

KORESHAN STATE HISTORIC SITE

UNIT MANAGEMENT PLAN

APPROVED

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Recreation and Parks

AUGUST 6, 2003



Department of Environmental Protection

Jeb Bush
Governor

Marjorie Stoneman Douglas Building
3900 Commonwealth Boulevard, MS 140
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

August 6, 2003

Ms. BryAnne White
Division of Recreation and Parks
Office of Park Planning, M.S. 525
3900 Commonwealth Blvd.
Tallahassee, Florida 32399

Re: Koreshan State Historic Site

Lease # 3630

Ms. White:

On **August 6, 2003**, the Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, approved the management plan for **Koreshan State Historic Site**. Pursuant to Section 253.034, Florida Statutes, and Chapter 18-2, Florida Administrative Code this plan's ten-year update will be due on **August 6, 2013**.

Approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Please forward copies of all permits to this office upon issuance.

Sincerely,

Delmas T. Barber

Delmas T. Barber, OMC Manager
Office of Environmental Services
Division of State Lands

"More Protection, Less Process"

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TABLE OF CONTENTS

INTRODUCTION	1
PURPOSE AND SCOPE OF PLAN	1
MANAGEMENT PROGRAM OVERVIEW	3
Management Authority And Responsibility	3
Park Goals And Objectives	4
Management Coordination	6
Public Participation	7
Other Designations	7
 RESOURCE MANAGEMENT COMPONENT	
INTRODUCTION	9
RESOURCE DESCRIPTION AND ASSESSMENT	9
Natural Resources	9
Cultural Resources	14
RESOURCE MANAGEMENT PROGRAM	29
Special Management Considerations	29
Management Needs And Problems	30
Management Objectives	33
Management Measures For Natural Resources	33
Management Measures For Cultural Resources	40
Research Needs	42
Resource Management Schedule	43
Land Management Review	43

LAND USE COMPONENT

INTRODUCTION	45
EXTERNAL CONDITIONS	45
Existing Use Of Adjacent Lands	45
Planned Use Of Adjacent Lands	46
PROPERTY ANALYSIS	46
Recreation Resource Elements	46
Assessment Of Use	47
CONCEPTUAL LAND USE PLAN	50
Potential Uses And Proposed Facilities	50
Facilities Development	55
Existing Use And Optimum Carrying Capacity	55
Optimum Boundary	56

TABLE

TABLE 1 - Existing Use And Optimum Carrying Capacity	55
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LIST OF ADDENDA

ADDENDUM 1

Acquisition History and Advisory Group Staff Report	A 1 - 1
---	---------

ADDENDUM 2

References Cited	A 2 - 1
------------------	---------

ADDENDUM 3

Soil Descriptions	A 3 - 1
-------------------	---------

ADDENDUM 4

Plant And Animal List	A 4 - 1
-----------------------	---------

ADDENDUM 5

Designated Species List	A 5 - 1
-------------------------	---------

ADDENDUM 6

Priority Schedule and Cost Estimates	A 6 - 1
--------------------------------------	---------

ADDENDUM 7

Land Management Review	A 7 - 1
------------------------	---------

MAPS

Vicinity Map	2
Soils Map	11
Natural Communities Map	13
Base Map	48
Conceptual Land Use Plan	51
Optimum Boundary Map	57

INTRODUCTION

Koreshan State Historic Site is located in Lee County (see Vicinity Map). The historic site is on the corner of Corkscrew Road and U.S. Highway 41, two miles west of Interstate 75. The vicinity map also reflects significant land and water resources existing near the park. Two additional parcels are located at the mouth of the Estero River and are not accessible by road.

For this plan, park acreage has been calculated based on the composition of natural communities, in addition to ruderal and developed areas. Currently the park contains 140.82 uplands and 53.76 wetland/submerged acres.

At Koreshan State Historic Site public outdoor recreation and conservation is the designated single use of the property. There are no legislative or executive directives that constrain the use of this property. The park was acquired in September 1961 as a donation from the last remaining members of the Koreshan Unity, in exchange for a lifetime tenancy agreement. Obligations associated with the tenancy agreement were fulfilled in August 1982 (see Addendum 1).

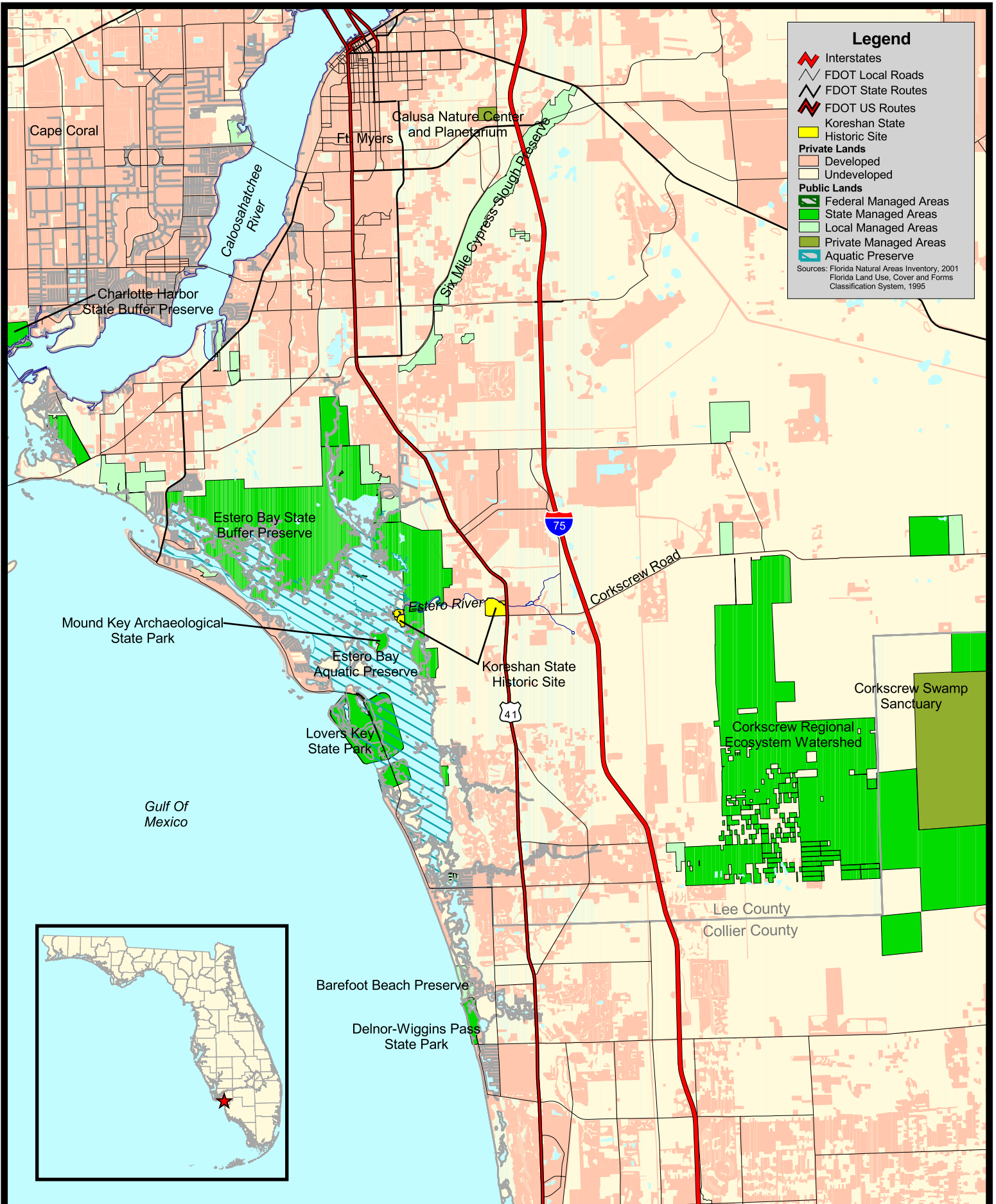
PURPOSE AND SCOPE OF THE PLAN

This plan serves as the basic statement of policy and direction for the management of Koreshan State Historic Site as a unit of Florida's state park system. It identifies the objectives, criteria and standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and intended to be consistent with the State Lands Management Plan. With approval, this management plan will supercede and replace the current approved plan of June 1, 2000. All development and resource alteration encompassed in this plan is subject to the granting of appropriate permits; easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state, or federal agencies. This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes, and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.

The plan consists of two interrelated components. Each component corresponds to a particular aspect of the administration of the park. The resource management component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management problems and needs are identified, and specific management objectives are established for each resource type. This component provides guidance on the application of such measures as prescribed burning, exotic species removal, and restoration of natural conditions.

The land use component is the recreational resource allocation plan for the unit. Based on considerations such as access, population, and adjacent land uses, an optimum allocation of the physical space of the park is made, locating use areas and proposing types of facilities and volume of use to be provided.

In the development of this plan, the potential of the park to accommodate secondary management purposes ("multiple uses") was analyzed. These secondary purposes were considered within the context of the Division's statutory responsibilities and an analysis of the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation, and visitor experiences.

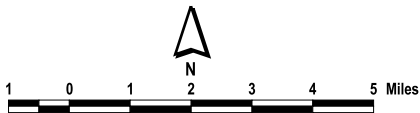


Legend

- Interstates
- FDOT Local Roads
- FDOT State Routes
- FDOT US Routes
- Koreshan State Historic Site
- Private Lands**
- Developed
- Undeveloped
- Public Lands**
- Federal Managed Areas
- State Managed Areas
- Local Managed Areas
- Private Managed Areas
- Aquatic Preserve

Sources: Florida Natural Areas Inventory, 2001
Florida Land Use, Cover and Forms Classification System, 1995

**Koreshan State Historic Site
Vicinity Map**



Florida Department Of Environmental Protection
Division Of Recreation And Parks
Office Of Park Planning

For this park, it was determined that no secondary purposes could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation. Uses such as, water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the park and should be discouraged.

The potential for generating revenue to enhance management was also analyzed. Visitor fees and charges are the principal source of revenue generated by the park. It was determined that multiple-use management activities would not be appropriate as a means of generating revenues for land management. Instead, techniques such as entrance fees, concessions, and similar measures will be employed on a case-by-case basis as a means of supplementing park management funding.

The use of private land managers to facilitate restoration and management of this unit was also analyzed. Decisions regarding this type of management (such as outsourcing, contracting with the private sector, use of volunteers, etc.) will be made on a case-by-case basis as necessity dictates.

MANAGEMENT PROGRAM OVERVIEW

Management Authority and Responsibility

In accordance with Chapter 258, Florida Statutes, and Chapter 62D-2, Florida Administrative Code, the Division of Recreation and Parks (DRP) is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values; conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.

The Trustees have also granted management authority of certain sovereign submerged lands to the Division under Management Agreement MA 68-086 (as amended January 19, 1988). The management area includes a 400-foot zone from the edge of mean high water where a park boundary borders sovereign submerged lands fronting beaches, bays, estuarine areas, rivers or streams. Where emergent wetland vegetation exists, the zone extends waterward 400 feet beyond the vegetation. The agreement is intended to provide additional protection to resources of the park and nearshore areas and to provide authority to manage activities that could adversely impact public recreational uses.

Many operating procedures are standard system wide and are set by policy. These procedures are outlined in the Division **Operations Procedures Manual** (OPM) and cover such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, camping regulations, resource management, law enforcement, protection, safety and maintenance.

In the management of Koreshan State Historic Site, primary emphasis is placed on protection and maintenance of the historic site for long-term public enjoyment. Program emphasis is directed toward the interpretation of the historic site for general public enjoyment.

Park Goals and Objectives

The following park goals and objectives express the Division long-term intent in managing the state park. At the beginning of the process to update this management plan, the Division reviewed the goals and objectives of the previous plan to determine if they remain meaningful and practical and should be included in the updated plan. This process ensures that the goals and objectives for the park remain relevant over time.

