturally vegetated with trees, shrubs, and ground cover. While tree roots extend through archaeological deposits, their disturbance can usually be sorted out during excavations. The most important part of the vegetative association is ground cover. Where ground cover is missing or not healthy there is a greater risk of erosion, especially on slopes. Ground cover should be repaired or reestablished if exposed soil is unstable.

Public Access and Interpretation and Private Landowners

Private land that contains an archaeological site can be made available for education and recreation. As an owner of an archaeological site, you are not obligated to open your site to the public, but you may choose to do so for a variety of reasons. Visiting archaeological sites can be educational. It gives people first-hand experience with understanding and interpreting the past. This experience can be fun and informative. For example, an archaeological site might be accessed by a bike or walking trail. There are many walking tours that showcase archaeological sites of local interest. By participating in these programs, property owners can contribute to the understanding and appreciation of Florida's cultural heritage. Should a property owner express interest in providing public access to an archaeological site, there are many ways in which information regarding the site can be disseminated. For example, the creation of brochures, pamphlets, web pages, lecture series, and other products can increase public knowledge about archaeological sites in private

ownership. These are highly valued by local school systems. While precautions are necessary to insure public safety and to prevent site destruction or damage, the advantages to providing public access to privately owned archaeological sites far outweigh the disadvantages.

Accessibility and the Public Land Manager

A well-managed public archaeological site is accessible to the public, except in certain circumstances. This means that a path or walkway has been established, either planned or unplanned. In the case of the large mounds that visitors wish to climb, this can be a recipe for erosion if protective measures, such as a stairway, are not implemented. Public access also implies some form of interpretation—a message about the site and the people who once lived there. The message can also address proper

treatment of the site and set forth rules to prevent disturbance. In some cases, along with public access comes a complex of facilities, such as parking, paths, signage, and perhaps rest rooms and a picnic area. Care should be taken to ensure that construction of these does not damage site deposits, and much thought should be given in advance to direct the flow of people and vehicles to prevent damage over the long term. Consideration should also be given to locating these improvements to avoid or minimize their visual intrusion on any scenic vistas associated with a site.

Preservation

Finally, a well-managed archaeological site is cared for. Signs of vandalism, litter, neglect of facilities, and unkempt grounds all send a subliminal message that this is a place others do not respect, and that the usual rules of responsible behavior do not apply to the visitor. Although it would not be apparent from looking at the site, a well-managed site has a management plan in place that can respond to threats or damage. A site owner or manager should have established contact with local law enforcement, with a local archaeologist, or perhaps a local archaeological society, so that all parties will already be familiar with the site if some action is required. It is helpful to keep a site notebook with information about the site as well as names and telephone numbers of various people to contact when help is needed.

MANAGEMENT STRATEGIES

Threats and Responses

Because many archaeological sites and historic properties on public land receive some level of management, most site destruction occurs on private property. Unintentional site damage is caused through ignorance and without malice. Some examples of unintentional site damage are erosion caused by boat wakes, off road vehicle activity, animal burrowing, and tree falls. Intentional site damage such as looting and vandalism also account for a great loss of archaeological and historic sites. *Looting* is the deliberate destruction of an archaeological site or structure for personal gain. *Vandalism* is deliberate damage to an archaeological site or structure for the sake of causing the property owner distress, or because of misguided political, social, or religious beliefs. The following section addresses the issues of unintentional and intentional site damage. Options for site protection are also provided, but you should also ask an archaeologist for help in determining what threats your archaeological site is exposed to and which protection methods may be appropriate to address the threats.

Best Management Practices in Responding to Threats to Archaeological Sites

1. Identify the cause or the source of the threat
2. Determine potential solutions to the problem
3. Determine whether permits are required
4. Determine with experts whether the proposed solution is likely to be effective over the long term
5. Make sure the solution does not cause more damage than it fixes
6. Determine whether the proposed solution is cost effective
7. Monitor the site to determine whether the solution continues to be effective over the long term
8. As appropriate, document site damage using a Florida Master Site File "Changing of Status" form

Erosion

Many archaeological sites are near water, because people have always chosen such desirable locations for activities and settlements. Erosion is one of the most serious threats to archaeological sites. Because of the great negative effects of erosion, we need to recognize the basic processes, understand which can be modified, and assess whether erosion control efforts will be appropriate in each unique situation.

We think of erosion as something unusual, some kind of natural calamity that befalls us, and something that we should be able to control or prevent. In fact, erosion is constant on the earth's surface. It is the geologic force that levels mountains over millions of years and that cuts canyons and valleys on a continental scale. On a smaller scale, at a local level and over years instead of millennia, we can have some effect on erosion. Perhaps we can prevent it from occurring at some particular location, or perhaps we can slow its rate.

Costs and Benefits

Steps to control erosion may range from inexpensive to very costly. They may have unintended consequences that also need to be considered as costs. In some of the erosion control strategies listed below, like re-vegetation and armoring with sandbags or old tires, construction costs can be minimal. However, placement of imported stone or construction of concrete structures can be very expensive, especially in remote or inaccessible areas. In areas where it is not possible to navigate a barge or other vessel laden with project construction material, clearing a road to transport equipment and supplies may cause greater damage than would be addressed by the proposed control plan. Some site loss must be accepted, and the most cost-effective response may be archaeological excavation before more erosion occurs.

Stream Erosion

Stream erosion includes many kinds of events, from sheet flow across normally dry lands, to lakeside erosion due to changes in water level, to bank erosion in the largest rivers. Stream erosion occurs most frequently when there is some change in the normal equilibrium of a flow of water in its normal course. Erosion might be due to altered vegetation within, along, or near a stream,



Example of river erosion causing tree fall, exacerbating erosion until the obstruction is removed.

a change in the volume of water flow, velocity, and sediment load, or a change in the upstream channel. Streams will respond to any change by trying to establish a new equilibrium or balance. This may mean deposition of sediment in some locations and removal of sediment elsewhere. Over time, streams meander. They change their course within a valley due to the dynamics of flowing water. In the course of thousands of years, streams and rivers move from one side of their valley to another creating oxbows, dead lakes, bank deposits, channel deposits, and bluffs. Whether sites in the valley or on its edges are threatened by stream erosion often depends on long term and large-scale processes of stream flow.

A stream is considered stable when there is no visible evidence of erosion along its banks. Typically, a stable stream is relatively straight or has gentle curves, and is neither silted in nor down cut. In many cases of stream erosion, a recently fallen tree or new upstream construction can often be identified as the cause of redirected stream flow. If the stream bed is changing as a result of a new and permanent obstacle, like a boat ramp, or increased runoff due to a new housing development and related impervious surfaces, then a long term solution should be sought. If the erosion-causing agent is a tree fall or other temporary factor, cooperation with an upstream landowner to remove the obstruction may be all that is necessary. In every case, a cost-benefit analysis should be done to determine if the long or short term benefit merits the money spent to fix the problem, and especially whether the solution will last for a long time or also be lost to continuing erosion.

There are many indicators of erosion evident in and adjacent to streambeds. Some of these are rills, sheet erosion, cracks, bank failure, scour, down cutting, and silting in. Each of these symptoms indicates erosion that can be destructive to archaeological sites. Rills, small gullies running perpendicular to the stream flow, are the result of drainage running into the stream over the top of the bank. They are formed when vegetation has been cut away from the edge of the stream bank, resulting in the ground being unable to absorb the runoff, and, in turn, causing the water to create a new channel to the stream bank. Sheet erosion, small particles of dirt being carried to a stream by rainwater flowing over the ground, is probably the most difficult to detect. Cracks are found parallel to the stream and are caused as large blocks of soil, separating from the surrounding bank, begin to slide into the stream. Bank failure occurs when the bank slides into the stream. Bank failure at a bend in the stream is called a scour. If a stream is attempting to make itself deeper, it is down cutting. On the other hand, when a stream slows and can no longer hold its sediment load, it is silting in.

To apply the best protection measure for stream erosion, an analysis of upstream causes of erosion must be undertaken. This is where the volume and velocity of

water are established before it reaches your land. The best solution will focus on the source of the problem rather than its local expression on your land.

There are almost as many ways to prevent and combat stream erosion as there are causes of it. This section discusses the most common erosion defense strategies including vegetation, sandbags and hay bales. The key is to discover what will work best for your situation. Many of these solutions can be employed with little expense, but some require heavy equipment and should not be undertaken without professional guidance. Help can be found through the U.S. Department of Agriculture, Natural Resources Conservation Service, through the state's water management districts, in local government environmental and permitting agencies, and at some university departments. A list of agencies and contacts can be found at the end of this guide.

Control of large-scale erosion is beyond the scope of most private landowners. Placement of fill in wetlands, dredging, and placement of obstructions in navigable waterways are undertakings that require environmental permits. Before considering projects of this type, be sure to consult with local, state and federal environmental agencies that may have jurisdiction over such activities. See the list of agencies and contacts at the end of the guide.

Best Management Options for Preventing Stream Erosion

Vegetation
Sandbags
Hay Bales

Vegetation

Vegetation is fundamental in erosion control. Often when vegetation is well established and undisturbed, the ground surface is stable and erosion is absent. If the ground cover has been removed and soil is exposed, erosion is more likely, especially on slopes. Flowing water will concentrate in areas of least resistance, on bare soil rather than through leaves, stems, roots, and humus. As the loose soil is washed away, the flow is further concentrated.



Planting sod on the surface of a restored mound.

The key to stabilization is to reestablish the ground cover that acts to hold the soil in place and dissipate the force of flowing water. Different plants can be used for different results. Grasses and fast growing plants with short root systems are best for archaeological sites since their root systems are less likely to displace buried features or artifacts. Native species are preferred since they are adapted to local conditions. In fact, for many sites, the best vegetative cover is that which previously existed on the site. Many factors determine which species will thrive at a particular location, and over the long term, these will already have been naturally selected.

