

Chinsegut Hill Management Plan



**A Cooperative Partnership with the
Hernando County Board of County Commissioners
through its Environmentally Sensitive Lands Program
and the Florida Forestry Service
Contract #021662**

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March 2015

Introduction

The Chinsegut Hill property is approximately 117 acres. Of that, approximately 10 acres serve as the Retreat Center which includes the Manor House, cabins, dining hall, lecture hall and other various out buildings. Per a Memorandum of Agreement (MOA) with Hernando County, the Florida Forest Service has the responsibility to manage the property outside the immediate Chinsegut Retreat Center grounds. This Work Program is the first step toward fulfilling this obligation and is required per the MOA. At present, the great majority of this management will be to begin to treat, and eventually control, the exotic species located on the property and replace with native vegetation.

The property has a long history of human occupation. There are signs of multiple generations of human presence visible in the form of ruins, extant buildings, terracing, rock piles (evidence of agriculture), a bridge, old roads, etc. Among the historic occupants were those that intentionally collected exotic plants from around the world.

This history has led to nearly complete ground coverage of invasive exotic plant species. There are species on Chinsegut Hill that seem specific to this property that are not identifiable using standard literature such as the Florida Invasive Exotic Pest Plant Council list of invasive plant species. Creation of a complete species list will be a challenging task because some of the plants may have been introduced from around the world and are not known to local botanists.

So extensive is the coverage of the many various exotic plants, careful planning using multiple strategies will be required in order to efficiently progress with the restoration process. This process, carried to the desired condition, will be long term and will be ongoing for years. Survey work and mapping will be used to document site conditions and sensitive features.

Desired Outcomes

The long range outcome will be to restore the area back to the appropriate native plant communities. In the short term though, the following outcomes will be the immediate focus:

1. Keep the worst invasive species from spreading to other nearby conservation lands.
2. Improve the user experience for visitors.
3. Test methods for an economical way to restore areas with native plant species.
4. Provide educational material/signs for visitors to understand and support the management activities occurring on the property.

Strategies

There are many strategies to consider in achieving the desired outcome. The following is a list of them in no particular order. We will use one or more of these strategies in concert to begin the process. As time progresses, the strategies will be refined and/or may be changed depending on the initial outcomes. The treatment methods listed below will be implemented using various chemicals, mechanical methods, or prescribed fire, or some combination of two or three of these methods.

- Treat exotic species from the perimeter and work inward over time.
- Treat everything in geographical order. (Start in one area and move outward.)
- Treat everything in descending order from most invasive to least invasive.
- Treat everything in order what we can eradicate more easily to the ones most difficult to eradicate.
- Pick certain areas that may have higher ecological value or better geographical location and start there and work outward.
- Use fire to treat exotics.
- Treat all exotics in order from tallest to shortest or shortest to tallest.
- Treat all species starting at the top of the hill working downward.
- Use a hybrid of these treatment systems.
- Re-introduce native plant species by seed or planting
- Provide educational/interpretive signs to inform Chinsegut Hill guests of the restoration activities.
- Utilize contractors to achieve some of the work where it is more economical or when the FFS is lacking in manpower.
- Identify potential grants.
- Identify treatment plans for specific species.

Exotic Species List

In order to select treatment method(s) an understanding of which exotic species occur on the property is needed. Presently there are 30 species of exotic plants known to be present. A few of these species are not readily identifiable.

Chinsegut Hill - List of Exotic Invasive Species			
Common Name	Scientific Name	EPPC Category	Estimated Coverage
Camphor	Cinnamomum camphora	1	
Common Bamboo	Bambusa vulgaris		
bamboo 2 (medium)			
Arrow Bamboo	Pseudosasa japonica		
Lantana	Lantana camara	1	
Sour Orange	Citrus X aurantium		
Camelia			
Azalea			
Caesar-weed	Urena lobata	1	
Catclaw vine	Macfadyena unguis-cati	1	
Climbing ficus	Ficus pumila		
Arrowhead vine	Syngonium podophyllum	1	
Privet	Ligustrum spp. (L. lucidum)	1	
Elephant-ear	Xanthosoma sagittifolium	2	
Chinaberry	Melia azedarach	2	
Air potato	Dioscorea bulbifera	1	
Coral ardisia	Ardisia crenata	1	
dentate woody vine			
three veined tree			
Exotic Dayflower	Commelina spp.		
spiny flaky barked tree			
Chinese Fan Palm	Livistona chinensis	2	
Tuberous Sword fern	Nephrolepis cordifolia	1	
Cogongrass	Imperata cylindrica	1	
Paper mulberry	Broussonetia papyrifera	2	
Common Asparagus-fern	Asparagus setaceus		
Japanese climbing fern	Lygodium japonicum	1	
Rosary Pea	Abrus precatorius	1	
Tangerine	Citrus reticulata		
Weeping Finger Grass? (at seep)	Eustachys distichophylla		