Estimates are developed for the funding and staff resources needed to implement the management plan based on these goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers, and partnerships with agencies, local governments and the private sector, for supplementing normal legislative appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined by the availability of funding resources for these purposes.

Natural and Cultural Resources

1. Identify, preserve and protect the site's cultural resources.
 - A. Continue implementation of program to restore historic structures and grounds features as recommended in March 2000 "Koreshan State Historic Site Unit Management Plan".
 - B. Develop and implement written plans for maintenance of historic structures and Koreshan-introduced features within the historic district.
 - C. Adopt a Scope of Collections Statement and develop a Collections Management Plan.
 - D. Produce Historic Structures Reports, which comply with established standards for stabilization, rehabilitation and restoration of cultural resources, before funding major work on any historic structure or feature.
 - E. Initiate interagency project with the DHR and FDOT to develop a historical structure report for the New Store and Art Hall due to potential for negative impacts on the structures during work on U.S. Highway 41.
 - F. Implement the recommendations outlined in the November 2000 historic structures report "The New Store, A Restoration Approach And Preservation Plan." Purchase a fireproof safe for the collection storage facility.
 - G. Facilitate curatorial staffing needs with an additional Career Service position or recurring OPS funding.
 - H. Continue the integrated termite and pest management program in the Historic District.
 - I. Establish preservation alliances with area historic sites and museums.
 - J. Protect the settlement from the impact of impending construction on U.S. Highway 41, as well as the visual and auditory impact of the road by constructing a sound barrier and vegetative buffer between the Art Hall and the New Store.
 - K. Rebuild the Seminole Chickee, built by the Seminoles for the Koreshans during the historic period.

- L. Coordinate with the FDOT, the DHR, and U.S. Department of the Interior on implementation of protection measures to insure adequate protection of the cultural resource features during the expansion of U.S. Highway 41.
- 2. Improve administrative aspects of cultural resources management at the site.
 - A. Using collection management software, compatible to standardized system software, continue to assemble, catalog and store existing information about the site's cultural resources.
 - B. Maintain a collections management program based on standards in the Division Operating Procedures Manual.
- 3. Implement park management practices that promote historic site integrity and provide site security.
 - A. Preserve cultural and natural landscapes by establishing vegetative buffers to screen the site from internal support facilities and intrusions of development on adjacent lands.
 - B. Move or bury overhead lines that extend through the historic settlement and establish underground communication, electrical and water access for each building
 - C. Increase security service to install a fire alarm system and an intrusion alarm system for each structure. Alarm systems must be connected to local fire department and law enforcement by automatic dialer.
- 4. Implement a cyclical maintenance plan for day-to-day operations within the historic settlement.
 - A. Develop and maintain building records of activities associated with each individual structure and collection object.
 - B. Develop a history of resource management activities and review work project and purchasing records.
- 5. Implement management program for horticultural resources.
 - A. Develop a vegetation management plan to facilitate restoration of the cultural landscape in the historic settlement and in other areas important for site interpretation.
 - B. Maintain a plant nursery to propagate samples of all garden plant materials and important tree varieties.
 - C. Establish a cyclical maintenance program for the existing ornamental resources in the historic district.
 - D. Contract qualified lawn maintenance service to maintenance program.
 - E. Identify irrigation needs in coordination with development of water system installation. Utilize xeriscape techniques when ever possible and research how Koreshans dealt with this issue.
 - F. Monitor invasive character of ornamental plant species associated with the historic district to prevent the spread of unwanted plant materials into natural areas of the park.
- 6. Preserve and actively manage the natural resources at Koreshan State Historic Site.
 - A. Continue utilizing prescribed fire in appropriate natural communities.
 - B. Continue removal of exotic invasive plant species.
 - C. Implement plan to create more natural contours and vegetative features around the borrow pits.
 - D. Continue to document daily weather via an on-site remote weather station.

Recreational Goals

- 7. Continue to provide quality resource based outdoor recreational and interpretive programs and facilities at the state park.
 - A. Continue to schedule special events such as holiday festivals, living history

- programs, concerts and cultural demonstrations.
 - B. Continue training curriculum and provide training opportunities for staff and volunteers to encourage developing and presenting quality interpretive programs.
 - C. Maintain overnight accommodations.
 - D. Maintain day use opportunities for picnicking, fishing, hiking, nature observation and boat launching.
8. Seek funding to expand recreational and interpretive opportunities through the improvement of programs and the development of new use areas and facilities, as outlined in this management plan.
- A. Enhance interpretive opportunities by building a visitor center to house exhibits, orient and create a transitional experience for visitors, and provide office space for volunteers and staff.
 - B. Expand the trail system utilizing existing park roads and firebreaks, providing a link from the campground/ day use area to the historic district and a link to existing sidewalks outside the site.
 - C. Upgrade the day-use area by replacing the restroom and constructing a picnic shelter.
 - D. Upgrade the campground by expanding the restroom facilities.
 - E. Upgrade the boat ramp.
 - F. Enhance the self-guided and guided tours to interpret the utopian community.

Park Administration/Operations

9. Provide efficient and effective management of park resources and facilities while maintaining a high level of visitor service.
- A. Seek funding to construct additional support facilities including a shop, storage facilities and administrative office.
 - 1.) Research potential funding sources for the restoration of the historic district.
 - B. Continue to upgrade the existing facilities to assure compliance with the Americans with Disabilities Act.
 - C. Assure that appropriate training is provided to all staff in visitor services, park information, and emergency procedures.
 - D. Maintain high maintenance standards and conduct routine safety inspections to provide clean and safe facilities and use areas.
 - E. Continue to work with the Koreshan Unity Alliance, the Citizen Support Organization (CSO) for the park. Encourage continued participation under established procedures for volunteers to solicit funds, grants, gifts and donations to aid in the restoration, maintenance, and interpretation of the site.
 - F. Continue to communicate concerns to the planning staff of Lee County and the FDOT on the impact from the widening of U.S. Highway 41 and encourage the incorporation of protective measures in the planning and decision making process in the visible and the audible vicinity of the historic site.
 - 1.) Pursue funding to complete a cultural assessment of the US 41 boundary including the historic entry feature before DOT widens this section of the road.
 - G. Monitor proposed changes to surrounding property, including development proposals, Comprehensive Plan amendments and zoning changes that may affect park resources, operations or visitor experience.

Management Coordination

The park is managed in accordance with all applicable Florida Statutes and administrative rules. Agencies having a major or direct role in the management of the park are discussed in this plan.

The Department of Agriculture and Consumer Services, Division of Forestry (DOF), assists Division staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FFWCC), assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish and other aquatic life existing within park boundaries. In addition, the FFWCC aids the Division with wildlife management programs, including the development and management of Watchable Wildlife programs. The Department of State, Division of Historical Resources (DHR) assists staff to assure protection of archaeological and historical sites. The Department of Environmental Protection (DEP), Office of Coastal and Aquatic Managed Areas (CAMA) aids staff in aquatic preserves management programs. The DEP Bureau of Beaches and Wetland Resources aids staff in planning and construction activities seaward of the Coastal Construction Line. In addition, the Bureau of Beaches and Wetland Resources aid the staff in the development of erosion control projects. Emphasis is placed on protection of existing resources as well as the promotion of compatible outdoor recreational uses.

Public Participation

The Division provided an opportunity for public input by conducting a public workshop and an advisory group meeting. A public workshop was held on May 29, 2003. The purpose of this meeting was to present this draft management plan to the public. A DEP Advisory Group meeting was held on May 30, 2003. The purpose of this meeting was to provide the Advisory Group members the opportunity to discuss this draft management plan.

Other Designations

Koreshan State Historic Site is not within an Area of Critical State Concern as defined in section 380.05, Florida Statutes. Currently it is not under study for such designation. The park is a component of the Florida Greenways and Trails System.

All waters within the unit have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302 Florida Administrative Code. Surface waters in this unit are also classified as Class III waters by DEP. The secondary parcels by the mouth of the Estero River are within the Estero Bay Aquatic Preserve as designated under the Florida Aquatic Preserve Act of 1975 (section 258.35, Florida Statutes).

RESOURCE MANAGEMENT COMPONENT

INTRODUCTION

The Division of Recreation and Parks has implemented resource management programs for preserving for all time the representative examples of natural and cultural resources of statewide significance under its administration. This component of the unit plan describes the natural and cultural resources of the park and identifies the methods that will be used to manage them. The stated management measures in this plan are consistent with the Department's overall mission in ecosystem management. Cited references are contained in Addendum 2.

The Division's philosophy of resource management is natural systems management. Primary emphasis is on restoring and maintaining, to the degree practicable, the natural processes that shape the structure, function and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management may be implemented when the recovery or persistence of a species is problematic provided it is compatible with natural systems management.

The management goal of cultural resources is to preserve sites and objects that represent all of Florida's cultural periods as well as significant historic events or persons. This goal may entail active measures to stabilize, reconstruct or restore resources, or to rehabilitate them for appropriate public use.

Because park units are often components of larger ecosystems, their proper management is often affected by conditions and occurrences beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program (to assess resource conditions, evaluate management activities, and refine management actions), review of local comprehensive plans, and review of permit applications for park/ecosystem impacts.

RESOURCE DESCRIPTION AND ASSESSMENT

Natural Resources

Koreshan State Historic Site is located in southwestern Lee County, between Fort Myers and Bonita Springs in the community of Estero. It lies west of U.S. Highway 41, north of Corkscrew Road.

Koreshan State Historic Site preserves the remains of a utopian, pioneer settlement that began in the year 1894. The community of 200 settlers called themselves the Koreshan Unity. They were led by an energetic and inspired leader named Dr. Cyrus Teed. With the death of Dr. Teed in 1908, the movement he founded began to decline, although members continued to live out their lives at the site until 1982.

Topography

The topography at Koreshan is low relief ranging from approximately 7.5 to 15.7 msl. The park occurs on the coastal lowlands topographic division and is a part of the southwestern slope physiographic zone. The upland site topography has been altered somewhat by road clearing, fire break maintenance. These features are relatively insignificant. Some of the roads are not paved. Other man-made alterations to park topography are in the form of several drainage ditches, borrow pits, and spoil mounds at the mouth of the Estero River. The drainage ditches are a component of the cultural landscape associated with the garden landscapes in the historic settlement. The borrow pits, found adjacent to the southern boundary of the park is associated with creation of the grade of Corkscrew Road.

Geology

Before the initial Pleistocene glacial melt, sea level lay approximately 82 meters (270 feet) above the present shoreline. Dry land on the Floridean Plateau was restricted to a few small

islands lying in what is now Polk County, and another group near the Trail Ridge near Jacksonville. Subsequent sea-level fluctuations gradually left more of the Floridean Plateau exposed.

The various elevations of the Pleistocene shorelines and the alternation of marine and freshwater beds in certain limestone and marl formations provide a record of sea level fluctuations during the great ice age. The advances and retreats of great ice sheets over the North American continent alternately raised and lowered the regional sea levels. In Florida that resulted in a variety of Pleistocene deposits including quartz sands, shell beds limestone and marl.

In southern Florida, the strata of the Pleistocene are composed of the sands of marine terraces such as the Caloosahatchee, Anastasia, Fort Thompson, Key Largo Limestone and Miami formations. In addition to sand and clay deposits, Koreshan State Historic Site is underlain by the Anastasia Formation, coquinoïd limestone. Soils overlying this limestone base have an average thickness of three feet and tend to be sandy mixed with marl.