The use of non-native species carries some risks. First, it is best to avoid vegetation that requires special attention like watering, fertilization or mowing. Second, some introduced species will thrive at the expense of diverse native plant communities. Brazilian pepper, cogon grass, kudzu, wisteria, Australian pine, and Chinese tallow are well known examples of exotics that have displaced natural plant and animal communities. These plants now require very costly removal programs to control their continued spread. Contact a local nursery or the Florida Department of Agriculture and Consumer Services, Division of Plant Industry (address at end of the guide) with specific questions about what species are suitable for your particular needs.

Sandbags

Sandbags are effective for controlling many forms of erosion. They are relatively inexpensive and do not require special equipment to create or install. Sandbags are most effective where the forces of erosion are moderate and where conditions are too unstable to promote growth of vegetation. They can be employed relatively quickly and may afford a temporary or a long-term solution. Properly filled and placed with a protective backing, sandbags can prevent erosion in situations of low energy. Higher volume or velocity, as in storm events, can displace them or cause them to split and spill their contents.

If sandbags are filled with a concrete mixture, they can form a more stable and permanent erosion barrier. When water breaks against a barrier, the brunt of the erosion is borne at the foot or toe of the structure—this is called toe scour. Proper placement of sandbags is essential to prevent toe scour, because water can seep between the bags and erode away the soil behind them, causing destabilization of the entire structure.

Hay Bales

Hay bales can be used in a manner similar to revetments as a short-term solution, and have similar placement considerations. Hay bales can be staked along a low

wave-energy shoreline as a temporary erosion protection measure. They should be placed to leave gaps to permit water outflow from overtopping and tidal action. If properly placed, the hay bales will trap sand and provide shoreline vegetation an opportunity to re-establish itself before the hay turns to compost.

Large Scale Erosion Control Options

Other methods such as revetments, gabions and jacks can also be employed for preventing stream erosion. These methods do represent viable responses to erosion, but they can only be implemented in large-scale projects at great expense.

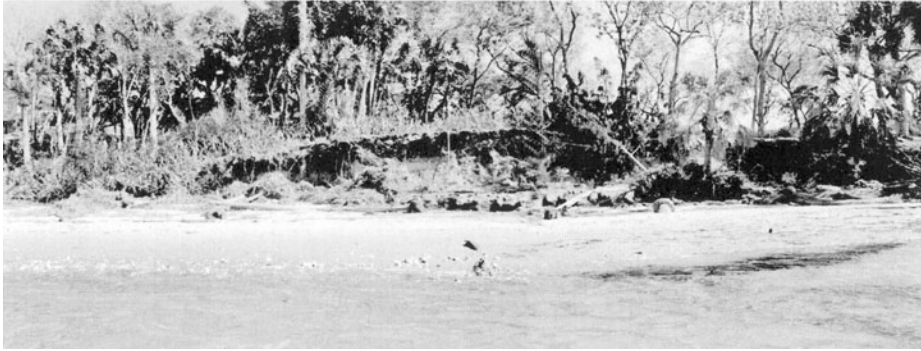
A revetment is a layer of concrete or rock lining a slope to protect it from wave action. Revetments can be constructed from poured cement, rocks, or concrete construction debris. Construction debris or concrete rubble is also a good erosion control device when certain limitations are considered. There are also aesthetic and other safety problems with revetments. They are visually intrusive and pose safety problems for those trying to walk on them. It may be possible to cover revetments with soil, providing a safer setting in which vegetation may be established, thus fortifying erosion protection.

Gabions are metal wire cages filled with rocks and anchored to the shore. They can be an alternative to rock revetments due to the scarcity of stone in many parts of Florida. There are certain disadvantages to their use. Rusty gabions can be dangerous and unattractive. Sometimes the stone in the wire cages rubs off the protective coating causing the underlying metal to corrode. As an alternative to stone, a framework can be built around the base of the wire cage and a layer of concrete poured into it to provide the needed structural weight.

Jacks are another method that can be used to control erosion. Jacks are large-scale steel structures that have a shape similar to children's jacks. They are lowered into the stream channel to reduce the stream's velocity. As the water slows, it has less energy and can carry less sediment. An area of erosion becomes an area of deposition. This can be a very effective method of erosion control that can build up areas previously eroded. However, there can be problems. First, jacks can be an obstruction to navigation. Second, upstream deposition may increase downstream erosion.

Coastal Erosion

In contrast to stream erosion, coastal erosion results from the energy of vast bodies of water acting upon the shoreline at the edge of the continents. This unique energy is expressed in tides, waves, and currents, sometimes mildly in the steady rhythm of the shore, but often wildly in a storm event, such as a hurricane.



Damage to a mound caused by coastal erosion.

Beyond a certain point, coastal erosion is not subject to effective control. The rise in the level of the sea, the movement of the barrier islands, the transgression of the sea in certain sections of the coast, the loss of beachfront property—these are inexorable, despite the expensive efforts of governments and private landowners. A realistic analysis of coastal erosion is essential in determining how to respond to threats to historical resources (both archaeological sites and historic structures) on the coast.

Erosion control on the open Atlantic or Gulf shoreline involves great public effort and expenditure and is far beyond the scope of the average private landowner. Such projects typically cost millions of dollars and involve all levels of government in planning, permitting, and construction efforts that may extend over many years. However, certain coastal shorelines, those within estuaries, lagoons, and bays are sometimes suitable for smaller scale stabilization techniques that are within the scope of a private landowner or a community association. These projects still require considerable expertise as well as permits from various agencies, and are not to be undertaken lightly. Just like stream erosion, wave and tidal action can be detrimental to historic properties. Wave action associated with storms causes some of the most severe damage in the coastal strand. But, like sheet erosion, everyday wave and tidal action is difficult to observe as a cause of erosion. The Atlantic and Gulf coasts are part of a dynamic zone that extends from the toe of the stable dune to a distance of several miles offshore. Within this zone sediments are moving seaward from barrier islands and dunes to beaches to offshore bars.

The only thing permanent about a natural beach zone is change. Over the long-term barrier islands migrate. They move in the direction of the dominant long-shore currents and waves. They also migrate landward as a consequence of on-shore breezes and sea level rise, eroding on the ocean side and accreting on the bay side. Inlets also move along the coast, as they open and close over periods of centuries, or more rapidly as result of storm events.

Most archaeological sites along the coast reflect the human preference for a pleasant place to live. Except in

modern times when our substantial dwellings can overcome the harsh conditions of sun, wind, and salt spray, people chose to live away from the beach. Typically, archaeological sites are found on the bay or lagoon shore on the back of barrier islands. Here the vegetation is well established, the microclimate is moderate and stable, and the resources of the estuarine system are nearby. Among the most common sites are middens, the accumulations of living remains like

shells, animal bones, and pottery sherds in a dark soil matrix. These are often recognizable along the shore in areas of hammock vegetation as a layer of black soil and shell contrasting with the usual light-colored sandy soils. Middens often extend as small headlands into the bay or lagoon. Midden soils, because they are more compact, organically rich, and favor vegetative growth, are often more resistant to erosion than sandy soils.

Many methods of erosion control can be applied in coastal environments, including vegetation, revetments, hay bales, breakwaters, groins, bulkheads and sea walls, and re-nourishment. All require permitting, but on lagoon and bay shores this need not be so complicated as along the beach itself. Just as with planning erosion protection strategies for streams, it is necessary to involve experienced professionals in design and planning. Erosion control failures are very common, and it is often better to be slow and cautious in one's decisions than to do something wrong. An ill-conceived erosion control structure can cause more damage than it prevents. Some contacts for expert assistance are listed at the end of the guide.

Best Management Options for Preventing Low Energy Coastal Erosion

Vegetation
Hay Bales
Breakwaters
Re-nourishment



An example of a healthy, well-vegetated sand dune.

Vegetation

The best defense against windblown erosion is vegetation. Usually, when vegetation is well established and undisturbed, especially in low wave energy coastal settings, the ground surface is stable and erosion is absent. Sand dunes, the sign of healthy beach upland, are at the greatest risk for erosion when their vegetation is destroyed. The harsh conditions of a sand dune (constant wind, salt spray, excessive soil drainage, and often, a lack of rain) limit the range and variety of species capable of growing on it. Special care must be taken when re-vegetating to ensure that existing plants are not damaged while encouraging new ones to take root. Many native Florida plant species will provide lasting protection without demanding constant care or becoming a nuisance in the future. Salt tolerant species like sea oats, palm, gopher apple, sea grapes, and cord grass vine are all examples of plants suited to the coast. Different regions encourage various species, and a local nursery should be able to help you choose the plants best suited to your needs and location. Florida law prohibits digging up sea oats or sea grapes on public land.

Hay Bales

Hay bales can also be used in the low wave-energy shoreline of a bay or estuary. As a temporary erosion protection measure, hay bales can be staked to the shore. Placed end to end with occasional gaps, or alternatively, individually placed in a spaced line with the bales oriented diagonally to the direction of the prevailing wave surge, they will allow water to outflow from overtopping and tidal action. The hay bales trap sand and provide shoreline vegetation an opportunity to reestablish, before the hay turns to compost.

Breakwaters

Breakwaters are appropriately named, as they break the wave before it reaches the shore, reducing its energy and erosive force. Permanent breakwaters are expensive and difficult to maintain over the long run, and they may cause erosion on adjacent segments of the coast. Temporary breakwaters like hay bales or contained brush are most effective in protecting an area that is newly planted to reestablish vegetation at the adjacent shoreline.

Renourishment

Sediment eroded from a shoreline can be artificially replaced. This process, known as beach renourishment, is a popular response to erosion but is almost always a temporary solution. The same coastal dynamics that removed the sediment in the first place are still at work, with renourishment typically necessary within five years, sooner following storm events. In more protected

situations like bays and lagoons, renourishment may have a longer effective life. It is important to plan renourishment carefully, since the characteristics of the new sediment will determine how long it will stay and whether it can reestablish the natural habitat and function of the beach system it replaces.