Initial Strategy

Considering that we do not want visitors to inadvertently transport exotics off the site and disperse them throughout the southeast we must consider removal and control of certain species from the area of highest traffic, on top of the hill. Species that can contaminate clothing and vehicles must be considered first. These include camphor, Caesar-weed, chinaberry, coral ardisia, privet, Sword fern, cogongrass, and Japanese climbing fern. These species should be removed from the top of the hill within the mowed periphery of any occupied building, parking lot, or frequently visited area. Initially the mowed grounds will be the responsibility of the Friends of Chinsegut Hill, Incorporated. In future years the Florida Forest Service may assume this responsibility as negotiated in an annual budget agreed upon by Hernando County and the Florida Forest Service.

To keep invasive exotic plant species from spreading to neighboring properties a buffer around the perimeter of the property will be treated. This will start with existing roads and be augmented with a perimeter trail for access where no road exists. All exotics outside and within 25 feet of this trail will be frequently treated.

To stop new invasives from spreading from the hill, treatment of any plant that is not widespread on the property and has not already spread throughout Hernando County will be accomplished. Unidentified species such as the 3 veined trees, the spiny tree, perhaps one or more of the bamboos, and the Chinese fan palm are all examples of this.

In order to determine future native planting needs for restoration, an area with easy access will be selected near the top of the hill in which all exotics will be treated. This will test the treatment methods and note any desirable species that return. If there are no desirable native species present, introduction of plants or seed from some nearby natural areas will be the method to re-vegetate the area. The results of this trial area will eventually determine the final desired condition of the property, and the rate in which we try to achieve this condition.

Species that have a good chance of escaping the property, despite a buffer, will also be treated. Examples are sword fern that spreads by spore or coral ardisia that have seeds that are carried by animals.

Finally, any area that can/should be restored with fire will be identified. There is a sandhill in the SW portion of the tract in which fire may be introduced. This is the only area that seems to be recognizable as sandhill, a fire dependent plant community. If this area can be

treated with fire, it may be possible to reduce the exotic species more economically than with herbicides.

Implementation Phases

Phase 1:

1. Draft management plan and develop budget for FY 15.
2. Establish perimeter road/trail for access. This will also serve as perimeter treatment area.
3. Modify existing building(s) to secure chemicals and equipment that may be necessary for management.
4. Continue to update the species list of all exotic species and natives. It may be important to identify certain native species that will be used in conjunction with restoration.
5. Identify area for ground cover and treatment trials.
6. Meet with The Friends of Chinsegut Hill to plan the treatment of the Retreat Center and buffer area.
7. Determine control methods for exotics that are intended to be treated.
8. Take into consideration significant archaeological and historical resources (including plant species, if applicable) identified on-site.

Phase 2:

1. Prepare list of tools, equipment, and chemicals to begin work.
2. Acquire necessary tools, equipment, and chemicals.
3. Map sensitive features and document baseline conditions.

Phase 3:

1. Begin treating perimeter of property.
2. Begin treating trial area.
3. Work with The Friends of Chinsegut Hill to get mowed grounds area treated.

4. Identify areas of significant ecological features and plan if there should be any exotic treatments for ecological purposes.
5. Identify area(s) where fire could be reintroduced and create any necessary firelines.
6. Begin treatment of specific species that can be easily eradicated, have not spread to nearby conservation lands, or that can spread regardless of buffers.

Phase 4:

Use adaptive management to proceed. Any planning beyond the first two phases requires information gathered from the implementation of this plan.