Soils

Seven soil types have been identified at this unit (see Soils Map). These soil types are Pompano fine sand, Myakka fine sand, Boca fine sand, Pineada fine sand, Immokalee sand, Cocoa fine sand and Hallendale-Urban land complex. A detailed description of these soils is contained in Addendum 3. The soil profile at Koreshan State Historic Site has been altered in areas associated with the Koreshan's garden features. The major soil disturbance is associated with the Koreshan ditches and the "sunken garden" landscape feature which extended into lower soil horizons and achieved a drainage system directed into the river. Soil erosion on the shorelines of riverine habitats is, in part, a natural phenomenon. The principle concern in public use areas is to ensure that the public does not affect the vegetation along the steep embankments of the natural shorelines or the man-made ditches. On a small scale, erosion of park soils can be minimized by one or a combination of the following methods: direct seeding of native grasses, planting of native vegetation, and maintenance of overlook structures and retaining wall. Placement of any additional recreational facilities must acknowledge the dynamic natural processes of riverine environments to minimize damage and destruction.

Minerals

There are no known minerals of commercial value at this unit.

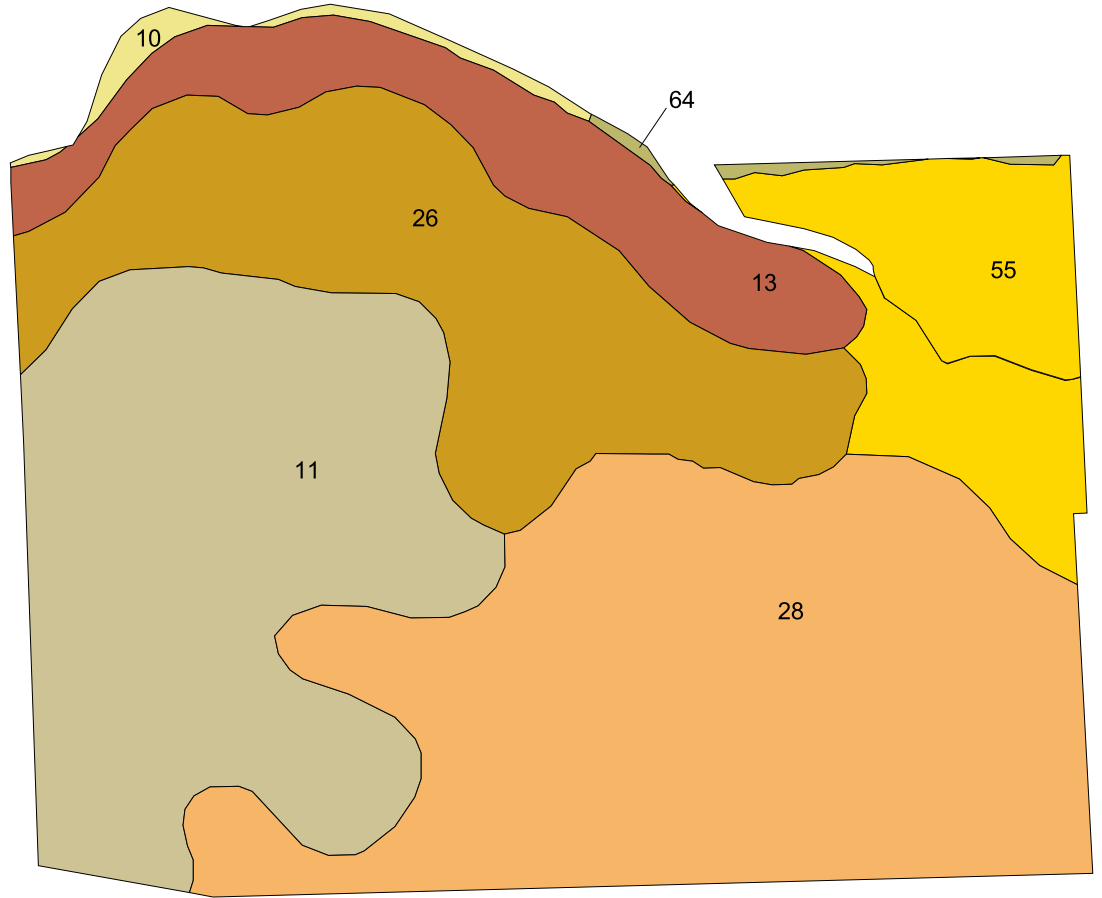
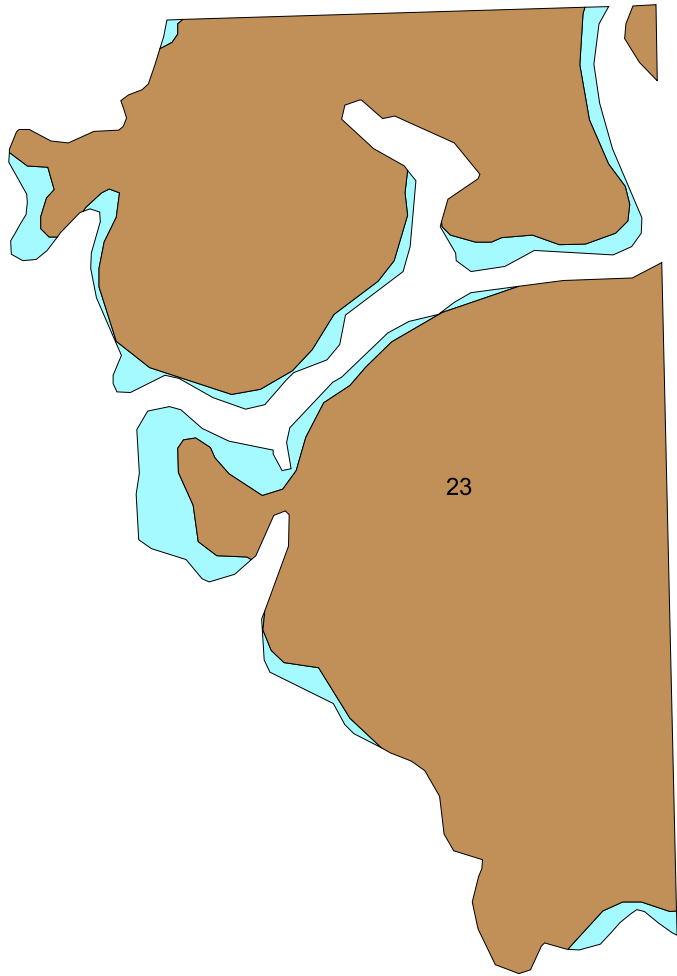
Hydrology

The park is within the Estero River drainage basin. Koreshan State Historic Site has well drained soils. The most conspicuous drainage feature is the Estero River. Several ditches dug by the Koreshan Unity, for landscaping purposes, drain into the Estero River. These features are stabilized by vegetation growing along their banks.

Surface water. Much of the soil is very porous with a corresponding high absorption rate. However, the principal concern in public use areas occurs during periods of high rainfall when the soil becomes saturated and is covered with a shallow layer of slowly moving water that is slow to disperse. Surface water flow associated with high rainfall events, flow north. Rainfall related surface water periodically affects recreational tent campers and increases the impacts of vehicle traffic on unpaved roadways. Small-scale impacts of rainfall events include erosion around the boat ramp area that can be corrected using best management practices with rip-rap.

Natural Communities

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI) **FNAI Descriptions**. The premise of this system is that physical factors, such as climate, geology, soil, hydrology and fire frequency generally



LEGEND

- 10 - POMPANO FINE SAND
- 11 - MYAKKA FINE SAND
- 13 - BOCA FINE SAND
- 23 - WULFERT MUCK
- 26 - PINEDA FINE SAND
- 28 - IMMOKALEE SAND
- 55 - COCOA FINE SAND
- 64 - HALLENDALE-URBAN LAND COMPLEX
- 99 - WATER

**KORESHAN STATE
HISTORIC SITE**



Florida Department of Environmental Protection
Division of Recreation and Parks
Office of Park Planning

SOILS MAP

determine the species composition of an area, and that areas which are similar with respect to these factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub--two communities with similar species compositions--generally have quite different climatic environments, and these necessitate different management programs.

The park contains four distinct natural communities (see Natural Communities Map) in addition to ruderal and developed areas. Park specific assessments of the existing natural communities are provided in the narrative below. A list of plants and animals occurring in the unit is contained in Addendum 4.

Scrubby flatwoods. The scrubby flatwoods community has been compromised, by placing much of the park's development within it. This severely restricts the use of fire, the traditional management tool, to maintain the community at an early successional stage. No part of this plant community is in an original condition due to these encroachments. Where possible, the park will use fire and mechanical treatments to control fuel loads and maintain early successional characteristics. The scrubby flatwoods community is well drained and dry during the wet season.

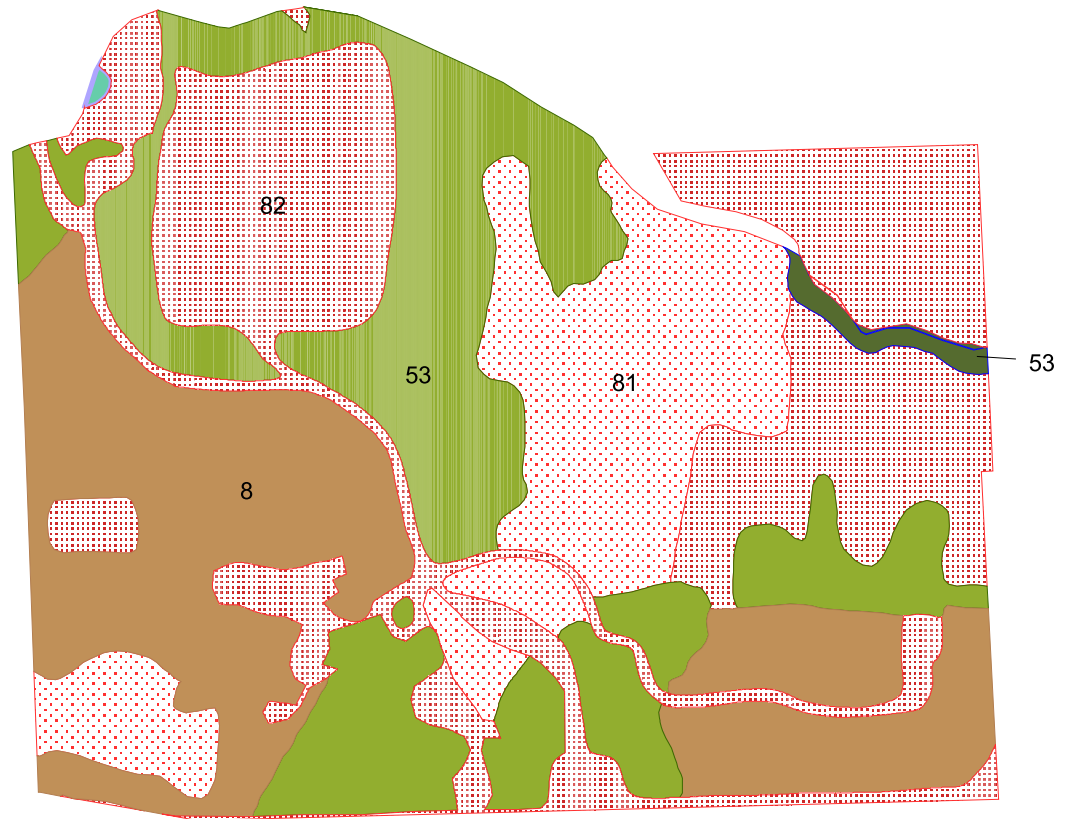
Mesic flatwoods. This community was heavily invaded by melaleuca trees and downy rose myrtle that are being removed. Very little of this community remains in an original condition, however, though much of the original aspect has been restored.

Approximately 12 acres of North Florida slash pines were planted in the park. Through prescribed burning, the pines have been thinned. The North Florida slash pines have suffered heavy mortality in recent years. They are being replaced with South Florida slash pines. Herbicide treatments, which have been successful in combating downy rose myrtle and melaleuca trees following prescribed fire and mechanical cutting, will continue as necessary to control reentrants. Much of the original mesic flatwoods was displaced by construction of buildings, landscaping and by horticultural endeavors of the Koreshans.