Large Scale Erosion Control Options

As is true for large-scale stream erosion, there are certain techniques that can only be employed in large-scale coastal erosion prevention projects. All of these techniques involve great expense, professional planning and environmental permitting. A revetment is like coastal armor. This armor is made by placing heavy and large objects like rocks and sandbags along the shoreline to protect less stable soils from the energy of water and wind. Revetments used for coastal erosion protection are of similar design and construction as those mentioned above for stream erosion protection. For stability, revetments need filter cloth underlying the rocks to protect the soil from movement and to stabilize the base or toe to prevent undercutting. In considering installation of a revetment, be sure to involve an experienced professional, and coordinate with permitting agencies.

Groins are a series of parallel revetments that generally run perpendicular to the beach. They work like fingers of a hand extending outward from the shore to catch passing sand. Groins interrupt the normal transport of sand along the beach and cause it to accumulate on the upstream side of the structure. However, the downstream shore becomes starved for sediment and subject to severe erosion as the system attempts to reach equilibrium again. If sediments are brought in to fill the groins at the time of construction, sediment transport is better maintained and down-beach erosion can be reduced.

Bulkheads and sea walls are vertical barriers to the transport of sediment from the shore to the water. They are constructed of interlocking metal sheets, wood planks attached to pilings, or concrete slabs, and are commonly installed to protect buildings and other infrastructure at the shore. Bulkheads and sea walls can be difficult to maintain due to toe scour, which can undermine the wall. Also, sea walls interrupt the natural transition from the upland to the water, and beach transitional zones are often critical habitat areas for marine life.

Critical Beach Erosion Areas

Over the last century or so, a great amount of information has been accumulated about the changing configuration of the coastline. By comparing old surveys, maps, aerial photographs, and other coastal data, it is possible to track the movement of the shore over time.

The Florida Department of Environmental Protection (FDEP) recently surveyed coastal areas (not including bays or estuaries) to determine which were eroding the fastest. These stretches of beach have been called Critical Beach Erosion Areas. Archaeological and historic sites in these areas are in greater danger of being negatively affected by storms as well as ongoing erosive forces.

Incidental Damage

Off road vehicles (ORVs), horses, bikes, and frequent pedestrian traffic can damage archaeological sites. Many parts of archaeological sites are very fragile. In addition to crushing sites and artifacts, ORVs can damage vegetation, contributing to subsequent water and windblown sand erosion. To a lesser extent, horseback riding, bikes, and pedestrian traffic also create erosion



Off road vehicle activity can be very destructive to archaeological sites.

problems. To prevent this unintentional destruction, ORVs should be encouraged to travel around archaeological sites. This can be accomplished either by posting signs to redirect them or by clearing an alternative path, which they can follow. Paths that already cross sites should be closed off by replanting trees, moving a deadfall across the path, or fencing it off. The same should be done for trail bike and horse riding trails. These measures, when properly implemented, can prevent further destruction without advertising the exact location of an archaeological site.

Animal Activity

Animal burrowing and digging, while a natural part of the wild, should be discouraged at archaeological site areas. Burrowing animals displace artifacts by bringing deeply buried material to the surface and allowing surface material to fall into the burrow. In certain sensitive sites, animals like hogs, cattle, gopher tortoises, and armadillos should be excluded. The Florida Fish and Wildlife Conservation Commission may be able to help keep nuisance wildlife under control. Contact the nearest regional office or the Tallahassee office to request brochures or assistance.

Trees

Trees, while normally excellent erosion deterrents, can damage a site. When an old tree is blown over, a large root ball is sometimes pulled up, which displaces the dirt and any artifacts that might be in it. Trees located on an archaeological site should be examined routinely for signs of death and disease. Sick trees should be cut off close to the ground, leaving the roots to rot in place. This prevents tree falls and ensures that no further disturbance is done to the site. Consult with a local arborist to determine the best course of action.



An example of the kind of destruction to archaeological and historical remains caused by tree growth.

Looting and Vandalism

Deliberate destruction of archaeological sites by looting is on the rise. Deterring looters can be a difficult task, but one well worth the effort. Supporting you in this endeavor are federal and state laws and law enforcement officers. If you have difficulty controlling unauthorized access to your property, you can take some positive steps. Law officers are ready to assist you when a law has been broken, but they can also assist you in preventing crimes. Artifacts taken from your property without your permission are legally still yours. Looters who sell these items can be charged with selling stolen property. If looters are caught on your property, they can be charged with trespassing. Trespass laws are more effectively enforced when land is posted with “no trespassing” signs. Looters can also be charged with vandalism and property damage, if they have been digging on your property without your permission.

For further protection, your site may be designated a State Archaeological Landmark or Landmark Zone, which affords private lands the same protection as state lands under chapter 267, F.S. In certain cases, the Archaeological Resource Protection Act of 1979, as amended, (ARPA) can protect sites on private land. ARPA subsection 6(c) includes interstate transportation of stolen items. Thus, violations of a state or local law may give rise to an ARPA violation. In the event a site is looted on private land and the artifacts are taken across state lines, ARPA would apply. In Florida, looting a cemetery or unmarked burial site is a felony.

Contact your local sheriff and ask that a deputy visit your site with you before problems occur so officers will know where to go if their assistance is needed. Best of all, contact an archaeologist and arrange a time for all three of you to meet and tour the property. If a site is looted, the archaeologist can provide a cost estimate on the damaged resource in order to repair it and to help determine what action should be taken. Take pictures of the current condition of your property and start a log documenting (with photographs) damage each time you notice it. Take photographs or make a video tape of the site and any subsequent damage to it. If you are experiencing looting, request the sheriff, or other appropriate law enforcement official, to patrol the area and possibly even stake out the site. Once the looters are caught, the damage estimate provided by the archaeologist can be used in a civil case to determine an appropriate amount of restitution and can be helpful in a criminal case to determine a penalty.

The best way to prevent further looting is to repair the damage. Again, a trained archaeologist can help you. Consider filling in the looter holes with clean dirt that is free of artifacts. Line the insides of the holes with sheet plastic or filter cloth and refill them. Replant ground cover to camouflage the area against future looting.

The deliberate destruction of archaeological sites has become a serious problem in some areas. Unauthorized digging in sites, particularly those containing human burials, has caused the loss of much archaeological information and the desecration of many important sites. There are several things you can do to defend against this senseless disturbance of the past. First, sites are vandalized when it appears no one cares for them. Not only sites in remote areas, but more often sites that show signs of neglect are at high risk for vandalism. Sites that appear cared for, well maintained, clearly interpreted, and frequently visited, are seldom vandalized.

Should you notice signs of vandalism like unauthorized digging, graffiti, late night visitation, unusual vehicles, or other suspicious activities, act quickly to secure the site. Posted signs, lights, and perhaps a visit from local law enforcement can all serve to let others know the site is closely watched. If there is evidence of disturbance of the archaeological site, treat the area as a crime scene. Secure the area from public access, notify local law enforcement, and do not confuse the evidence by introducing new footprints or removing anything.

Protection Strategies

Many site protection strategies defend against deliberate looting and vandalism. Use of signs, fencing, camouflage, site burial, site monitoring, and law enforcement, alone or in combination, can all be effective approaches. Sites in frequently visited, easily

viewed, and publicly interpreted settings are among the least looted and vandalized.

Signage

Signs are typically one component of a broader site protection program that includes law enforcement and regular site monitoring. Two types of signs are helpful. The first type guides or interprets; the second advises or warns. Signs that guide or interpret are used to direct, such as trail markers, or to educate, such as historic plaques. The second type of sign makes the viewer aware of the law and the penalty for damaging or endangering a site. Experience has shown that the use of signs generally, but not always, reduces site looting and vandalism. Like a lock, signs keep honest people honest. Signs usually should not be posted at archaeological sites located in remote areas, as they might call attention to sites that cannot be properly protected. On the other hand, highly visible and accessible sites should have prominent signs that both interpret the site and discourage damaging activity. These signs should indicate to visitors how to report unauthorized activities. Signs can also be placed along trails and roads, near campsites, and as part of a wayside exhibit.



Signage warning looters against unauthorized digging and the penalties for disturbing unmarked burials.

Fencing

The use of fencing for archaeological site protection is, like signs, best in a monitored area. Fences in unusual places may call attention to a site that otherwise would be unknown, saying, "loot here." Fences can be used to guide as well as to restrict access and need not be impenetrable to be effective. A simple series of posts connected by a chain or rope can keep visitors in the right area. Fences should be used in highly visible areas to deter the curious from climbing mounds or where there is no stabilized trail.

Camouflage

Hiding a site can offer some protection. Camouflaging a site works best when it is done prior to any looting or vandalism. Planting poison ivy or oak, cactus, or Spanish bayonette and utilizing beehives will

dissuade many potential diggers. Posting signs noting the presence of such species may also be a sufficient deterrent.

Site Burial

Intentional site burial can be an effective deterrent to looters and vandals. In many cases a soil cap can adequately cover surface evidence of archaeological remains. For sites with considerable threat, construction wire, rebar, cement, or other material can be placed over them, followed by a cap of clean sand, and then replanting. Site disturbance will become almost impossible without heavy equipment. This method is not inexpensive, but it does work.

Site Monitoring

The most inexpensive method of site protection is site monitoring. Regular visits to your archaeological site will alert looters that you care about the site and will take steps to protect it. Site monitoring also gives you a chance to keep a log of activities that could be used in court. Authorized visitors, like members of local historical and archaeological groups or scouts, could assist you in monitoring the site. Increased site visitation results in decreased looting and vandalism events.

RESPONSIBLE DEVELOPMENT

The Context of Development

Florida is one of the most rapidly growing states in the nation. The most recent population census shows that Florida's population increases by more than 200,000 people each year, with this figure constantly rising. This has created a demand for new houses, shopping centers, roads, workplaces, and other facilities. As undeveloped lands are converted to more intensive land uses, the land is contoured, scraped, cleared, cut and filled, and otherwise modified. All of these activities have the potential to damage or destroy archaeological resources. Over the past twenty years or so, a legal and practical framework has been established to review certain development projects, determine whether significant archaeological resources may be threatened, and consider options to preserve or protect such properties—or the information they contain.