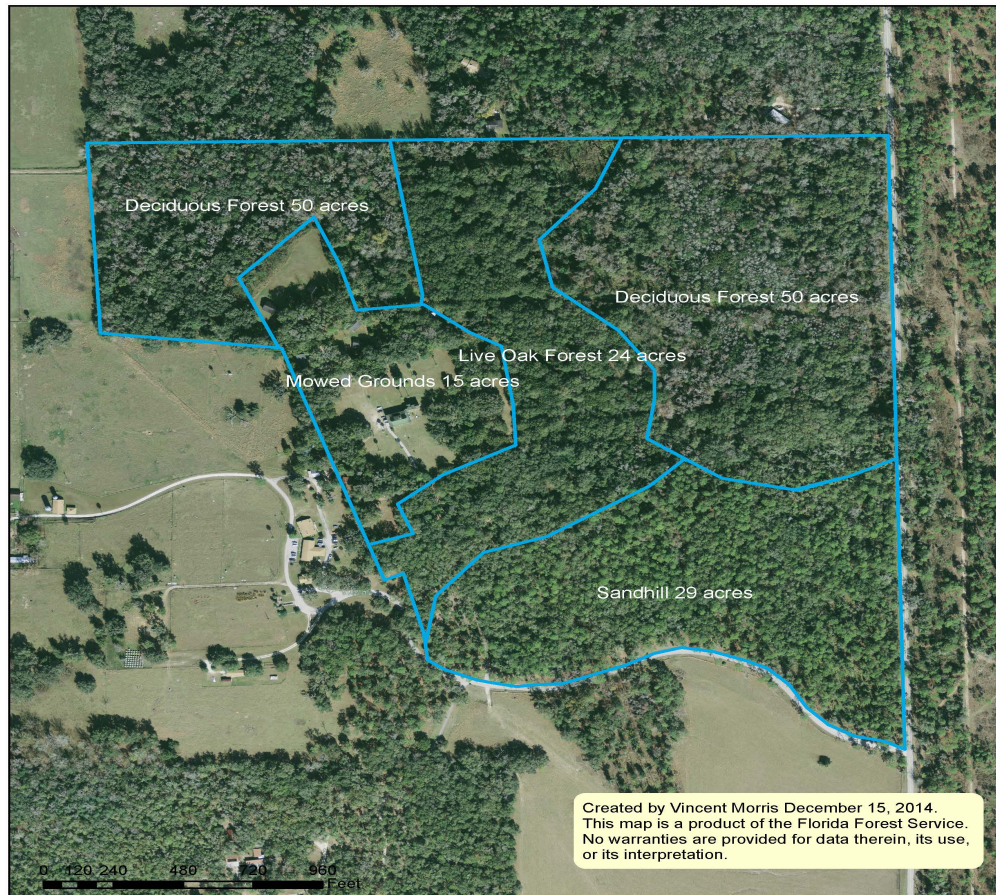
Annual Work Program

Each year per the contract, the Forestry Service will develop a work program with associated costs which will be attached to the management plan.

Map

The map shown on the next page has some meaningful information that can be attained from aerial photography because the grounds as well as characteristics of canopy trees that may still indicate the (historic) location of certain plant communities can be seen. A map may guide exotic treatments and potential prescribed burns.

Chinsegut Hill
Estimated Plant Community Type and Acreage



Appendix

Related Management and Use Plan Issues

Chinsegut Hill is recognized for its significant historic resources. The Chinsegut Hill property is being leased by Hernando County from the Florida Department of Environmental Protection in conjunction with the Friends of Chinsegut. The Friends of Chinsegut will manage the structures and the area surrounding them on the top of the hill. Hernando County Planning Staff and the Florida Department of Agriculture and Consumer Services have negotiated a Memorandum of Agreement for the Florida Forest Service (FFS) to manage the natural resources on the remainder of the property under the County's Environmentally Sensitive Lands (ESL) Program.

The property is within the Florida Ecological Greenways Network (FERN). It is adjacent to the Chinsegut Wildlife Management Area, conservation lands managed by Florida Fish and Wildlife Conservation Commission (FWC) and is in the vicinity of Withlacoochee State Forest tracts managed by the Florida Forest Service (to the northeast). The property provides connectivity to publically owned State and Federal lands. The property also contains numbered sites from the Florida Master Site File; (HE00269) for prehistoric habitation and historical development, a cemetery (HE00673), and the Manor House which is listed in the National Historic Registry (HE00496).

Hydrology

The property assists in maintaining the hydrologic integrity of the natural system, including the surrounding conservation lands and the federally owned USDA property. Chinsegut Hill is a topographic high in the County (274 feet MSL). Soils consist of Arreddondo Fine Sand, Blichton Loamy Fine Sand, Flemington Fine Sandy Loam, and a very small amount of Kendrick Fine Sand on the southeast corner of the property. The dominant soil type is Arreddondo Fine Sand which is well drained. The other soils are poorly drained, with the exception of Kendrick. There are small seeps that may have been previous locations of the Brooksville Bellflower and may contain other rare flora. Old wooded borrow pits (about 4 acres) are shown on the southern boundary (USDA soils map). Due to the topography, there will not be any impacts to floodplain. There are no activities proposed for impacting water quantity or quality.