Blackwater stream. The Estero River forms most of the northern boundary of the park. Tidal influence from Estero Bay extends into the park. Mangrove trees are commonly interspersed with the shoreline vegetation on the riverbanks. Species such as snook and mullet frequent the adjacent river waters. Manatees have been observed near the boat ramp during periods of high water. On the steep riverbanks, invasive plants including Brazilian pepper, leadtree and sanseveria have mixed with native plants. At sites where the sand bottom is exposed during low water, a relatively invasive plant population of umbrella sedge has become established. Efforts are made to remove exotic invasive vegetation and allow the native vegetation and natural vistas to become established.

Estuarine tidal swamp. A small site adjacent to the Estero River is occupied by white mangrove, strangler figs and several fern species. It is inundated during extreme high tides and is uniquely different from other areas in the park.

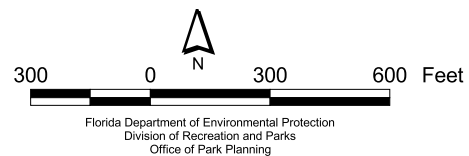
Ruderal and developed. Ruderal and developed areas include the settlement grounds where native vegetation was almost entirely replaced by ornamental exotics. Portions of the unit are maintained as mowed lawn. Until 1989, there were several extensive stands of melaleuca and eucalyptus trees in the park and it is unlikely that these areas can be completely restored, but a flatwoods aspect of low, predominantly herbaceous ground cover can be achieved. There is also a large area west of the historic settlement that reflects the Koreshan horticultural landscape and agricultural activities. Several areas of artifact scatter have been identified as well as old fence lines. Many of the ornamental plant



LEGEND

- 8 - Mesic Flatwoods-34.27 ac.
- 15 - Scrubby Flatwoods-37.43 ac.
- 53 - Blackwater Stream-1.10 ac.
- 64 - Estuarine Tidal Swamp-52.66 ac.
- 81 - Ruderal-23.84 ac.
- 82 - Developed-45.28 ac.

**KORESHAN STATE
HISTORIC SITE**



**NATURAL COMMUNITIES
MAP**

species have spread throughout the area. These ornamentals tend to invade adjacent natural communities and require active management. Two man-made borrow pits were created in the southwestern zone of the park. The eastern most pit has a permanent open water aspect. It is of unknown depth with steep sides and a rectangular shape. Restoration to create natural contours for this feature is needed. The western most pit has a shallow aspect and has provided habitat for several exotic invasive pest plant species. Recent exotic removal efforts have re-created habitat which attracts wildlife.

Designated Species

Designated species are those that are listed by the Florida Natural Areas Inventory (FNAI), U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC), and the Florida Department of Agriculture and Consumer Services (FDA) as endangered, threatened or of special concern. Addendum 5 contains a list of the designated species and their designated status for this park. Management measures will be addressed later in this plan.

Several designated species occur within the site. With the exception of the gopher tortoise and the West Indian manatee, no specific measures beyond ordinary protection are required. The West Indian manatee is observed on an infrequent basis in the blackwater stream habitat of the Estero River adjacent to and flowing within the boundary of the park.

Most of the gopher tortoise habitat at Koreshan has been surveyed for gopher tortoise burrows. There are 50 active and inactive burrows, yielding an estimate of 31 tortoises (assuming an occupancy rate of 61.5 percent as suggested in Cox et al. 1987, FGFWFC Nongame Wildlife Program Technical Report No. 4). If an additional zone that has not been surveyed has the same density of tortoises, there are an estimated 38 tortoises occupying natural habitat in the park. A minimum viable population of gopher tortoises requires 40-50 individuals, and may require many more animals in areas where environmental conditions are not always favorable (p. 28, Cox et al. 1987). Allowing for some variation in environmental conditions, it has been determined that Koreshan would need a minimum number of 60 individuals to maintain a perpetual viable population.

Additional gopher tortoise habitat, located adjacent to the northwest corner of the park, is managed as the Vesta Newcomb Preserve. It is owned by the Florida Audubon Society.

Special Natural Features

The Estero River is the special natural feature of this unit. The historic flow of this river has been significantly altered since the time of Koreshan settlement with the construction of Interstate 75 and the resulting isolation of the river from its original headwaters. Although shallow, the river permitted access by large vessels carrying goods and supplies to the Koreshan settlement. A boatworks, maintained by the Koreshans, was located upstream from the park. The Estero River is a scenic recreational asset providing for shallow boat, canoe and kayak activities.

Cultural Resources

Evaluating the condition of cultural resources is accomplished using a three part evaluative scale, expressed as good, fair, poor. These terms describe the present state of affairs, rather than comparing what exists against the ideal, a newly constructed component. Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A fair judgment is cause for concern. Poor describe an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor

condition suggests immediate action to reestablish physical stability.

The founding of the Koreshan Unity Settlement in Estero, Florida, was the continuation of a movement started in the town of Moravia, New York in 1880 by Dr. Cyrus R. Teed. He founded a post-Christian utopian community that had to survive an unfriendly and often hostile society. In its efforts to establish and maintain an environment favorable to the development and growth of its religious, scientific and cultural philosophies, the movement relocated to the Florida frontier in 1894.

Much has been written about utopian communities, from Essenes to New Harmony. When people first dreamed of a state of perfection, the seed of utopianism was planted. The vision of this ideal has manifested in different ways and has been influenced by such diverse concepts as communism, celibacy, moral freedom, religiousness, communalism, secularism, and others. Criteria common to all of the utopian communities include the fact that they were groups of people who withdrew from normal interaction with the rest of society to act as a unit in meeting their common needs. Almost every community of this nature can be traced to an individual, usually of strong character, profound conviction of beliefs and the ability to motivate people, who were the inspiration and provided the dynamic leadership necessary for the development of the community. Dr. Cyrus R. Teed was that dynamic leader and steering force in this community. The Koreshan Unity described itself as a religious and fraternal commonwealth, naming its entire system of religious, scientific, and social beliefs, Koreshan Universology.

The early development of this community is based on a religious illumination that Dr. Teed experienced while working as a medical doctor in Utica, New York during the winter of 1869-1870. This experience was of such magnitude to Dr. Teed that he continued to write and lecture on the subject for the rest of his life.

For several years, Dr. Teed moved from town to town in New York, practicing medicine and spreading the word of this prophecy. He gained some of his most significant disciples during the 1870s, including Dr. and Mrs. A.W.K. Andrews, who later followed him to Florida.

By 1886, Dr. Teed and his followers had moved to New York City. It was at this time that he was invited to Chicago to address a convention of the National Association of Mental Science. He so impressed the convention that he was elected president of the organization. He remained in Chicago, joined by his believers. His "Church Triumphant" attracted converts. An education institution called the "World's College of Life" developed, and publication of the magazine, the Guiding Star, began in 1886.

In early 1887, the Society Arch-Triumphant was organized with Mrs. Annie G. Ordway becoming president. Mrs. Ordway's role in the Koreshan Unity was an integral part of its structure as Dr. Teed's "dual-associate". This role marks a significant dimension of Koreshanity as an important aspect of the social beliefs and their theory on women's rights. The Koreshan Unity gave women the equality that they had been fighting for in the society around them.

By 1888, a cooperative home for his college was established. This was to be the home where the Koreshan Unity would sprout from a group of religious socialists into a post-Christian utopian community. A print shop, the Guiding Star Publishing House was established. In 1889, the Guiding Star magazine was put to rest, replaced by the monthly Flaming Sword, under Dr. Teed's editorship. Teed was still publishing material under the name Cyrus in 1889, but by 1891 he was calling himself Koresh.

Ardent supporters working with Dr. Teed during this time period included Dr. Andrews, vice president of the College of Life, James H. Bubbett, secretary of the Guiding Star

Publishing house and later Mrs. Evelyn Bubbett was its manager. Ulysses G. Morrow, a member of the Koreshan geodetic staff, developed a rectilineator (to measure the curvature of the earth) and was instrumental in conducting the scientific experiments regarding the configuration of the earth's surface (the Koreshans believed the earth was a hollow sphere with life existing on the interior surface). These individuals proved to be prominent members as the community continued to develop.

In December 1893, Dr. Teed, Mrs. Ordway, and two fellow members of the Koreshan Unity from Chicago visited the homestead of an elderly German settler, Gustave Damkohler in Lee County, Florida. This visit marked the beginning of the Koreshan Unity Settlement in Estero when Mr. Damkohler donated his property to join the group. Additional members traveled to Florida, and by mid-1894 the first permanent structure, the woman's log house was constructed. Built almost totally from local materials and by Unity labor, it served as the first place of meeting as well as women dormitories. A second structure, also a log house was constructed at approximately the same time to house the male Unity members. Land continued to be cleared and crops were planted.

In 1894, the editor of the Fort Myers Press visited and described a two-story dining hall in his publication. Fish and seafood were the major food staples obtained from the river and bay, and vegetables were grown in the gardens. The group was highly dependent on boats, the sloop, Ada, was their primary fishing vessel.

An element of concern and one that directly affected the community's initial growth, was an adequate supply of drinking water. A spring, utilized earlier by Damkohler and his family, had dried up by the time Dr. Teed and his followers arrived. Drinking water, according to Dr. Andrews, was brought in by cask on a wheelbarrow from a surface well out in the woods. Health concerns led the Koreshans to drill a deep well.

Construction of additional structures was hampered by the unavailability of lumber. In December 1894, Dr. Teed bought a sawmill in Fort Myers. The mill was dismantled by the Koreshans, transported to Estero Island, and reassembled. The facilities on Estero Island included housing, a machine shop, boat ways and a post office. Supplies and mail were carried by boat to the main settlement along with lumber, which was processed at the sawmill. This mill, the first industry established by the Koreshan Unity, was destroyed by fire in December of 1896. Its destruction was a serious blow to the community and most of the workers moved to the mainland settlement.

The community progressed with the addition of two barns, the dining hall, several minor sheds, member's houses and a small one room store, which sold a few essentials to local people and travelers who using the trail which crossed the Estero River on a wooden bridge. At this time, the dining hall was used for dining, as a place of worship, and the location of the "sister's" industrial departments.

During 1896 and 1897 the Koreshan geodetic staff conducted rectilineator experiments on Naples beach. Their experimentation proved to their satisfaction that the surface of the earth was concave and demonstrated their theory of "Cellular Cosmogony" and demonstrated the "Koreshan Premise" which described a "hollow earth". National publicity of these experiments and their claims of success attracted new attention and visitors to the Koreshan settlement.

In 1896, work was started on the Children's House, later referred to as the Founder's House, and in 1897 the large, three-story Dining Hall, said to be the largest structure in Lee County.

In 1902, a major decision was made by Teed and his followers to move all of the Koreshans to Estero. By 1903, the transfer of the colony from Chicago was complete. This

influx brought the population to approximately 200. The arrival of so many exceeded the housing that was available. A few new members' houses, the "brother's and sister's" log houses and the Dining Hall/Dormitory represented the total housing capability of the settlement.

New structures were constructed starting in 1904. The Publishing House, which printed the Flaming Sword magazine, was started on the banks of the Estero River, east of the "trail". The Planetary Court, built to house the seven managing women, was built at about the same time. The construction of the Old Store, a three-story structure on the river on the west side of the "trail" was also completed.

The Old Store played a major role in the settlement's growth. It served as a major commercial center for the Koreshans. The store sold various goods to the public and travelers, and, as a retail outlet, was able to purchase goods not produced by the Koreshans at wholesale prices. Goods were traded and sold, produce from non-Koreshan settlers was purchased giving them needed cash. Boats came up the Estero River bringing supplies and carrying Koreshan-produced goods, all of which brought Koreshan and non-Koreshan together, not in beliefs, but in commerce.

The Koreshan Settlement was incorporated in 1904, excluding lands not owned by the community. The newly incorporated town comprised one hundred and ten square miles, eighty-two square miles of land and twenty-eight of water. Of this, the Koreshan Unity owned approximately 7,500 acres.