At the federal, state and local levels, archaeological and historic preservation laws, ordinances, and regulations support a system of cultural resource management that has already protected a great many sites. Typically, a development project with federal involvement, or that falls within the scope of certain state or local

government mandates, will be assessed by the Division of Historical Resources' review and compliance staff. Based on the distribution and type of archaeological sites known or predicted to exist on the development property, staff may recommend a range of archaeological activities from protection of known sites, to field survey, to archaeological monitoring to no action. If a survey is recommended, the archaeologist conducting the work will locate, inventory, and assess archaeological sites, then offer recommendations concerning their protection during development, if they are deemed significant.

Through early review, reliable information, and proper advance planning, it is often feasible to arrange for the long-term protection of historic sites. Where this is not possible, or where sites are less important, salvage excavations may be recommended to save information in the site. The best archaeological resource protection opportunities exist when survey is conducted and good information is available far in advance of development. Understanding the location and extent of sites to be preserved is critical before lots and roads are laid out, and especially before property is sold. The most serious archaeological crises occur when significant archaeological sites are discovered after construction begins. Such situations offer few options and little flexibility. If you are involved in developing land, you should acquire a thorough understanding of archaeological sites on your property as early as possible. Some lending institutions are beginning to require archaeological surveys as a condition of financing.

Archaeological resources need not be a liability; they can be an important asset. Knowing in advance not only the location but also the age, type, and function of archaeological sites offers opportunities for interpretation as well as preservation. Archaeological sites can become important greenspace components in a development, and can be developed for public access, education, and recreation. In Florida and elsewhere, such sites are an amenity offering added value to property, and have been featured in marketing and community relations efforts.

Questions You Should Ask Before Developing Land with Archaeological Resources

- ◆ *What type of site do I have?*
- ◆ *Where is my site located?*
- ◆ *How big is my site?*
- ◆ *How can I avoid the site during development?*
- ◆ *If I have to disturb an area that is archaeologically sensitive, how can I make sure valuable information is properly collected?*

Site Assessment

Before development is ready to proceed, it is first necessary to assess one's archaeological site to help determine the most viable protection measures for it. How big is it? How far does it extend below ground? How important is it? How much damage has occurred in the past? These questions and others can be answered by an archaeologist. If possible, landowners should seek the assistance of a professional who can help advise them in these matters. Sometimes the archaeologist will recommend a survey to map the site, serving both to document it for the archaeological record and to help plan the property development. The Florida Master Site File at the Division of Historical Resources keeps records on all known archaeological sites in Florida. Site File staff can provide information to landowners and planners, which may help significantly in preparing development plans.

Minimizing Site Impact

Having identified the extent and significance of the site and determined that protection is warranted, development should proceed in a fashion that has the least amount of adverse impact to the site. Ground disturbing activities such as the installation of an in-ground pool, septic tank and drainfield, electrical cable, water pipes, or a building foundation should be planned in areas without archaeological remains. There are many appropriate above ground uses of archaeological sites that also serve as a means of protecting them. Landscaping, which can minimize or avoid ground disturbance by using fill or other means is the most obvious. It can also serve to preserve the open space setting of the site. Sites may also be protected by carefully sealing them under properly designed driveways, parking lots, tennis courts, or the like.



Archaeologists at work in the backyard of a home. A screen is employed to help recover small excavated artifacts.

Occasionally, even those devoted to the protection of their archaeological site have to dig a hole. In this case, special care should be taken to record what is observed during such disturbance, such as soil color and consistency, the presence of bone or shells and the artifacts encountered and collected while digging. To recover artifacts sift the dirt through 1/4" or 1/8" mesh hardware cloth, which is like window screen only more durable, attached to the bottom of a rectangular wood frame. Take careful notes, record the depth at which you found each artifact, and draw a map (or use a detailed property map) locating on it each hole in relation to the house, property line, or trees. Place the artifacts from each excavation unit in separately labeled bags. If your digging is associated with a planned project, make your notes on the plans showing where you dug and what was found. If large projects need to be undertaken, like digging a well, swimming pool or sprinkler system, and it is impossible to avoid archaeologically sensitive areas, consider having an archaeologist excavate the area first or monitor any excavations you may undertake, particularly when using heavy equipment. Contact the Bureau of Archaeological Research for help with planning these activities.

In most large cities in Florida there is a local chapter of avocational archaeologists from the Florida Anthropological Society (FAS). The FAS is a non-profit organization whose members have a great interest in local and Florida-wide archaeology. FAS members can give you further information and assist you in identifying the artifacts that you have found. They can also be called to give informal talks about archaeology or sponsor workshops in flint tool and pottery making.

Land Use and Development Issues

Land uses or land modifications like farming, pond and canal dredging and vegetation removal can also be detrimental to archaeological resources. The following discussion outlines various issues in land use and development and offers recommendations for protecting archaeological sites during such activities.

Agriculture

Some of the most interesting and valuable archaeological sites can be found on land suitable for agricultural production. This is not surprising since many Florida Indian tribes, Spanish mission settlements, and later Florida settlers depended heavily on agriculture and chose locations with fertile soils for settlements. These sites are located on land still favored by today's farmers. Although different farming methods were employed in prehistoric and early historic times, many of the same crops continue to be grown. Like many modern farmers, aboriginal farmers lived close to their fields and close to water. These archaeological sites

provide the most information about such early farmers. However, due to the use of heavy machinery to drain and reshape the land as well as the modern use of fertilizers and pesticides, areas that were once marginal for farming, are now being cultivated. Traditional farming methods only disturbed the top 6 to 8 inches of soil, and such shallow plowing only minimally disturbs archaeological sites. With the advent of mechanized farming and deep plowing, now up to 3 feet of soil can be turned. This causes great damage to archaeological sites, as does re-contouring the land to level high spots and fill in low areas or digging ditches for drainage.

There are ways you can preserve the intact underground portion of an archaeological site on your farmland. The best method is to dedicate it to a passive use. The area could be converted to pasture or a woodlot. If the land must be farmed, shallow plowing could be used in this area. Alternatively, you can bury your archaeological site under a cap of clean soil, limiting plowing to the upper layer of soil

Mounds and earthworks are the easiest to protect because they generally represent only a small portion of arable land. These sites should be removed from cultivation.

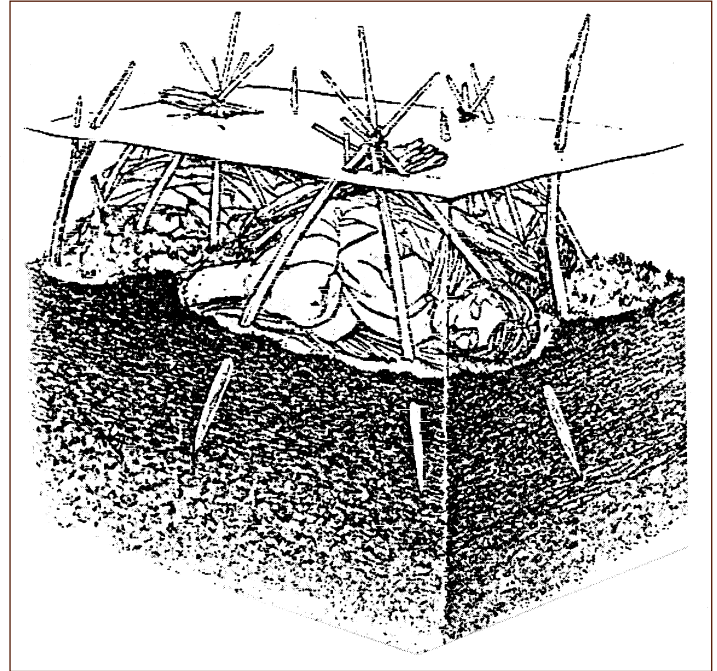
Pond and Canal Dredging

If you are thinking about developing an inundated area of your property, consider consulting with a professional archaeologist. Wetland areas can contain significant archaeological resources because their environment tends to preserve archaeological remains like wood and bone, which are rarely or only poorly preserved in other archaeological sites. One of the most famous sites of this type in Florida is Windover Pond. This small pond, situated between the Indian and St. Johns Rivers, contains one of the most important archaeological finds in the state. The site was discovered during dredging in advance of road construction.

Following the site's discovery, its importance was recognized and professional archaeological excavations were conducted. Deep within the peat deposits of the pond, some 10 feet below the modern pond surface, were found the remains of over 120 individuals buried nearly 8,000 years ago. They are older than the Ice Man found in the Italian Alps and the mummies of Egypt. Similar Archaic burial sites have also been discovered in Hardee and Sarasota counties. Such finds are unique to Florida and demonstrate the potential for underwater burials in unexpected places.

Vegetation Removal

The removal of trees and other vegetation from an archaeological site can cause considerable damage to archaeological resources. For example, tree removal from an archaeological site could damage the site by



An artists' version of a Windover Pond burial.

disturbing artifacts and features located near the root system. If possible, trees should be cut off close to the ground and the stumps left to decompose in place.

Landowners should also take special care when removing overgrown vegetation from historic cemeteries. Cemeteries are unique archaeological sites because objects located on the ground surface of cemeteries can be valuable sources of information. Items such as grave offerings or old headstones can provide a more accurate picture of a cemetery and the people it represents. For these reasons, clearing and/or restoring an overgrown cemetery should be done in conjunction with a professional archaeologist or cemetery preservationist. Please feel free to contact the Bureau of Archaeological Research for more information regarding cemetery preservation.

HUMAN BURIALS

In 1987, Florida's cemetery law was revised to protect unmarked human burials—those graves and burial sites and their contents that occur outside our traditional cemeteries. While unmarked burials usually represent Native Americans who lived in Florida before European contact, there are many examples of more recent rural and ethnic graves that were never clearly marked or whose modest wooden markers have disappeared. Whatever the origin of the human remains, they are all afforded equal protection under Florida law. Under Section 872.02, *Florida Statutes*, it is a felony to willfully and knowingly injure or remove a tomb or

monument or to willfully and knowingly disturb the contents of a tomb or grave. This law applies to Indian burial mounds as well as it applies to church and city cemeteries. Anyone having knowledge of the discovery of unmarked human remains must report the incident to local law enforcement. Whenever human remains are discovered, all activity that could disturb the remains must cease and cannot resume until authorized by the state archaeologist or the medical examiner.