Natural Habitats and Other Resources

FFS will manage the vegetated areas for exotic invasive species and use management techniques described in the Plan for restoration. Historical and archaeological sites mentioned above are to be protected and are addressed in the State's Department of Environmental Protection Conservation Management Plan.

Administration

Hernando County has entered into a license agreement with the Friends of Chinsegut (a non-profit organization) for the operation, maintenance, and management of the Manor House and conference center infrastructure. The facilities will continue to be used as a Retreat Center for events, and eco-

tourism. The revenue-generating enterprises are associated with this portion of the operation and not the Preserve management under the ESL program.

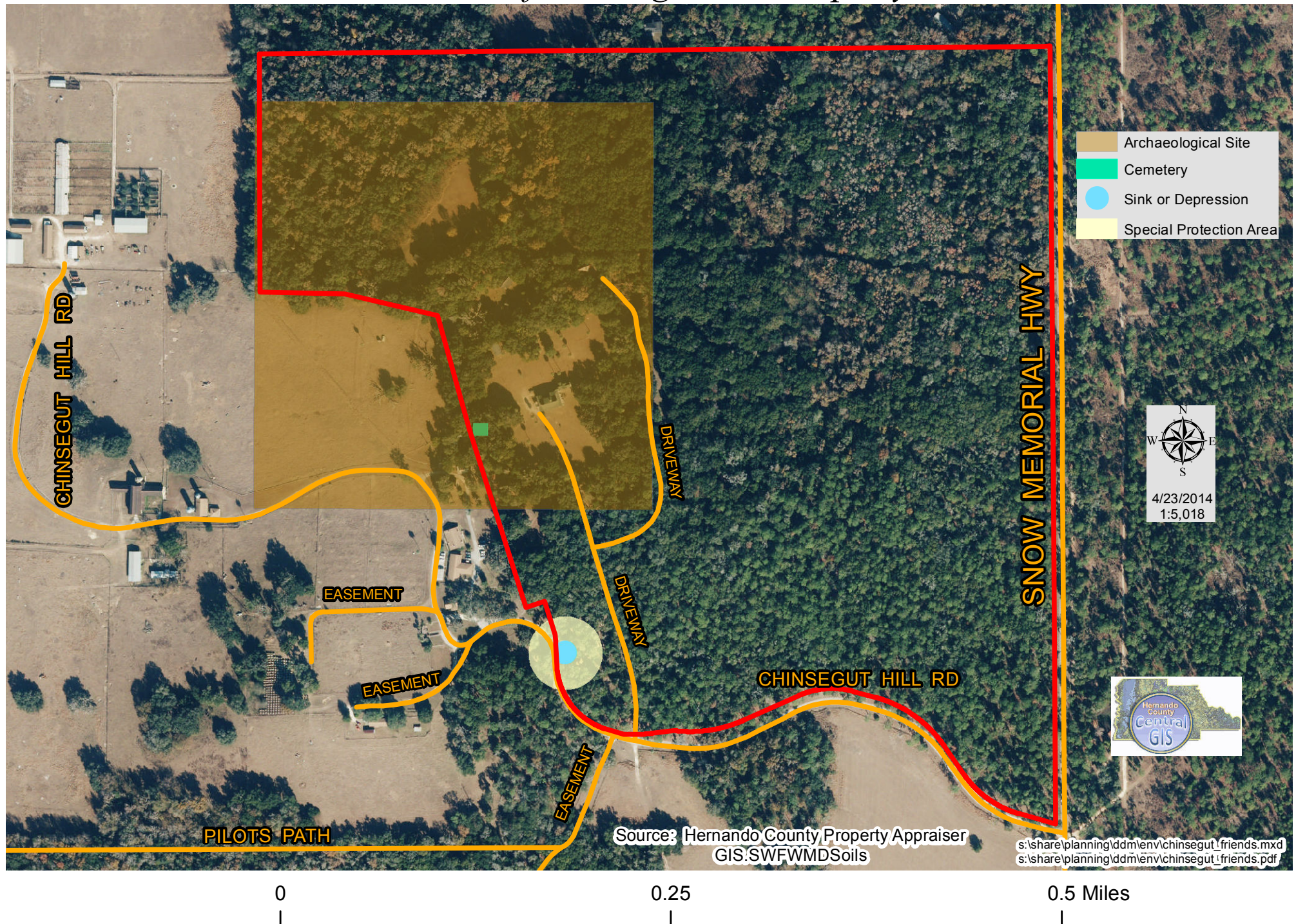
The FFS annual work program addresses implementation of the Management Plan and budget.