At this time, equipment brought from Chicago was installed in the completed Publishing House and publication of The Flaming Sword resumed. The Guiding Star Publishing House represented another major commercial venture for the settlement by printing jobs for clients in the community, Fort Myers and even Chicago. The quality was high and the Koreshans were not modest in stating that it was one of the best printing and binding operations in the state.

The Unity also generated cash through other departments. The bakery, with an oven capacity of six hundred loaves of bread per day, was popular with the community. Boat building and related marine industries represented other commercial ventures. Construction of boats for the settlement gave them the means to transport goods manufactured by various settlement departments, to harvest food from the sea and to sell new and refurbished boats to the community.

Another aspect of Koreshan life -- music -- played an important role in fostering good relations between the community of Fort Myers and Estero. Concerts were given by the "Koreshan Band," both on the settlement grounds and in Fort Myers.

The band performed on a floating raft at the bend of the river (Bamboo Landing) where a natural amphitheater existed. The musical practice periods were so loud that a building for the students was eventually built separate from the settlement. An orchestra was formed and played numerous concerts for the Koreshans, in the Art Hall and on the grounds. All major events at the settlement involved the musicians in the band and orchestra.

Education also served an important role, not only for the children at the settlement, but also for the adult members and was considered an indispensable part of the Koreshan system. At this time, the Pioneer University of Koreshan Universology was established. Its classes were held in the newly constructed Art Hall, which was built by the students and their professors.

The Art Hall played a major role in the settlement, being utilized for lectures, concerts and

religious services. Musical and theatrical performances were given there, enjoyed by not only the Koreshans, but also the community at large.

The Koreshan Unity Settlement, for the most part, was self-supporting. The Koreshans owned and operated a lumber mill, boat construction facility, country store, bakery, printing press, machine shop, blacksmith, laundry, and many other incidental operations.

The Koreshan Unity's prosperity and unusual beliefs caused resentment and prejudice from the citizens of Fort Myers. There was apparent jealousy involved, and the increase in membership and size brought them into conflict with the people of Lee County. This conflict was due to their growing political influence on county politics. Their religious doctrine had little or no effect on the people of Lee County. However, when the Koreshans tried to exert their influence on local politics, the leaders of Fort Myers reacted to protect their power.

Life in the settlement, in contrast to their relations with the local community, appeared to be happy and full activity. In addition to music, drama and dance presentations, and lectures were given. In 1907, a small zoo was created and contained a black bear, an eagle, opossum, three foxes, wildcat and a pair of otters. Picnics and parades were held several times a year, and twice yearly the birthdays of Dr. Teed (October 18th) and Mrs. Ordway (April 12th) were celebrated, being named the Solar (for Dr. Teed) and Lunar (for Mrs. Ordway) Festivals.

Dr. Teed died peacefully on December 22, 1908 on Estero Island. Upon Dr. Teed's death, the Koreshan Unity's growth ceased and with the group's decline, conflict with Lee County political leaders ceased to exist. Financial failures seriously burdened the Unity. Members began to leave; first individuals and later entire groups and departments.

In 1908-1910, a powerhouse/generator building and storage shed were constructed. The building was used to house the machinery and equipment required to generate electricity for the settlement and surrounding buildings. There is reference to a plan for the Koreshans to purchase a 90 horsepower boiler to install an electric power plant, in a July 1916 article in the Koreshan American Eagle newspaper. Directly to the east of the building, a water tower was built with a massive wooden framework standing 30 feet high. The presence of the water tower indicates the possible use of a steam engine. This water tower may have also been used to provide water pressure (gravity forced) to other buildings in the settlement.

In June 1925, the Koreshan Unity ordered a new 80 horsepower diesel/crude oil engine from Fairbanks Morse of Beloit, Wisconsin. Before the installation of the diesel engine, the floor plan of the building was changed to accommodate the new equipment. The new floor plan incorporated an L shape and a higher section on the southeast wall was constructed to accommodate the engine. In addition, a large I beam was necessary for the lifting of the heavy engine parts during maintenance periods. This new engine would provide all the power needed to run the 50-kilowatt alternator to generate ample electricity for the Unity. The original diesel engine was used for this purpose until August 29, 1946, when Estero was hooked up with Florida Power and Light Company. This engine was sold to the Kaiser Brothers of Venice Florida to be used in their Ice Plant. Money from the sale of this equipment was needed to maintain the settlement.

In 1910, a one-court tennis area was constructed by the settlement, reflecting the Unity's involvement with all aspects of community life. A portion of this facility is still found in an open area near the bakery and the Vesta Newcomb cottage.

In the early 1920s, a New Store was built to replace the Old Store, which had been damaged by a series of floods. The first floor contained a country store, and a restaurant,

the Riverview Inn, both of which contributed needed revenue to the settlement. The second floor contained rooms for male settlement members. A small Koreshan Unity office was located in the southeast corner with access to the General Store. Several of the Koreshan members filled the role of Estero post master for many years. In 1937, a phone booth was constructed in the building. After the Old Store was replaced with the New Store, the structure continued to be utilized, as a post office, barber shop, warehouse and apartments for some of the members, until it burned to the ground in the summer of 1938.

A gasoline service station was constructed in 1926 to the east of the Post Office to serve tourists traveling on the Tamiami Trail.

In 1951, a post office was constructed from materials recovered when a storage shed (1901) was dismantled. The post office facilities in the New Store had become inadequate. When the building was closed as a post office in 1963, the building was converted to the office of the Koreshan Unity Settlement.

The cultural garden landscape was also an important feature of the Koreshan Unity settlement throughout its existence. Many references are made to the Unity gardens and various plantings in issues of the Flaming Sword magazine and the American Eagle newspaper. Ornamental plants were maintained in the garden landscape and plant materials were often used in floral arrangements at various Koreshan events. Koreshan members worked in a horticultural department that introduced plants to the Unity grounds and propagated vegetation for sale as well. As years passed, residents of the Koreshan Unity settlement gave special attention to the grounds. The result was complex landscaping complete with ornamental concrete sculptures, fountains, walkways, decorative bridges, benches and park areas.

From 1908 through 1961, the Koreshan Unity membership steadily declined, buildings fell into a state of disrepair and land holdings were sold to support the existing members. In November 1961, the Koreshan Unity transferred portions of their property to the State of Florida. The purpose was to preserve and interpret, for the present and future generations, information of historical significance.

Pursuant to the authority contained in the Historic Sites Act of 1935, as amended, and in the National Historic Preservation Act of 1966, as amended, the National Park Service, Department of Interior listed the Koreshan Unity Settlement Historic District on the National Register of Historic Places. This listing by the Department of Interior was effective on May 4, 1979.

Pursuant to the Lee County Land Development code, Chapter 22, Historic Preservation, Koreshan State Historic Site/Koreshan Settlement (HD District 2000-06-01) was designated as a historic resource on July 19, 2000.

The portion of the Koreshan Unity Settlement Historic District found in Koreshan State Historic Site is located within a 40-acre parcel adjacent to U.S. Highway 41. The District extends to the east, across U.S. Highway 41 on to grounds currently managed by The World College of Life.

An orderly listing of the cultural resources that physically remain in the Koreshan Unity Settlement within the physical boundaries of Koreshan State Historic Site may best be described chronologically.

In the 1990s, Koreshan's scope of interpretation was re-evaluated and adjusted from its original scope of 1905-1908, to a one-hundred year period, from 1882-1982, that encompasses events from the time Damkohler built his cottage until the death of Hedwig Michel.

Damkohler House. 1882-to present, also known as the Medical Building or Pioneer Cabin. It was the residence of Gustave Damkohler, the original settler of the property, which was later to become the Koreshan Unity Settlement. The Damkohler Cottage is very important to the Settlement, as it was the first place of residence for the Koreshans. This building represents a rare survival of a pioneer board and batten cottage. The cottage was built by Damkohler approximately 12 years before the arrival of the Koreshans. The structure was moved to the present location, from its original placement, reportedly about 100 yards west of where it now sits, in 1928. When Teed first visited Damkohler, it consisted of one room with a sleeping loft and porch.

Construction was of basic wood frame with vertical wood siding. The structure was originally covered with a palmetto-thatched roof, later changed to tin, and was furnished at the time of Dr. Teed's arrival with rough wooden boxes and homemade furniture. The structure was stabilized and restored in 1994. It is currently used as an interpretive feature for viewing by park visitors. The one-room building is furnished with period furniture to represent Gustave Damkohler's home circa 1894. Electric service in the form of a single exterior outlet box was added in 1999 to facilitate maintenance and cleaning of the structure and contents. Hurricane and termite protection, water service and fire alarm/suppression systems need to be considered for this structure. . A new Plexiglas exhibit barrier is currently being implemented in the cottage in addition to the existing wood railing. This will provide for enhanced security and protection from the elements as well as a better view of the exhibit by the visitor.

Founder's House. 1895–present, was also called Children's House, Children's School, Master's House, Brother's House and Ordway's House. This is a two-story structure, centrally located on the grounds. It is one of the major structures of the settlement. While reference sources disagree as to its original function, it has evolved in history to be known as the Founder's House.

Originally constructed in 1895, the building has undergone more modifications than any other structure in the settlement. It sits on masonry piers. The basic building consisted of a two-story structure on conventional wood frame balloon construction, with its longer elevation occurring on the north and south sides. The exterior has horizontal wood lap siding, with a wood shake/shingle roof. These elevations, in turn, had porches, eight to ten feet in depth, running the length of the structure. The exterior was covered with horizontal wood siding possibly with a cypress shingle roof.

The earliest known view of the Founder's House is an Edith Campbell drawing, showing the building as it looked from the south side of the Estero River, the north and west elevations are illustrated in the drawing dated September 6, 1899. It is an interesting note that the Campbell drawing, and the other drawings that show portions of the building, identifies it as the Children's House, a clue as to its initial usage.

In 1908, the porches were removed and extensive renovation involving creation of a series of imitation brownstone walls and arches, intended to enclose the old building, began. This renovation also included the creation of a circular tower or turret on the northwest corner that was 30 feet in diameter.

The death of Dr. Teed appears to have stopped the extensive remodeling then in progress. After continued remodeling projects, a structural assessment was conducted in 1969, and it was restored to the original configuration in 1992. Remains of the 1908 walls and circular tower remain near the northern face of the building. Renovation included installation of interior and exterior lighting, a security system and electrical service to allow for interpretive facilities.

The building is currently used as an open building for visitors. Indoor exhibits consist of enlarged copies of historic photographs, a model of the Koreshan sloop, Ada, and a three-dimensional map diorama of the park. A three-dimensional diorama of Mound Key, exhibit cases for rotating exhibitions of Koreshan “ephemera”, and an exhibit recreating Dr. Teed’s living area are currently in progress. The diorama of Mound Key will serve to interpret the island to visitors who are not able to actually visit the island. An interpretive fixture consisting of a cabinet, a television and DVD player provides a 10-minute video about the Koreshans for visitors. The video is of good quality and content; however, it is rather outdated. Updating the video should be a priority. The upper level of the building is closed to public access. A baiting system for monitoring subterranean termites is in place, however, fire/alarm suppression systems need to be added to provide adequate protection for this structure.

Planetary Court. 1904 – present, was originally constructed as housing for the seven “sisters” who managed the Koreshan departments and one “brother” who was responsible for the physical upkeep of the building. Meetings to direct the day-to-day affairs of the settlement also occurred in this building. It is a three-story wooden frame structure with horizontal siding, that was installed around 1914. Prior to 1914, the exterior was covered simply with a heavy draft paper, to eliminate drafts and protect against insects. In 1921, a hurricane moved this building off its original pier foundation some six feet to the west.

A porch, occurring at both levels, went around the building on all sides, with a simple open railing on the second floor. The third level, a cupola, which was originally destroyed during a hurricane, has been reconstructed as part of the building’s restoration due to be completed in July of 2002.