If the remains are involved in a criminal investigation or have been buried less than 75 years, the medical examiner will have jurisdiction and responsibility to authorize activities to resume once the remains are removed or protected. If the remains have been in the ground more than 75 years, responsibility rests with the Division of Historical Resources. Different procedures are followed depending on whether the remains were encountered during an archaeological investigation or not, but the procedures are intended to provide an opportunity to arrange for protection of the remains. The law does not require or prohibit removal of the remains, but preservation in place is the preferred alternative.

If remains for which the Division of Historical Resources has responsibility are removed from the ground, certain steps are followed concerning identification, analysis, and notification of family or community representatives. In the event no living relatives or representatives can be found, a committee of four is appointed to provide advice on final disposition of the remains. If the remains are Native American, two members of the committee are members of tribes recommended by the Florida Governor's Council on Indian Affairs, Inc.

Over the last decade in Florida hundreds of cases of unmarked human remains have been handled under the procedures specified in Chapter 872. If you encounter or have knowledge of unmarked human remains you are required by law to notify a local law enforcement authority. Tell them you are reporting unmarked human remains in accordance with Section 872.05, *Florida Statutes*, and record the name of the person with whom you spoke. Leave your name and telephone number in case it is necessary to inquire further about the site. Do not disturb the remains or the soil containing them. If the remains were exposed by illegal digging, treat the area as a crime scene. Do not disturb any evidence or introduce new footprints or other material to the site. The law enforcement agency will coordinate with the medical examiner and the state archaeologist if appropriate. Discoveries of human remains are given high priority, and someone should be able to visit the site within a day or so to continue the steps outlined in the law.

THE PARTNERSHIP APPROACH

Protecting archaeological sites requires creativity, cooperation and planning. Landowners have an opportunity to work with all of the partners necessary to protect and compatibly develop their land. Some of these partners include public and private organizations and local, state and federal governments. Through these partnerships, the possibilities for protecting valuable archaeological resources on private lands are numerous. Some methods have been in use for years, others are new and emerging. As more landowners become interested in resource protection, techniques will continue to develop.

Programs for Archaeological Site Protection

There are a number of programs and organizations that private landowners can rely on for site preservation and management. Please feel free to contact the Department of State, Division of Historical Resources for help in deciding which of these programs or organizations may be appropriate for your archaeological site.

Land Acquisition Programs and Organizations

In some cases, private landowners may want to pursue the sale or donation of land that contains an archaeological site. There are organizations and government programs that are established to ensure the permanent protection of cultural resources. Most of the public programs listed below require that a landowner work with a local or state agency or a private nonprofit organization. Private landowners should consult a tax attorney or estate planner to review the tax benefits that may be available through land sale, donations or easements.

Conservation and Recreation Lands (CARL) Program, Florida Department of Environmental Protection

Address: Office of Environmental Services
3900 Commonwealth Blvd.
Mail Station #100
Tallahassee, FL 32399-3000
Phone: (850) 245-2784

Historic Preservation Grants Program, Florida Department of State

Address: Division of Historical Resources,
Bureau of Historic Preservation
R.A. Gray Building
500 South Bronough Street,
Tallahassee, FL 32399-0250
Phone: (850) 245-6333

Office of Greenways and Trails

Address: Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Mail Station 795
Tallahassee, FL 32399-3000
Phone: (850) 245-2052

The Archaeological Conservancy

Address: 5301 Central Avenue NE, Suite 1218
Albuquerque, NM 87108-1517
Phone: (505) 266-1540

The Archaeological and Historical Conservancy

Address: 4800 Sw 64th Ave., Suite 107
Davie, FL 33014
Phone: (954) 792-9776

Land Trusts

Land trusts are private, nonprofit organizations that protect valuable natural and cultural resources through land acquisition. While there is no one program carried out by all land trusts, the work they do involves private lands. Their principal objectives are achieving permanent preservation of lands having at least one of the following qualities: natural, historic, cultural, agricultural, recreational, or scenic significance. Here are a few land trusts you may wish to contact for further information.

National Trust for Historic Preservation

Address: 1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036-2117
Phone: (202) 588-6000

Red Hills Conservation Program

Address: Tall Timbers Research Station
13093 Henry Beadel Drive
Tallahassee, FL 32312-0918
Phone: (850) 893-4153

Trust for Public Land

Address: Southeast Regional Office
306 N. Monroe Street
Tallahassee, FL 32301-7635
Phone: (850) 222-7911

Registry Programs

A registry program recognizes an owner's protection of historic or archaeological sites. Registration is usually voluntary and nonbinding. It is an agreement that can be canceled by either party at any time. Registration involves no payment or receipt of funds. Some registry programs also provide assistance in site management and education. Through a registry program, the owner will usually receive a certificate or plaque that recognizes the owner's site as archaeologically important. There are registry programs at national and state levels. The National Register of Historic Places is the most prominent organization. The State of Florida has several registry options including archaeological landmarks and the Florida Site Steward Agreement.

National Register of Historic Places

Address: National Register, History and Education
National Park Service
1201 Eye St., N.W., 8th Floor (MS 2280)
Washington, D.C. 20005
Phone: (202) 354-2213

State Archaeological Landmark Program

Address: Florida Division of Historical Resources,
Bureau of Archaeological Research
R.A. Gray Building
500 South Bronough Street,
Tallahassee, FL 32399-0250
Phone: (850) 245-6444

Florida Heritage Marker Program

Address: Florida Division of Historical Resources,
Bureau of Historic Preservation,
Survey and Registration Section
R.A. Gray Building
500 South Bronough Street
Tallahassee, FL 32399-0250
Phone: (850) 245-2333

Florida Site Steward Agreement

Address: Florida Division of Historical Resources,
Bureau of Archaeological Research
R.A. Gray Building
500 South Bronough Street,
Tallahassee, FL 32399-0250
Phone: (850) 245-6444

Volunteer Programs and Organizations for Public Support and Education

There is a broad array of archaeological expertise available through various private, state and federal archaeology programs and organizations. Public archaeology programs increase awareness of and respect for the past and explain the importance of archaeological research and the benefits of cultural resources to the public. These programs include formal and informal education approaches and the use of volunteers. Organizations such as the Society for American Archaeology and the Archaeological Institute of America promote archaeology through publications, meetings and various other programs.

Archaeological Resource Management Training Program (ARM)

Address: Florida Division of Historical Resources,
Bureau of Archaeological Research
R.A. Gray Building
500 South Bronough Street,
Tallahassee, FL 32399-0250
Phone: (850) 245-6444

Listing of Education in Archeology Projects (LEAP)

Address: U.S. Department of the Interior
National Park Service
Archeology & Enthography Program
1849 C St., N.W., 7th Floor
Washington, D.C. 20240
Phone: (202) 354-2100

Society for American Archaeology (SAA)

Address: 900 Second Street, N.E., Number 12
Washington, D.C. 20002-3557
Phone: (202) 789-8200

Archaeological Institute of America (AIA)

Address: Boston University
656 Beacon Street
Boston, MA 02215-2006
Phone: (617) 353-9361

Florida Anthropological Society, Inc. (FAS)

Address: P.O. Box 608
St. Petersburg, FL 33731
Internet: <http://www.fasweb.org>

Register of Professional Archaeologists (RPA)

Address: 5024-R Campbell Boulevard
Baltimore, MD 21236
Phone: (410) 933-3486

Other Organizations:

The following organizations can be contacted to provide reference materials and professional assistance regarding management issues such as erosion control and vegetation removal.

Department of Agriculture, Division of Forestry, Bureau of Forest Management

Address: 3125 Conner Boulevard
Tallahassee, FL 32311
Phone: (850) 488-4274

Florida Department of Agriculture and Consumer Services, Division of Plant Industry

Address: P.O. Box 147100
Gainesville, FL 32614-7100
Phone: (352) 372-3505

Department of Community Affairs, Florida Coastal Management Program

Address: 2555 Shumard Oak Blvd.
Tallahassee, FL 32399-2100
Phone: (850) 488-8466

Florida Fish and Wildlife Conservation Commission

Address: 620 S. Meridian St.
Tallahassee, FL 32399-1600
Phone: 1-888-404-FWCC

Natural Resources Conservation Service, Plant Material Center for Florida

Address: 14119 Broad St.
Brooksville, FL 34601
Phone: (904) 796-9600

U.S. Army Corps of Engineers District Office in Florida

Address: 701 San Marco Blvd.
Jacksonville, FL 32207
Phone: (904) 232-2568

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Florida Archaeology

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Internet Resources

For information on historical and archaeological resources of the *Florida Department of State*, see, <http://www.flheritage.com>. This address will take you to various web pages of the Division of Historical Resources including the Bureau of Archaeological Research, the Bureau of Historic Preservation, and the Museum of Florida History.

For information on *Florida Greenways and Trails*, see, <http://www.dep.state.fl.us/gwt>.

The *National Park Service's Heritage Preservation Services* helps citizens and communities identify, evaluate, protect, and preserve historic properties. Their web page is at <http://www.2.cr.nps.gov/>.

Archaeological Institute of America (AIA)
<http://www.archaeological.org/>

Heritage Preservation
<http://www.heritagepreservation.org/>

SAA Society for American Archaeology
<http://www.saa.org>

There are also World Wide Web servers devoted to the field of archaeology. Try *ARCHNET*, a virtual library for archaeology. This server provides access to archaeological resources available on the Internet. <http://archnet.uconn.edu/>.



Do

- Document your archaeological site
- Stop erosion
- Check on your site on a regular basis
- Contact professionals for help

Avoid

- Ground disturbing activities at your site
- Frequent traffic by people, animals and vehicles
- Untested stabilization methods

Responding to Threats

- Identify the cause
- Consult with experts
- Determine potential solutions
- Determine whether permits are required
- Select a cost effective and long term solution
- Monitor the site



Responding to Looting and Vandalism

- Notify law enforcement
- Secure the area and do not disturb the evidence
- Notify an archaeologist to conduct a damage assessment
- Consider how the site can be protected better in the future

Questions to Ask Before Developing Land With Archaeological Resources

- What type of site do I have?
- Where is my site located?
- How big is my site?
- How can I avoid the site during development?
- If I have to disturb an area that is archaeologically sensitive, how can I make sure valuable information is properly collected?