Recreation/Education

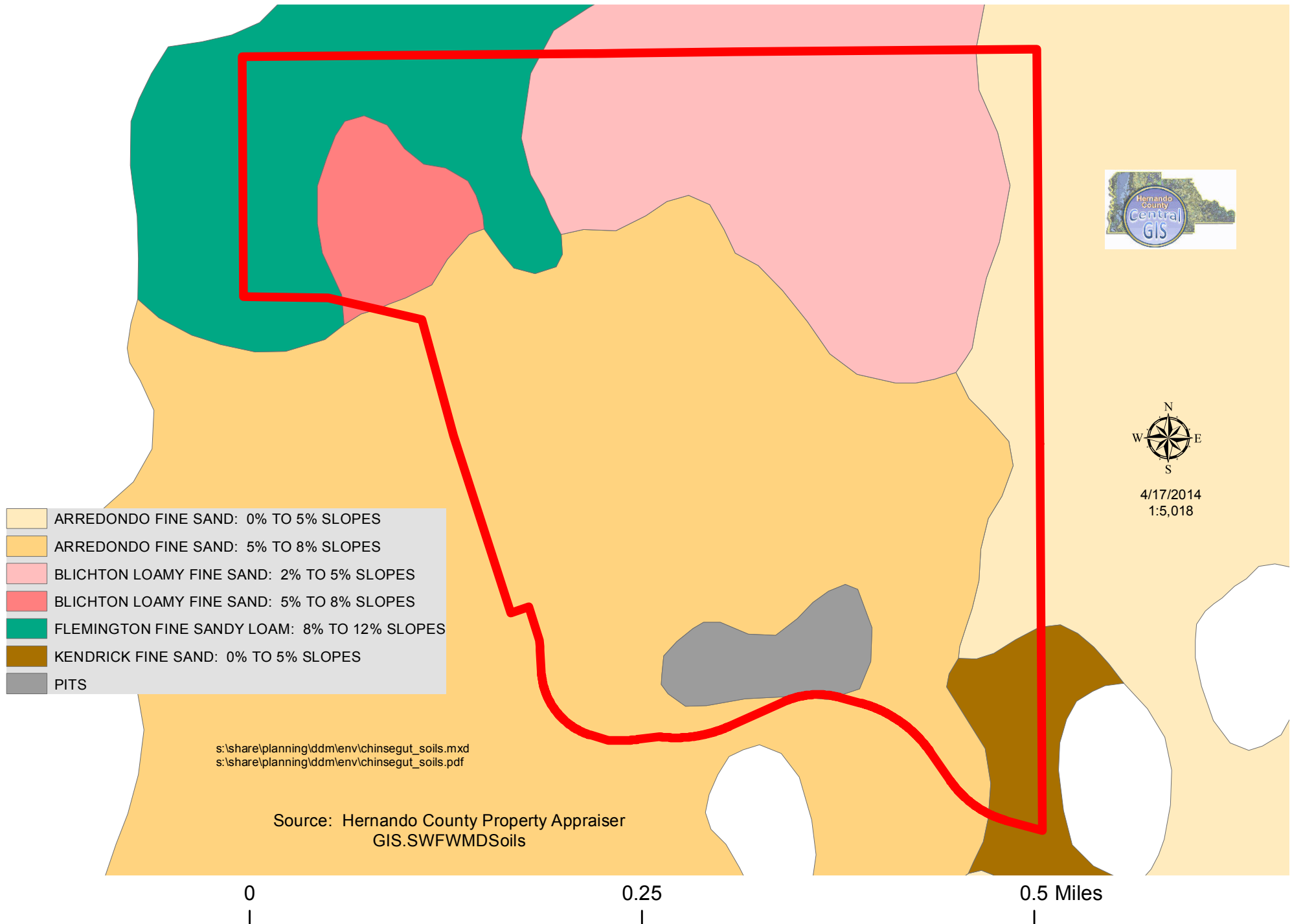
The ESL program promotes public access compatible with the property. The property can support passive recreation such as hiking, bird watching, and nature observation with the potential to interconnect to hiking trails on State conservation lands. This would broaden the ecotourism aspects of the property once exotic invasive plant species are being controlled in areas adjacent to trails to prevent the spread of invasive species to managed conservation lands. Florida Friendly landscaping will be used where possible around the facilities.

Educational signage will be developed and installed on exotic invasive plants and their control. Florida Friendly landscaping and techniques can be featured. Historical interpretive signs and material are being developed for the Manor House.

Features of Chinsegut Hill Property



Soils of Chinsegut Hill Property



Chinsegut Hill Property: FLUCCS*