The interior of the Planetary Court was divided into eight rooms with a central hall that housed an ornate wood stairway to the second floor.

The rooms all have exterior exposure providing excellent cross ventilation and air circulation, illustrating early Koreshan awareness of environmental design and indigenous architecture. A wooden cistern, fed by roof rain gutters provided freshwater but is not connected to an interior plumbing system.

The Planetary Court was used as a residence by the last Koreshan Unity President, Miss Hedwig Michel. Several renovations occurred which are not historically accurate. The Restoration Approach and Preservation Plan for the Planetary Court was completed and approved in 1996, and interior and exterior restoration of the building is pending completion in July 2002.

After the completion of the restoration and re-installation of exhibits, the Planetary Court will be open to the public during guided tours of the settlement and/or when a docent is present. At other times, the interior of the building can be viewed through the windows from the first floor porch. The second floor is restricted to authorized park staff only. Termite protection systems are needed to protect this structure. Electric, water, and a hurricane shutter system are in place, and fire and security systems will be operational upon completion of the restoration.

Bakery. 1903/1904 – present, with a 500-600-loaf capacity, produced 200-300 loaves of bread per day, some being sold to local people. It is a two-story wood frame structure, which housed “sister’s” and guests in four dormitory rooms on the second floor. At one time, a shower had been installed on the second floor. The large, first floor room has structural wood columns at its interior, supporting the second floor, with a concrete floor slab at grade. This structure is not raised on piers. The exterior of the bakery was covered with horizontal wood siding and a cypress shingle roof, later changed to a tin roof.

Connected to the south were the bake ovens, and at the northwest corner was located a wooden rain-fed cistern. Newer wood siding had been installed on the exterior wall, removing any visual trace of the connection between the oven structure and the bakery. The bakery ovens, 1903-mid 1930s, were a small room, approximately 15' X 20'. It was of masonry construction with an application of wood siding going from a point four feet above grade to the roof. The stone was collected locally from the settlement grounds. There is no apparent explanation for the removal of the ovens other than a gradual disuse as the population of the settlement declined.

A formal restoration approach and preservation plan needs to be addressed in a historic structure report for this building. The ovens should be reconstructed and the original cypress shingle roof and appropriate doors on the ground floor should be restored. The original finish on the exterior siding should be verified. The building should be provided with adequate electrical power and water service to facilitate maintenance and proposed interpretive facilities. A fire alarm/suppression and security system should also be added as well as a termite protection system.

The bakery is accessible to the public through the southeast doorway. A wooden rail barrier restricts overall public access. A new plexiglass barrier, similar to that on the east side of the Vesta Newcomb Cottage, should be installed to replace the wooden rail. This would provide for heightened security, protect the exhibit from the outside elements, and provide improved viewing of the exhibit. Collections displayed on the first floor can be viewed from this location. The second floor is limited to authorized park staff.

Membership cottage. 1903 – present, is the only remaining structure characteristic of several that were constructed as housing for residents of the settlement. The structure is of typical wood frame vernacular with vertical rough sawn wood siding, gabled ends, and formerly had a wood shingle roof. The roof was later replaced with the existing metal roof. Two steps lead to a small porch with an overhang at the front door; a former bathroom remains as a side room on the west side.

The building is in poor condition and a formal historic structures report is needed for this structure, soon. The building is in an extremely deteriorated condition and placement of foundation piers is inadequate. Restoration will require most of the historical material to be replaced. The roof should be replaced with the original wood shingles. The building also needs to be provided with water and electric service to facilitate maintenance and to provide for fire alarm and security systems. Hurricane and termite protection need to be addressed as well.

Large machine shop. 1904-present, is a one-story wood frame structure, of irregular configuration, it contained the steam power equipment that served the adjacent laundry. It housed, in addition to the steam equipment, engine lathes, drill presses, shapers, a power metal saw, grinding machines and emery wheels, a forge and brazing tools. Reflecting the inventive character of Unity settlers, several special tools and engines were designed and constructed in this facility, including a marine gas engine with which they contemplated using for manufacturing purposes.

This is an open structure with windows on the east and west faces. The original wood shingle roof and roof element has been replaced with a metal roof. Deteriorated corrugated metal and wood framing have been replaced as needed.

Elements on the north and south walls have also been removed leaving voids that have exposed the building to the elements. Placement of the artifacts within the structure has lessened the impact of weathering; however, susceptibility to insects is unavoidable. “Boring bees” have specifically been a problem in the structure—leaving holes in portions

of the framework and in some wood artifacts.

A historic structures report is needed on this building, which will describe a formal restoration and preservation plan, most importantly, taking into consideration the need to reconstruct walls on the north and south ends to enclose the structure—the laundry was attached on the north side enclosing that end. Fire alarm/suppression, security, hurricane and termite protection systems need to be addressed.

The laundry. 1903 – 1950s wood framed one-story structure was attached to the north wall of the large machine shop. The laundry was powered by steam power. The drying was accomplished by the use of a centrifugal machine that made 3000 revolutions a minute, and extracted water from its capacity of clothes in three minutes. All machines were set on solid stone foundations made in the Koreshan's stone and sidewalk department. The room was kept cool by the use of revolving fans made in the machine shop. Six people -- settlement members -- worked in the laundry doing all of the laundry work for 200 members of the Unity. The structure was removed in the 1950s. The original stone foundations supporting the machinery are in place, and the roofline can be identified on the large machine shop building.

The features associated with the laundry need to be preserved and interpreted as part of the Large Machine Shop complex. An archaeological test dig was completed at the laundry site in 2000 in an attempt to establish the perimeter of the former building. A kiosk has also been installed on the site interpreting the former structure for visitors.

Small machine shop. 1905 – present, is a small, one-story building, located to the east of the Large Machine Shop. It housed a workshop used for the manufacturing of small special tools, kitchen items and clock and watch repair.

It is a typical settlement wood frame building with horizontal wood siding. It was covered, in 1989, with a roll rubberized roofing over a unique bowed roof. The bowed sheathing on the roof is visible from the interior. The original roof is believed to have had a cypress shingle roof, common on structures in the settlement. The building has recently been leveled (1998), with the addition of structure members and concrete piers under the floor. In 2001, metal flashing was added above the north windows to temporarily mitigate any further water damage until restoration can be accomplished. A plexiglass barrier was also added to one south window as an experimental, temporary stabilization & mitigation measure.

This building needs an historic structures report to address a restoration approach and preservation plan. As with the several other structures, this building needs electric and water supply systems added to facilitate maintenance and fire alarm/suppression, security, hurricane and termite protection systems added. A new plexiglass exhibit barrier is currently being installed in the small machine shop to replace the existing wood railings. This will provide for enhanced security and protection from the elements as well as a better view of the exhibit by the visitor.

Art Hall. 1905–present, was constructed during the period when the settlement reached its peak. It is a one-story wood frame building. Its exterior is surfaced with horizontal wood siding and, similar to other settlement structures of that period, its roof is hand-split cypress shingles. A covered porch, originally eight feet in width, occurred on the north, east and south sides of the building. The porch roof is metal. The flat roof element covering the porch is supported structurally by a series of wood braces and counter braces, which play an important role in the aesthetic appearance of the building. Originally, the roof had a small secondary roof or “monitor”, which served as an air vent, which has recently been restored. In addition, the roof shingles have been replaced with cedar shake

shingles and, tin on the flat roof element.

The Art Hall is elevated above ground level approximately 18", as are most settlement buildings, and supported structurally on a series of piers. These piers were, in turn, resting on stone indigenous to the site, but were later replaced with concrete, after construction of the settlement concrete works.

The interior is open with no columns obstructing the space. The floor is tongue and groove oak strip, which was refurbished in 1989. A mechanical and air conditioning system was installed in 1969. Lighting fixtures provide fair lighting, but need to be replaced. Blinds were installed in 1995 to protect the collections from the damaging effects of UV light. A raised stage occurs at the west end of the room, behind which is a narrow "backstage" area, originally utilized for dressing and other related activities associated with the numerous theatrical and musical performances given by settlement members. The Art Hall, with a seating capacity of 300, was utilized for lectures, concerts, entertainment, and education and was the center for all religious activity. In later years, the Art Hall was used by the community of Estero, during elections, as a polling place. Additionally, the building contains some 40 paintings by Douglas Arthur Teed, son of Dr. Teed, which had been purchased by the Koreshan Unity in 1905 for \$4000. (As of 5/2002, the paintings are in museum storage due to the Art Hall roof restoration).

The Pioneer University of Koreshan Universology, established in 1904, included within its curriculum what were considered to be "useful trades", such as construction, pattern making, electrical, mechanical, stone construction, as well as a music department and an art department. It was the professors and students of the university who built the Art Hall and who subsequently held their classes and meetings there.

Due to the roof restoration project, the Art Hall is closed and vacant. Due to water damage to the ceiling and walls in April 2002, the building is closed indefinitely. A special category grant funding for the second phase of the restoration, to include replacing and relocating the HVAC system, ceiling repairs and stabilization, porch restoration and ADA lift installation is being sought.

The Art Hall has a fire alarm, a security system and a climate controlled environment. The air conditioning system is anticipated to be relocated to the backstage area of the building in order to restore the historic accuracy of the ceiling, provide for ease of maintenance, and decrease the structural load of the HVAC on the building. Accessible restroom facilities were designed and added in 1996. As part of the historic porch restoration, the restrooms are tentatively scheduled to be relocated to the Art Hall parking lot. A fire suppression system, and hurricane and termite protection systems are a necessity.

Electric generator building. 1908-present, also know as the "power house", is a large structure of wood frame construction. It was built in the early 1900s and eventually housed the electrical generating equipment of the settlement. Directly to the east of the building is the foundation of a water tower that originally stood 30 feet high.

The structure appears to have been constructed with corrugated metal sides and roof, and may represent the first structure of that type in the settlement. The electrical equipment, purchased in the north by the Koreshan Unity, was shipped to the site and was generating electricity for the settlement buildings in the 1920s. While portions of the equipment remain, the majority was sold by the settlement in the 1930s and 40s when money was needed to maintain the cooperative.

Used primarily as a storage area for furniture at the time the park was created, the furniture has since been removed. The original electrical generator and alternator are still in place. In 1995, a flywheel diesel engine, of the same model (four years newer) as the original

engine, was located in Belle Glade, Florida, where it was used from 1929 until the 1970s. This engine ran an irrigation pump for the sugarcane fields. The system has been restored to the specifications of the original engine as installed in 1925. Concrete structural features outside the structure were identified, stabilized and restored for use as fuel containment and water cooling systems. Additional equipment, as per original specifications, was acquired (primarily through donation) and placed in the original positions. Corrugated metal and wooden structural members of the building have been replaced or stabilized. A historic structures report is needed for this building to document the structural features and additional restoration/preservation needs. A water system is in place outside of the building. Electrical, fire alarm/suppression, security, hurricane, and termite protection systems are also needed.

Storage shed. 1910–present, is located to the west of the Electrical Generator Building. It is constructed of log (peeled cypress and pine) posts and wood framing with corrugated metal roof and three sides. While its actual date of construction is unknown, it is assumed to have been constructed in approximately 1910, and to have served as a covered site for the settlement grounds equipment. The building is currently utilized by the park, for storage of wood, plumbing supplies, fencing, a wood stove, imitation brownstone (of Koreshan origin) and other miscellaneous materials used in park maintenance. Ideally, a historic structure should not be used as storage for park materials or artifacts. The area directly in front of the shed has a wood fence enclosing the storage area and is secured with a locked gate. A portion of the building has been enclosed as a locked storage site. The building should be included in the historic structure report for the Generator Building. The fence is not part of the historic structure; the historic structure report should address removal of the fence, perhaps, as well as the locked storage area.