What to do When Human Burials are Encountered

- Stop any activity that may disturb the burials
- Secure the area
- Notify local law enforcement and mention Chapter 872, Florida Statutes
- Cooperate with the medical examiner or the state archaeologist, whoever has jurisdiction
- Do not remove bones or artifacts
- Make bones and burial artifacts available for proper final disposition

Partners

- Record your site with the Florida Master Site File
- Get to know an archaeologist
- Work with land conservation experts and non-profit organizations
- Consider public access or acquisition for important sites

Thank you for your wise management of Florida's Archaeological Resources.

GUIDELINES FOR USERS: FLORIDA MASTER SITE FILE

Background State and federal law mandate that the state maintain an inventory of all known historic structures and archaeological sites. The Florida Master Site File, Bureau of Archaeological Research, Division of Historical Resources, is the office which maintains Florida's inventory. An eighth of a million cultural resources, including 22,000 archaeological sites and 101,000 historical structures, are recorded at this time on the Site File. Roughly 7,000 new records or updates are added annually. These large numbers, however, represent only a small part of the heritage of Floridians, considering that less than 10% of the area of most Florida counties has undergone field survey by qualified archaeologists or architectural historians. More information about the Site File and other activities of the Division of Historical Resources is available on the World Wide Web at <http://www.dos.state.fl.us/dhr/msf/>.

Function The Site File is an archive and information source only, analogous to a public library. Site File staff evaluate neither the historical significance of sites nor the potential impact of development projects, although official and unofficial evaluations by others are included in our records. Consult the Compliance Review Section of the Bureau of Historic Preservation (850-487-2333) if you have inquiries related to preservation aspects of development projects, inquiries related to local government comprehensive planning, or questions dealing with the historical aspects of state lands.

Requesting Information The Florida Master Site File maintains individual paper and computer files on archaeological sites and historic structures reported to this office. We plot the locations of archaeological sites, structures which are listed on or eligible for the National Register, and historical districts on USGS 7.5 minute topographic maps. Research involving more than about 15 minutes of staff time, including photocopying, is normally done by the user. Our office is open Monday through Friday from 8:00 to 5:00 and we have a copier available for public use. We are sometimes able to steer clients to local help if they need extensive photocopying but are not able to get to Tallahassee themselves. We charge \$0.15 per page for all photocopies when the total number of copies exceeds 100; there is no charge for smaller totals. Please consult with us well in advance of deadlines, by fax, letter, or e-mail, if possible, not by phone, and plan on a response time of two weeks for routine inquiries. Replies by fax or express mail services are not ordinarily possible. We cannot photocopy sheets larger than 11 x 14 7/8 inches.

We are developing electronic mapping with a Geographic Information System (GIS). Currently GIS data layers are complete for archaeological sites, historical structures, National Register properties, historical bridges, historical cemeteries, and field survey projects (see the Site File document *User's Guide to the GIS of the Florida Master Site File* or contact the Site File for more information).

Helping Us to Search Site or Survey Records Inquiries about sites should, when known, refer to the state file number assigned to each site, historic property, or survey project. For sites and historic properties, file numbers include a two letter county code, a serial number in assignment order within the county, and an optional terminal letter, when applicable, designating spatial or other subdivisions of the site. "LE220" or "LE00220," for example, refers to the 220th site recorded in Florida's Leon County. Searches for all historical structures and archaeological sites in a given area can efficiently be performed by legal survey location—township, range, and section, though many extraneous resources may be listed. Specific historical structures are best searched by full street address and all known historical names. Specific archaeological sites are best searched according to their map location on 1:24,000

GUIDELINES FOR USERS: FLORIDA MASTER SITE FILE

topographical maps of the United States Geological Survey. Survey projects and reports are filed in a single statewide sequence, and specific surveys can be searched based on the county, report author, publication date, and report title. Past surveys within a given area can be identified from map location, preferably on 1:24,000 or 1:100,000 USGS contour maps. **We limit, as far as possible, the distribution of location information on sites which are especially susceptible to damage through illegal activities.** If you have very large or complex tracts of land which need to be searched, the Site File's GIS might help; contact the Site File for current information.

Eligibility for Listing on the Florida Master Site File The criteria for listing a property on the Florida Master Site File are that it be adequately documented and normally that it be at least 50 years old. Therefore, entry of a property on the Site File does not necessarily imply that it is especially significant historically, although many listed properties have great significance.

Recording Sites Nonprofessionals as well as professionals have often furnished information useful in understanding and preserving historical sites. Standard Site File forms and manuals are available for recording archaeological sites, historical standing structures, historical bridges, and historical cemeteries. We are developing a form for use with historic districts. A preliminary form is available for recording historic shipwrecks. Supplementary documentation is normally required in addition to the completed form. For instance, for archaeological sites, we require (1) boundaries plotted on a 1:24,000 scale USGS topographic map for all sites, and (2) a detailed site plan at 1:600 scale or better. We encourage site recorders to use the Site File's *SmartForm* program to document cultural resources; state-sponsored surveys resulting in at least 45 forms are required to use *SmartForm*. Various paper forms, manuals, and the *SmartForm* program may be downloaded at <http://www.dos.state.fl.us/dhr/msf/>.

Distributing Computer Database Information The Site File can write the general computer information relating to cultural resources, one county at a time, in a convenient one record per site format. Such "Santa Claus" files can be sent via diskette, CD, or, if you have Web access, FTP download. There are explanatory handouts for each different resource for which we send Santa Claus data. It is easiest to send the data in Microsoft Access format, which can be read by most database systems. Otherwise, we can send the information in fixed column delimited formats—or as a paper listing, if fewer than 200 sites are involved.

GIS (Geographic Information System) Data If you need very large amounts of precise location data, or if the project area is very large or complex, our evolving GIS system may be able to help. Staff limitations prevent us from routine plotting of custom paper maps, but if you have a Geographic Information System, you may be able to download GIS data from our FTP site, depending upon file size and your system. Consult with the GIS Supervisor of the Site File.

Florida Master Site File
Division of Historical Resources
R. A. Gray Building, 500 South Bronough
Tallahassee, Florida 32399-0250
Phone: 850-245-6440; Suncom: 205-6440; Fax: 850-245-6439
E-mail: fmsfile@dos.state.fl.us
Site File web page: <http://www.dos.state.fl.us/dhr/msf/>

FORMS FOR MANAGING ARCHAEOLOGICAL RESOURCES

The forms on the following pages are for you to cut out or photocopy and use in managing sites on your property.

The **Archaeological Resources Checklist** is a good place to begin to assess your site. It requests information that any archaeologist or manager will want to know to recognize management needs. If you send the form to the Bureau of Archaeological Research, you can receive technical assistance in taking care of your site.

The **Florida Master Site File** is the single place in Florida where information is kept on all the known archaeological and historical sites in the state. The Guidelines for Users provides an introduction to the Site File, and helps explain the context for the Site File forms that follow

The **Florida Master Site File** form (2 sides) is the basic recording form for all archaeological sites in the state, and is the basis for organizing and maintaining information in the site file. It is technical in some places, and you can get help from any archaeologist or by calling the Bureau of Archaeological Research. The main Site File form is supplemented by other forms for other particular kinds of sites like cemeteries.

The **Florida Master Site File Cemetery Form** (2 sides) is designed for recording cemeteries. It requests information that will be helpful for archaeological and historical documentation as well as for responsible management.

The **Florida Master Site File Archaeological Short Form** (2 sides) was created to solicit the most basic information about a site. No special experience or knowledge is necessary to complete the form, and it often serves as the first source of information submitted to the Site File. Often, upon receipt of a Short Form, the Site File will contact the owner to discuss a possible visit by an archaeologist to collect more information.

Recording your site in the Florida Master Site File conveys no rights or interest in your property. Listing in the Florida Master Site File implies no legal status or government control over your property. It does create a public record that can be viewed by others, and will help ensure that knowledge of your site is available for research and management purposes.

Thank you for your stewardship.

ARCHAEOLOGICAL RESOURCES CHECKLIST

This form is used by the Bureau of Archaeological Research to assist landowners and land managers in archaeological site stewardship. It is designed to identify areas that can be improved in the management of cultural resources. To help the Bureau determine what types of information or technical assistance are appropriate, please photocopy, complete and send this form to:

Bureau of Archaeological Research
500 S. Bronough Street
Tallahassee, FL 32399-0250

A. Background Information

Name of Management Tract/Property _____ County _____

Name/Site Number of Archaeological Sites _____

Yes No

- Is the manager/landowner maintaining a cultural resources notebook containing copies of site forms, survey reports, site visit reports, monitoring reports, correspondence from the Division of Historical Resources, and other relevant information?
- Are there cultural resource maps showing the locations of all recorded archaeological sites and cultural resources investigation areas within the management tract/property boundary?
- Are all of the recorded sites represented by site forms and map locations?
- If artifacts have been collected during construction, monitoring activities or by other means, are they stored in plastic bags marked with collection date, site of origin, and other pertinent information?
- Have site visits been completed in a timely manner and current site condition and observations recorded in the notebook?
- Is a record of site vandalism, unauthorized artifact collection and site excavation maintained, including the names and other identification for individuals given warnings or arrested?
- Has a comprehensive cultural resources assessment survey been performed of the management tract/property?
- Do the property brochures, signage and other public information notify visitors that archaeological sites should not be disturbed and that artifacts should not be collected?
- Has the manager/landowner attended the Cooperative Approach to Archaeological Resource Management workshop sponsored by the Florida Division of Historical Resources (DHR) and the Florida Department of Environmental Protection, Division of Recreation and Parks?

B. Field Evaluation of Archaeological Sites

1. Do any of the sites show evidence of:

Yes No

If Yes, identify by site numbers/names

- Natural erosion _____
- Vehicular damage _____
- Horse or pedestrian damage _____
- Looting activities _____
- Construction activities _____
- Animal damage _____
- Other _____

2. Comment on any YES answers (for each site). Identify what measures have been taken to correct the problem:

3. If none yet taken, (for each site) what corrective measures are proposed, and what is the schedule to accomplish these measures?

4. List the sites accessible to the public:

5. What cultural resource interpretive measures are in place, such as park brochures, guidebooks, site brochures, trail side exhibits, visitors center exhibits? (Attach copy or describe)

6. What interpretive measures, if any, are proposed?

7. If there are known archaeological sites on the property, but no interpretive measures, why are there none?

C. Name of Property Manager/Landowner Providing Information in this Cultural Resource Management Assessment:

Name: _____

Unit/Property Name: _____

Phone: _____ Fax: _____ E-mail: _____

D. Name and Agency or Affiliation of Individual Preparing Assessment:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-mail: _____



ARCHAEOLOGICAL SITE FORM
FLORIDA MASTER SITE FILE

Recorder Site# _____
Field Date ____/____/____

- Original
Update (give site#)

Version 2.2 3/97

Consult Guide to Archaeological Site Form for detailed instructions.

Site Name(s)
Project Name
Ownership:
USGS 7.5 Map Name & Date
Township Range Section
Landgrant
City / Town
UTM: Zone Easting Northing
Address / Vicinity
Name of Public Tract

TYPE OF SITE (Check all choices that apply; if needed write others in at bottom)

SETTING *
STRUCTURES - OR - FEATURES *
FUNCTION *
List of site types and features with checkboxes.

HISTORIC CONTEXTS (Check all that apply; use most specific subphases: e.g., if Glades Ia only, don't also use Glades I)

Aboriginal *
Nonaboriginal *
List of historical contexts with checkboxes.

* Consult Guide to Archaeological Site Form for preferred descriptions not listed above (data are "coded fields" at the Site File).

SURVEYOR'S EVALUATION OF SITE

Potentially eligible for a local register?
Individually eligible for National Register?
Potential contributor to NR district?
Explanation of Evaluation

Recommendations for Owner or SHPO Action

DHR USE ONLY OFFICIAL EVALUATIONS DHR USE ONLY

NR DATE
KEEPER-NR ELIGIBILITY:
SHPO-NR ELIGIBILITY:
DELIST DATE
LOCAL DESIGNATION:
National Register Criteria for Evaluation

Consult Guide to Archaeological Site Form for detailed instructions.

FIELD METHODS (Check one or more methods for detection and for boundaries)

SITE DETECTION*

SITE BOUNDARIES*

- no field check, literature search, informant report, remote sensing, exposed ground, posthole digger, auger--size, unscreened shovel, screened shovel, bounds unknown, none by recorder, literature search, informant report, remote sensing, insp exposed ground, posthole tests, auger--size, unscreened shovel, block excavations, estimate or guess

Other methods; number, size, depth, pattern of units; screen size (attach site plan)

SITE DESCRIPTION

Extent Size (m2) _____ Depth/stratigraphy of cultural deposit _____

Temporal Interpretation* - Components (check one): single, prob single, prob multiple, multiple, uncertain, unknown

Describe each occupation in plan (refer to attached large scale map) and stratigraphically. Discuss temporal and functional interpretations:

Integrity Overall disturbance*: none seen, minor, substantial, major, redeposited, destroyed-document!, unknown

Surface: area collected m2 # collection units; Excavation: # noncontiguous blocks

ARTIFACTS

Total Artifacts # _____ (C)ount or (E)stimate? Surface # _____ (C) or (E) Subsurface # _____ (C) or (E)

COLLECTION SELECTIVITY*

- unknown, unselective (all artifacts), selective (some artifacts), mixed selectivity

SPATIAL CONTROL*

- uncollected, general (not by subarea), unknown, controlled (by subarea), variable spatial control, Other

ARTIFACT CATEGORIES* and DISPOSITIONS* (example: A_bone-human)

Pick exactly one code from Disposition List => => =>

- bone-animal, bone-human, bone-unspecified, bone-worked, brick/building debris, ceramic-aboriginal, ceramic-nonaboriginal, daub, exotic-nonlocal, glass, lithics-aboriginal, metal-nonprecious, metal-precious/coin, shell-unworked, shell-worked, Others:

Disposition List*
A - category always collected
S - some items in category collected
O - observed first hand, but not collected
R - collected and subsequently left at site
I - informant reported category present
U - unknown

Artifact Comments

DIAGNOSTICS (Type or mode, and frequency: e.g., Suwanee ppk, heat-treated chert, Deptford Check-stamped, ironstone/whiteware)

- 1. N= 5. N= 9. N=
2. N= 6. N= 10. N=
3. N= 7. N= 11. N=
4. N= 8. N= 12. N=

ENVIRONMENT

Nearest fresh water type* & name (incl. relict source) Distance (m)/bearing
Natural community (FNAI category* or leave blank)
Local vegetation
Topography* Min Elevation meters Max Elevation meters
Present land use
SCS soil series Soil association

FURTHER INFORMATION

Informant(s): Name/Address/Phone/Email
Describe field & analysis notes, artifacts, photos. For each, give type*(e.g., notes), curating organization*, accession #s, and short description.

Manuscripts or Publications on the site (Use continuation sheet, give FMSF# if relevant)

Recorder(s): Name/Addr./Phone/Email
Affiliation* or FAS Chapter

* Consult Guide to Archaeological Site Form for preferred descriptions not listed above (data are "coded fields" at the Site File).

SITE PLAN & USGS REQUIRED At 1"=300' (1:3600) or larger scale, show: site boundaries, scale, north arrow, datum, test/collection units, landmarks, mappers, date.

- Original
- Update (give site # at right)



HISTORICAL CEMETERY FORM

Florida Master Site File

Version 3.0: 8/98

Site #8

Recorder #

Field Date _____

*Consult Guide to the Historical Cemetery Form for detailed instructions

Form Date _____

LOCATION & IDENTIFICATION

Cemetery Name(s) _____ **Multiple Listing [DHR only]**

Project Name _____ **FMSF Survey #**

Address/Vicinity of/Route to _____

Nearest City/Town (within three miles) _____ In Current City Limits? yes no unknown

County _____ Tax Parcel #(s) (optional) _____

Ownership Type (check exactly one) private-profit private-nonprofit private-unspecified city county

state federal foreign Native American unknown

Public Tract Enclosing Cem., if any (e.g. park) _____

MAPPING

USGS 7.5 Map Name and Date _____

Township _____ Range _____ Section _____ 1/4 section NW SW SE NE Irregular sec.-name: _____

Township _____ Range _____ Section _____ 1/4 section NW SW SE NE Irregular sec.-name: _____

Landgrant: _____ Plat or Other Map _____

HISTORY

Year Cemetery Established: _____ Estimated Year _____ Ownership History (especially original owners) _____

Year Burials Ceased, if applicable _____ Reason(s) Burials Ceased _____

Range of Death Dates Earliest _____ Most Recent _____ (O)bserved or (R)esearched? _____

Acreage Expansions/Dates: _____

List People Important in Local, State, or National History Buried in Cemetery _____

FDHR Form Number HRXXXXXXX-98 Computer Document File P:\FSF\DOCS\FORMS\CM_V30ms.doc

Previous Attempts at Repair, Cleaning, or Restoration? _____

GENERAL DESCRIPTION OF CEMETERY

Type (Check all that apply) community company town epidemic family fraternal order

memorial park military(not national) municipal national potter s field prison

religious Rural Movement other (explain): _____

Ethnic Group(s) Interred (Check all that apply) White non-Hispanic Hispanic Asian Caribbean

African American American Indian-tribe: _____ other (explain): _____

Current Status: used for burials maintained but not used abandoned Size: _____ ft X _____ ft or _____ acres

Total # Graves: _____ Does Total # Include Unmarked Graves?: yes no

Evidence/# of Unmarked Graves? _____

Condition: well maintained some areas maintained, others neglected poorly maintained

not maintained, but can identify not maintained, hard to identify not identifiable but known to exist (explain): _____

Cemetery Boundary Type: fence wall hedge other (explain): _____

Describe Cem. Boundary (e.g. cast iron fence, stone or brick wall, etc.) _____

Historical Vegetation (trees, shrubs, flowers) _____

Grave Groupings (Check all that apply) family fraternal order military religious ethnic heritage other (explain): _____

Groupings Indicated By (Check all that apply) curbing fence hedge wall other (explain): _____

Public Access Unlimited Restricted: How? _____

Surroundings [use (N)one, (S)ome, (M)ost, (A)ll or nearly (A)ll] _____ Commercial _____ Residential _____ Institutional _____ Undeveloped

Threats (Check all that apply) abandonment agriculture desecration public development private development

mining or timbering other (explain): _____

Associated Historical Properties/Archaeological (non-cemetery) Remains _____

Check if Historical Structure Form completed

Check if Archaeological Site Form completed

*Consult Guide to the Historical Cemetery Form for detailed instructions

GRAVES

If question requests N/S/M/A, estimate proportions by using a letter as follows: (N)one/Very Few, (S)ome, (M)ost, (A)ll/Nearly (A)ll.

Orientation (N/S/M/A) (complete all that apply) ___East/West ___North/South ___Other: (explain): _____

Marked Graves (N/S/M/A) (complete all that apply) ___Headstones ___Marked with objects or plants (no headstone on grave)

___Graves mounded ___Graves depressed

If Other Method(s) of Marking Graves Used, List and Give N/S/M/A _____

Marker Materials (Check all that apply) marble concrete/cement fieldstone granite wrought iron cast iron white bronze/zinc sandstone slate wood other (explain below): _____

Describe Grave Articles Found in Cemetery _____

Marker Conditions (N/S/M/A) ___Sunken or tilted ___Chipped, cracked, weathered, but standing

___Broken or in fragments ___Deliberately vandalized

Other Notable Conditions Observed and Proportions (N/S/M/A) _____

Inscriptions (N/S/M/A) ___Legible inscriptions ___Illegible inscriptions ___No inscriptions

Distinctive Gravemarkers, Monuments, and/or Architectural Features _____

Signatures of Stone Carvers (Specify name, town if available) _____

RECORDER'S EVALUATION

Potentially Eligible for Local Designation? yes no insufficient information

Name of Local Register if Eligible _____

Individually Eligible for Nat. Register? yes no insufficient information

Potential Contributor to NR District? yes no insufficient information

Areas of Historical Significance (See National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", etc.): _____

Explanation of Evaluation (required; limit to three lines; attach full statement on separate sheet): _____

DOCUMENTATION

Research Methods (Consult Guide to the Historical Cemetery Form for detailed instructions) _____

Bibliographic References (Author, date, title, publication information. If unpublished, give FSF Manuscript Number, or location where available): _____

Local Contact: Name/Address/Phone # /Administrative Office _____

Recorder(Name/Address/Phone/Affiliation): _____

Photographs: Required. Request the use of B&W prints no smaller than 3x5. Photographs would be useful to document main gate or entrance, representative general views, representative or unusual monuments or markers, and damage or neglect.