Vesta Newcomb cottage. 1920 – present. This structure was originally constructed on Corkscrew Road (called Immokolee Road. at the time). It was purchased by Lou Staton, a settlement member, and moved to the northeast corner of U.S. Highway 41 and Corkscrew Road. One side was used as his residence & the other side for his barbershop business. In the 1930s, it was moved by the members to its current location west of the Bakery and utilized as housing, presumably for Staton, then, later, Newcomb after Staton’s death in 1950.

It is constructed of wood frame, horizontal wood lap siding and was originally covered with a wood shingle roof, later replaced with metal. The metal roof runs parallel to the entry. The building is accessed by a pair of doors that open onto a concrete stoop. A fixed awning has been restored over the entry to match earlier photographs. Its construction is typical of settlement buildings and since it was built outside the settlement, there is a suggestion that construction in the settlement influenced the community outside. An exhibit, recreating the sitting room of Vesta Newcomb, has been installed on the east side of the cottage. Miss Newcomb arrived in the settlement in 1894, when she was 15 years old, and resided in the cottage from approx. 1950 until her death in 1974 at the age of 95. To complete the exhibit’s interpretation, the west side of the cottage should also be restored to interpret Vesta’s bedroom, bath, and shower, along with re-introducing the doorway that existed in the dividing wall. To the southeast of the entry stairway, a kiosk was installed interpreting Vesta’s life and the history of the cottage.

An historic structures report is needed for this building to document the structural features and additional restoration/preservation needs. A water system, electrical, fire alarm/suppression, security, hurricane and termite protection systems need to be added to this building.

New store. 1920s – present. This structure was built to replace the Old Store, which had

been damaged by a series of floods. Its construction, stucco over a wood frame, was the first of its kind to be built at the settlement. The structure, two stories in height, originally had an ornate entry canopy facing the road. The canopy was removed in 1956, along with the front eight inches of the building, when the State Road Department was anticipating the widening of U.S. Highway 41. The east face of the building has asbestos shingles.

The first floor contained a general store, occupying a third of the floor, and a restaurant -- the Riverview Inn -- contributing needed revenue to the settlement, with the balance of the first floor used for storage of goods. The second floor contained rooms for male settlement members and was accessible both from the interior of the store, at the east, and from a stairwell on the exterior, at the west. A small Koreshan Unity office was located in the southeast corner with access to the General Store.

Both the restaurant and the general store were closed by the settlement in 1963, because of the difficulty in obtaining working help, and because of declining revenue.

The structure is currently utilized to store furniture and historical materials removed from the Founder's House during restoration. There is currently no water service in this building. One electrical outlet has been installed inside a small addition under the access stairs on the west side of the building, to provide power for maintenance equipment. The roof of the structure has been repaired, and windows have been repaired and replaced. This building is structurally unsound, much of the baseplate material and lower studs attached to the baseplate have deteriorated extensively.

An historic structure report and a preservation plan have been completed, and a grant for restoration is being sought. The plan calls for reconstructing the façade facing U.S. Highway 41 and re-instituting a store (gift shop) on the first floor along with food preparation and dressing facilities for weddings and other events. The plan for the second floor calls for adaptive reuse as staff office space and lounge area. The building should be rewired for electric, re-plumbed for water service, and fire alarm/suppression, security, hurricane and termite protection systems installed during the restoration process.

Historic grounds. By 1904, work on the landscape and grounds around the main buildings had been completed. An extensive tropical park was planned as a setting for the principal buildings of the town. For several weeks 20 laborers worked under the direction of some of the settlers digging ravines for drainage and using the dirt to create elevated mounds and terraces. Leveled paths and drives were laid out and paved with crushed shell in 1905. It was during this concerted work that the sunken gardens were constructed under Dr. Teed's close supervision, and the trees and shrubs were installed. Bridges, benches, trellises, gazebos and other garden structures were constructed in the Koreshan carpentry shop. The Koreshan concrete works began making paving stones for walkways, stone facing for walls and fountain ornaments, many of which can still be seen in the historic settlement. Major landscape features are described below.

Bamboo landing. The landing was built along with some of the initial structures around 1894. It was used as the main landing for goods and supplies coming up the river until the wharf and store were built east of this location and next to the bridge. It was probably constructed of cypress posts and planks with a step-down on either end and a sand path leading up to a pair of wooden steps. The bamboo was from the original cuttings taken from the Edison estate that first summer of occupancy.. The landing was used extensively for concerts by the Koreshan Unity band until the construction of the Art Hall about 1905. It was also used as a stage for a water pageant presented at the celebration of the Solar Festival (Dr. Teed's birthday). Around 1905, the wooden steps at bamboo landing were replaced with concrete steps and an elaborate trellis was constructed sometime around 1907. The trellis was removed a few years later. The concrete steps at Bamboo Landing are

an example of the products of the Estero Concrete Works. Oyster shell was used for aggregate in the concrete mix and then stuccoed over with a tinted concrete mix, to give the smooth, finished appearance. Between 1999 and 2001, the landing became unstable and structurally unsound due to high water levels in the river. It was rebuilt in 2002.

Sunken gardens. The gardens were located on the south bank at the bend in the river, just west of the drainage canal, and were constructed under the direction of Dr. Teed around 1904-1905. They consisted of a series of terraces, mounds and steps leading down to a recessed area. The terraces were built up into triangular and rectangular mounds that were covered with Para and Guinea grasses from Cuba. The steps leading down into the gardens were formed with wood headers and packed with crushed shell as were the walks leading to it. There were fruit trees planted to the west of this area.

Two wooden bridges constructed around the 1904 – 1905 ground development period and for purposes of identification shall be referred to as the “Rustic Wooden Bridge” and the white “Victorian” bridge. They were both near the sunken gardens and spanned the drainage canal in two different places.

Garden ornaments. The establishment of the concrete works and the sculpture department at the Estero community contributed to the enhancement of the grounds. The sculpture department made medallions, vases, urns, plaques, figureheads and all manner of ornamentation. When it was desirable to reproduce a number of pieces of a given pattern, such as vases, the sculpture department would build a piece mold and then turn it over to the concrete stone works for production. Numerous vases and urns on pedestals were scattered around the grounds of the settlement, most have disappeared, but a few can still be seen around the grounds. The remains of some pieces still lie broken in the woods.

The Petronian fountain. This is a good example of capabilities and methods of construction of the sculpture and concrete works. It is one of the few features of its kind that is relatively intact; being located northwest of the New Store. It was covered with imitation brownstone and had a lion’s head mask for a fountain spout. There are two columns, one on either side of the fountain, with a cast stone plaque inset and capped with spherical finials. The cast stone plaques originally depicted the astrological signs Pisces and Aquarius. At some point, the Aquarius plaque was erroneously replaced with another Pisces plaque. To be historically accurate, the Aquarius plaque should be reconstructed. An attempt to make the fountain functional was also made; however, the pump and system installed did not allow the fountain to function properly. The system needs to be redesigned and adjusted accordingly.

Landscaped grounds. There existed an elaborate system of paths and walkways. Most of the major walkways were paved with crushed oyster shell. All walks in the settlement have been reconstructed of crushed shell (except where concrete walks exist), well packed with wood header curbs. This material makes all areas more accessible to the handicapped. Documentation concerning landscape plantings and designs that evolved over the years is limited. Very few elements, with the exception of some of the trees, remain from the early years, and where these elements can be identified, their authenticity is important. Specimen plant materials should be retained when it is not in direct conflict with the structures or other major features. Plant materials representative of the 1905 period being used in and around the Fort Myers area would represent local sources that influenced the Koreshans. Large areas of the grounds are documented in photographs and should be maintained and restored where possible. Irrigation systems may be needed for some plants. A formal landscape restoration report should be compiled to organize information found in written documents and photographs. Some of the original garden ornaments are still in existence around the grounds and quite possible others will emerge during the continuing grounds

clean up. Details on these pieces, including measurements and casts should be made of some of the medallions, vases, and urns, plaques and pedestals that are still in existence, coupled with drawings made of those portrayed in photographs. This documentation of the garden artifacts may facilitate re-creation at a later date. In 1999, Barbara J. Stafford of the University of Florida completed a master's thesis on a preservation treatment for the Koreshan Gardens. The thesis details the site as a cultural landscape and presents methodologies for documenting the landscape as well as offering suggestions for further study and restoration of the gardens.

Miss Hedwig Michel gravesite. This is maintained on the grounds of the historic settlement. Although two Koreshan cemeteries are found nearby, standing water conditions at those sites at the time of her death in August 1982 prohibited interring her remains at those locations (Noble, 1998, personal communication). This gravesite is located northeast of the bakery, marked by a stone with a bronze plaque and surrounded by an ornate wrought iron fence. There is a shell path access to the east face of the gravesite to permit visitation. Management considerations include maintaining a well-kept appearance and preventing encroachment by burrowing animals, primarily gopher tortoises. At present, the headstone appears to be "sinking", suggesting that the gravesite may be collapsing. Personal communication with former park management recalls that the casket was simply made of wood and that the body was not embalmed. Informal recommendations have been made by BNCR to notify the proper authorities about disinterring the body and stabilizing the gravesite; however no action has been taken at this point.

Absent resources. Another category of cultural resources is the identification of extant, but absent, resources such as structures (log houses, barns, industrial buildings) roads, fencelines, wells, horticultural areas, refuse areas and other cultural resources which have been "lost" either to demolition, removal, or alterations of terrain or overgrowth of vegetation. Some of these resources have been surveyed and information about extant structures has been documented in the Herbert and Reeves Koreshan Unity Settlement Master Plan in 1977, in the Abell Master Plan Update for the Koreshan Unity Settlement in 1989 and in the Janus Research Koreshan State Historic Site Mapping Project and Archaeological Management Plan, in 1993. Other examples of these resources should be mapped as they are identified. Study of their remains will be the job of professional archaeologists.

Seminole chickee. The Seminole Chickee was built by the Seminoles for the Koreshans during the historic period. During early management by the park service, the chickee was erroneously demolished under the pretense that it was not within the scope of interpretation (1905-1908) established at the time. This scope of interpretation has since been adjusted to a one-hundred year period, from 1882-1982, which encompasses events from the time Damkohler built his cottage until the death of Hedwig Michel. This would connect a part of well known Florida history, the Seminoles, to the Koreshans. Historic documents support the relationship between the two groups. This structure would interpret how the Koreshans, an outside cultural group, associated with the Native Americans.

Tennis court. Partial remains of the Koreshan tennis court still exist directly south of the Vesta Newcomb Cottage. The feasibility of stabilizing and/or restoring the court should be considered. Interpreting the tennis court would illustrate the Koreshans' participation in sport for leisure.

Artifact Collection. The Koreshan Unity Cooperative required its members to donate all of their material possessions to the Unity as a whole. There is a considerable collection of objects from the Koreshan settlement. A portion of the objects was included with the initial donation of land and structures in 1961. Cora Stephens, a former Koreshan, donated a large

collection of original archival photographs, newspapers and other publications produced by the Koreshans.

In August 1998, the Koreshan Unity Foundation (now College of Life) conveyed the additional remainder of the Koreshan collection objects (artifacts) that are housed in the Koreshan settlement. The Division recognized the importance of displaying artifacts within their proper context in recognition of the importance of the Koreshan Unity's material culture. Upon entering into this agreement, the Division assumed full responsibility for the care, custody, conservation, maintenance and safety of the artifacts. The Division shall subscribe to the provisions of the Approved Unit Management Plan, the Collection Management Guidelines developed by the Bureau of Natural and Cultural Resources, and the Secretary of the Interior's Standards. A clause that would permit the ownership of the property to revert to the Koreshan Unity Foundation (College of Life), should the Division fail to meet its obligations under the conveyance agreement, is valid for six years (August 2004).

Other objects appropriate to the site's interpretation have been conveyed to the park by various private entities. Some of the display collections were placed on the site by the Division to facilitate visual interpretation of the features on site.