Describe and Give Location/File Nos. of Notes, Records, or Photos: _____

DHR USE ONLY OFFICIAL EVALUATIONS DHR USE ONLY

NR DATE ___/___/___ KEEPER-NR ELIGIBILITY: yes no Date ___/___/___

DELIST DATE ___/___/___ SHPO-NR ELIGIBILITY: yes no potentially elig. insufficient info. Date ___/___/___

LOCAL DESIGNATION: _____ Date ___/___/___

Local office _____

National Register Criteria for Evaluation a b c d (See National Register Bulletin 15, p. 2)

REQUIRED: Photocopy or Orig. 7.5' Map with Boundaries in Red

ARCHAEOLOGICAL SHORT FORM
FLORIDA MASTER SITE FILE

Version 3.0 12/95

- Original
- Update

Site File No. 8 _____
Date of Form _____
Field Dates _____

Site Name(s) _____
Survey Name _____ Site File # if known _____
USGS Map name _____
(A USGS topographic map in the 7.5 minute series, or a photocopy, must be attached to this form)

Ownership private-profit (corporation) private-nonprofit (church) private-individual private-unspecif
 city county state federal foreign native american unknown

Nearest Town _____ in current city limits? y n
County _____ Township ____ Range ____ Section ____
Address / Vicinity Of/Route To _____

Environment (nearest fresh water) _____ Distance (m/ft) _____
Local Vegetation _____
Current Land Use _____

Artifact Categories (If possible, attach photos, sketches, or photocopies of datable and representative artifacts)
 Stone tools, flakes, chips Glass Bone-animal
 Ceramics-prehistoric Precious metal/coin Bone-unidentified
 Ceramics-historic or Euro. Metal Shell
 Brick/building material Bone-human Other (describe below)

Other _____ DHR Form HR6E04906-92 Computer Document File F:\DOCS\FORMS\ARSHORT

Location (field notes, artifacts, photographs) _____

Contact Person (name) _____
Address/Phone _____

Is Contact Person the landowner? yes no Agreeable to further contact? yes no

NARRATIVE DESCRIPTION: Attach extra sheets with information on site discovery, artifacts observed or collected, history of land use, current condition, apparent threats to the site, current environment, and other pertinent observations.

RECORDER Name _____
Affiliation (FAS Chapter if member)/Address/Phone _____

To learn about a nonprofit organization of amateur and professional archaeologists concerned with preserving and learning about Florida's heritage, write: Membership Secretary, Florida Anthropological Society, P. O. Box 82255, Tampa, Florida 33682.

FURTHER READING

The Florida Master Site File has produced a one page *Bibliography for Archaeology in Florida*.
Write to the address on the bottom of this page.

*** * * REQUIRED: USGS MAP OR PHOTOCOPY WITH SITE MARKED * * ***

DON'T TRESPASS * DON'T DIG OR COLLECT WITHOUT TRAINING & RECORDS

SHORT FORM INSTRUCTIONS

WHICH FORM TO USE

If you have not had any archaeological training, use this Short Form. If you have had training, use the Site File's standard Archaeological Site Form, with instructions *Guide to the 1992 Archaeological Site Form of the Florida Master Site File*.

WHEN TO COMPLETE A FORM

If material from one category in the margin is found, note it and consider completing a form. If items from two or more categories are found together, always complete a form.

PREHISTORIC MATERIALS

- Bone ■ It is a felony in Florida to knowingly disturb ANY human remains without authorization. If you find bone that could be human but that may not be old, call law enforcement. If the bone is human and known to be old, notify law enforcement and call the State Archaeologist at (904) 487-2299.
■ Bone buried deeper than 18" (40 cm).
■ Bone at any level with materials made by humans.
- Charcoal ■ Any concentration not clearly from a recent fire (aluminum cans indicate a recent event).
- or Ash ■ Even scattered pieces of ash, especially if there are any pieces of pottery, shell, or discolored stones or stone flakes that are not obviously part of a stream bed or from bedrock.
- Stone ■ Arrowhead or projectile point.
■ Two or more human-altered stone flakes within a 100' (30 meter) diameter area.
- Ceramics ■ Two or more pieces of Indian pottery.
- Shell ■ More than 4 pieces, clearly old (e.g. moss covered), within 100' diameter area. Note especially conch, oyster, apple snail, and periwinkle shell.

HISTORIC MATERIALS

Fifty years old is a rule of thumb for "historic." Trash dumps can be especially important.

- Wood ■ Lumber: More than one piece hand cut or with square nails (for example, the remains of a wall).
■ Logs: Especially if notched or with bark removed.
■ Recognizable object. Example: canoe from lake.
- Metal ■ Recognizable hardware or three square cut nails.
- Glass ■ More than two pieces of any of these colors/kinds: purple, cobalt blue, white milk, dark amber, or green; glass with dates, writing, or decoration.
- Ceramics ■ At least one decorated sherd of European pottery.
- Brick or clay ■ Bricks in alignment (for a foundation?) or in a pile.
■ Older bricks, not machine made, are less regular in finish and size, and less likely to contain frogs (recesses and perforations designed into the brick).
■ Burned clay, especially with impressions from other materials.
- Concrete ■ Remnants of a foundation or structure, unless it is clearly less than fifty years old.
- Other ■ Any buttons, beads, toys, or jewelry.

FIELD BY FIELD INSTRUCTIONS

Original/Update: Mark Original if you have verified with Site File that the site has never been recorded or if you do not know whether it has been recorded; mark Update otherwise and write previous number in the Site File No. 8 field.

Site File No. 8: Omit if not assigned by Florida Master Site File.

Date of Form: When the form was actually completed.

Field Dates: When the site was actually observed; put all dates if more than one day's work was involved.

SITE NAME(S): All commonly used names for the site. If formerly unknown, sites are usually named for natural features, landmarks, or landowners. E.g.: Bryan Homestead, Roy's Mound, Beaver Creek, Hutchins (the word "Site" may be omitted from this field--it is understood).

SURVEY NAME: If the site has been recorded as part of a survey project, give the project name here.

Site File # if known: The Site File assigns survey projects a file number and keeps standard information on them. You will not know this number unless you have had your project, and the written report on it, assigned such a number.

USGS MAP NAME: The name of the USGS 7.5 minute topographic map on which the site appears, including the date of the map's latest revision. Vital! Mark the site area to scale on the map, preferably in red. Ensure that map name and date are written on the copy. USGS topographic maps at the large 1:24,000 scale may be used at large libraries. Purchase from large bookstores, engineering supply stores, or directly from U. S. Geological Survey, Map Distribution, Federal Center, Box 25286, Denver, CO, 80225, phone (303) 236-7477.

OWNERSHIP: If uncertain, mark unknown. Commercial uses including pine plantation are private-profit. Besides trespass laws, note that archaeological sites are legally protected on all state and federal lands, as well as by some local governments.

NEAREST TOWN: Nearest town or none if none within 10 mi.

IN CURRENT CITY LIMITS?: It is important to accurately complete this item from updated local maps. Local governments compile lists of sites from the Site File.

COUNTY: Spell it out. If the site overlaps counties, use the county in which the greater part of the site lies.

TOWNSHIP: North-south surveyor coordinate, red lines on USGS maps. Also shown on Florida Dept. of Transportation, soils, and other maps. Example: 1 South or 1S.

RANGE: The east-west surveyor coordinate as shown on above maps. Examples: 23E, 3W, 16W, etc.

SECTION: A subdivision (usually a square mile) of a given township and range, as read from above maps. On USGS maps, sections are marked by fine red solid or dashed lines.

ADDRESS / VICINITY OF/ROUTE TO: Give address if the site is on a lot with an address. Box/route information is not useful. In any case, explain briefly how to get there. Example: From Main St and US 98 in Bradford, S on US 98, 5.8 mi N; right on dirt rd, 0.5 mi; site S behind house, 100 ft.

Nearest Fresh Water: If named, identify by name: Lake Jones. Otherwise, indicate, e.g., unnamed creek.

Distance: indicate meters or feet and compass direction from site. Example: 120 m NE.

Local Vegetation: Describe (1) dominant trees; (2) nature of ground cover; (3) percent of ground covered. Example: Scrub oak, assorted evergreens and weeds, 75% cover.

Current Land Use: Examples: Cultivated field, old field, planted pine, groves, woods, subdivision under construction, existing residential area, urban redevelopment, right of way (for road, pipeline, powerline, etc.).

ARTIFACT CATEGORIES: Show number of artifacts if known; otherwise, check all the categories that are present. If possible, photograph, sketch, or photocopy artifacts such as arrowheads and decorated pottery. Pottery rims and glazed pottery sherds with designs or stamped or painted patterns are best for dating. Other is for artifacts outside these categories.

LOCATION Field notes, artifacts, photographs: Where are these items kept? This can guide future researchers.

CONTACT PERSON: Who locally knows about the site?

RECORDER: Person completing the form.

FURTHER INFORMATION

PHOTOGRAPHS: Optional, but valuable to document site condition (especially if obviously looted), and to document diagnostic artifacts. B&W prints, at least 3x5, are preferred; label in pencil on the back, including site number and name.

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