The majority of these objects are furnishings, of which furniture is a major constituent. There is also a considerable body of personal objects, tools, kitchenware, artwork, musical instruments, and scientific instrumentation, including demonstration models and machinery. The archival collection consists of books, pamphlets, manuscripts, photographs, videotapes, issues of the American Eagle and Flaming Sword, which were Koreshan newspapers, and National Geographic magazines. Portions of the archival collection have been reproduced on modern media such as CD ROM and digitized into *Past Perfect* museum software. A grant is currently being sought, in cooperation with the Southwest Florida Library Network, that would digitize the entire archival collection, using primarily outsource labor, and make the collection available via the internet. This would serve to both protect the original archives, by decreasing handling of the collections, and allow enhanced access to materials by researchers.

The entire artifact collection consists of approximately 5,000 identified of objects.

RESOURCE MANAGEMENT PROGRAM

Special Management Considerations

Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the Division's statutory responsibilities, and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of early successional communities such as sand pine scrub and coastal strand.

A timber management assessment is not required since the property is under the 1,000 acres threshold established by Florida Statutes. However, where possible, efforts will be made to maintain and restore the scrubby and mesic flatwoods communities to more natural conditions. Even though the park is less than 1,000 acres, timber management will be reevaluated during the next 10-year revision of this management plan.

Additional Considerations

Septic tanks and trailer pads from the original location of the Koreshan RV Park facility remain in place. Removal of the features that are no longer necessary for park operations needs to be addressed to permit further restoration of the area and prevent adverse impacts that may be associated with the buried tanks. Since much of this area is within the boundaries of the National Historic District, removal of the features will have to be coordinated with DHR.

Management Needs and Problems

The challenge in managing the Koreshan historical structures is in retaining their structural integrity without sacrificing their historical integrity. The Florida Park Service applies the Secretary of the Interior's Standards for Historic Preservation Projects to its preservation activities. Adherence to these widely accepted standards is intended to enable work to be performed without sacrificing historical integrity, while also providing methods to allow adaptations of structures for purposes beyond those envisioned by their builders.

The following resource conditions assessments make use of an imprecise descriptive scale of good – fair – poor. These terms describe a structure based on the conditions of its structure or stylistic elements. Complete failure or deterioration of those elements would result in loss of the structure's physical and or stylistic integrity.

The historic structures at Koreshan are generally in poor condition: they should receive extensive attention at the earliest possible moment. Park management has shown diligence and attention to maintenance in managing the structures. Nevertheless, it must be noted that structures like those, which constitute the built environment at Koreshan, deteriorate rapidly in the local climate, and without large infusions of capital, such deterioration can and does become catastrophic. Such structures include the small machine shop (045013), the large machine shop (045014), the membership cottage (045010), and the New Store (045001).

The Founder's Home and the Damkohler House. Both structures are in fair condition. Both were restored within the past 10 years. Each has developed minor problems that will become significant if not addressed.

Foundations of the Founder's Home are in some slight danger of being undermined by the activities of gopher tortoises. At least two active burrows and one inactive burrow that threaten either the foundations of the house or those of the historic masonry wall beyond the structure's north side were observed.

Both the Founder's home and the Damkohler cottage suffer from vices inherent to their construction/restoration. In the case of the Founder's Home, porch roofs are configured so that under many circumstances rainwater is drained directly on and into the ends of porch roof structural members. Rafter ends have begun rotting and will continue rotting at an accelerating pace until this problem is addressed. Damkohler's cottage suffers from warping of its siding fabric. Battens of the south and southwest elevations, which are most exposed to the sun, are especially unstable, and some have begun peeling away, loosening their nails and some of the siding boards as they go.

The Bakery. This is in fair condition. Its floor slabs and window frames will bear monitoring. The south wall, from floor to approximately two feet up, has previously sustained water damage. The Bakery is the only historic settlement structure with a masonry first story, making the second story a natural choice for storing emergency supplies. The cistern at the northwest corner of the building, however, is unstable and in dire need of restoration.

The Membership cottage. This is among the older structures extant on the park property.

It has been managed carefully; however, it is plainly suffering massive roof, siding, and foundation problems. It is only reasonable to consider the buildings framing to be deteriorated. Each of these is beyond the park's ability to repair, especially if, as required, repairs are performed in accordance with the Secretary of the Interior's Standards.

Large machine shop. This structure suffers from insufficiently anchored siding and possibly from extensively deteriorated structural members. While not as idiosyncratically elegant as its small machine shop neighbor, this large, conventional structure would leave a massive void in the Koreshan story if lost.

Small machine shop. This may be unique among the vernacular structures in the state. It is a treasure threatened by natural and manmade processes. The roof appears deceptively similar to a section of a World War II era Quonset Hut. In fact, the roof is formed from curved pieces of wood covered by stretched and treated textile: Its construction is more like that of an inverted fabric-covered canoe than of a conventional building. The roof appears to be in fair condition; however, it is not. On both long elevations, large portions of the roof's eaves have been removed, probably as a response to rot in those areas, and the structure now drains water into its own siding on those elevations. The siding is dangerously near self-destruction. The building was recently brought to level (1998), with the addition of structure members and concrete piers under the floor. In 2001, metal flashing was added above the north windows to temporarily mitigate any further water damage until restoration can be accomplished. A plexiglass barrier was also added to one south window as an experimental, temporary stabilization and mitigation measure.

Art hall. This is in fair condition; the roof has been restored and the monitor reconstructed (April 2002). The climate control mechanical system is approaching the end of its service life and is prone to condensation and leaking through the interior ceiling. Present preservation techniques would not place a maintenance needy, heavyweight apparatus high above an old frame structure's center point. The re-location of this equipment is a priority. A rain leak during the roof restoration prompted a mold growth outbreak and caused water damage to the floor areas, lower walls and the ceiling. Additionally, the west exterior wall of this structure exhibits a marked tendency toward moisture retention, siding rot, and paint failure. Mold abatement and water damage repair are pending as of June 2002, and a special category grant has been submitted to address relocating the HVAC equipment, structural stabilization, porch restoration, and ADA accessibility.

Vesta Newcomb cottage. Until recently, this was considered fair; however, floor support anomalies have placed it in the poor category. Should these support problems prove to be inaccurate, the building would return to the fair category, though not by much.

New store. This is located at the U.S. Highway 41 bridge over the Estero River has every appearance of extensive structural instability due to rotted structural framing. Although the building is at least five feet above normal river level, its first story floods with some regularity during any 10-year period. This probably is not a recent development: the first story has probably always flooded to a depth of a few inches from time to time. It appears that structural damage has not been studied until recently, and such studies are conducted from a lay perspective. The lay perspective holds that this building is in grave condition due to the damage described above. Additionally, water from driving rainstorms infiltrates the façade and is causing rot damage to structural members of that (east) elevation. The Florida Department of Transportation is in the process of planning for an imminent widening of the highway, and construction vibration is likely to cause greater damage than already exists.

Historic settlement area. This area of the park is recognized as a distinctive human landscape. The publicly accessible areas of the settlement are characterized by open space

punctuated by trees and shrubbery, which constitute a landscape under restoration. Progress on that restoration has been slow. The matter of what plantings must be reintroduced or rejuvenated in order to restore the landscape, as well as the question of which elements of the present landscape represent the desired cultural landscape and which should be eliminated need to be addressed. In 1999, Barbara J. Stafford of the University of Florida completed a Master's thesis on a preservation treatment for the Koreshan Gardens. The thesis details the site as a cultural landscape and presents methodologies for documenting the landscape as well as offering suggestions for further study and restoration of the gardens.

Collections objects. Object collections are maintained at the park. Objects are both owned by the park and loaned to it, as part of an arrangement with the College of Life, formerly the Koreshan Unity Foundation, to transfer ownership. Collection management approaches Division standards. Owned objects are cataloged and borrowed objects are listed according to descriptions supplied by the Lender. A Scope of Collections Statement is under development, hence a Collections Management Plan document is under development but cannot be said to exist.

The settlement is subject to impacts of noise, pollution, and dust from U.S. Highway 41 (Tamiami Trail), which forms its east boundary. Modifications to the cultural landscape must be made in order to lessen those impacts. Because FDOT will be performing a multilane expansion of the highway during the next decade, some flexibility within the historic landscape will be necessary in order to adjust for changes in impacts during and after completion of the widening. Refer to "visual Protection/Noise Reduction Buffer" in Land Use Component.

The physical condition of most collections objects at Koreshan is fair. Collections on exhibit consist of furniture and furnishings, personal gear, communication artifacts like books and paintings, and tools & equipment for woodworking or food processing and preparation.

Collection objects are exhibited in Damkohler's Cottage, the first story of the Bakery, the Vesta Newcomb Cottage, the Generator Building, the small machine shop, and the large machine shop.

The first story of the Bakery contains food processing and food preparation tools and equipment, including tables, dough trough, a few pots and pans, etc. Most objects are stable and in fair condition. Each elevation is pierced by a window, and there are exterior doors on the south and west. The Bakery lacks climate control mechanical systems, but the masonry exterior walls help slow temperature changes. Ownership of objects in the Bakery is divided between the park the College of Life.

The small machine shop contains tools and equipment for metalworking and some woodworking. Most objects are stable and in fair condition; however, the building is not stable. Due to its history as a machine shop, the building may be somewhat more flammable than expected. The building's advancing decrepitude places its contents at risk; no estimate about its ability to withstand a severe, prolonged storm is known. There appears to be no historic structure report for the building. The Small Machine Shop has no climate control system. Almost all objects in the building belong to the College of Life.

The Large Machine shop contains elements from tools and equipment for metalworking and woodworking, as well as many miscellaneous pieces. Its ends are open; therefore, nothing inside can be protected from the weather. Almost all objects within have been conveyed to park care by the College of Life.

A few additional objects, and machines, are contained in the generator building. This is a

large wood framed, “tin” sided and roofed structure. The machines belong to the park and are lubricated regularly.

Some park collection objects may be considered in “open storage,” in the store and on the second floor of the bakery. These objects are not on exhibit, but are not in museum standard storage facilities.

The New Store first floor area contains the vast majority of food processing objects, composed of mason – style jars and other materials related to preservation or preparation of food. They are in fair condition but are unstable due to the inherent vice of being composed of (old) glass. Store sales counters and domestic furnishings are also stored on the first floor. They are in poor condition. The New Store second floor area contains various furniture pieces, such as beds and folding screens. These are in poor condition, largely, due to their condition when acquired with the property. All of the objects stored in the Bakery are furniture pieces.

The second floor of the Planetary Court has been emptied of historical objects due to the restoration. Artifacts are now in storage on park property in the Collections Storage Building.

Collections-related records. These exist in hard copy form and partially exist as computer records. A large portion of the collections is documented photographically, Records should be replicated at District office; some replicated records may be found at the Bureau of Natural and Cultural Resources offices.

Management Objectives

The resources administered by the Division are divided into two principal categories: natural resources and cultural resources. The Division primary objective in natural resource management is to maintain and restore, to the extent possible, to the conditions that existed before the ecological disruptions caused by man. The objective for managing cultural resources is to protect these resources from human-related and natural threats. This will arrest deterioration and help preserve the cultural resources for future generations to enjoy.

Certainly, the most significant management needs are those of the cultural features associated with the Koreshan Unity historic settlement area. If a clear understanding of the environmental setting in which the Koreshans established their community is to be gained, the restoration and maintenance of the mesic flatwoods within the park is critical too. It is crucial that invasive exotic pest plant species be eliminated from all of the natural habitats and maintain fire regimes on one-three-years rotation.

Management Measures for Natural Resources

Hydrology

On July 26, 1990, the Estero River was designated as an outstanding Florida Water. As a tributary to the Estero Bay, it is considered to have exceptional ecological significance.

Near Corkscrew Road, the borrow pit features need restoration aimed at restoring natural wetland contours, water quality and vegetative features. Such efforts will add a wetland community to the site and create a wildlife viewing opportunity in the park.

Drainage associated with a historic Koreshan ditch feature along the south boundary of the park has been significantly modified during development of the adjacent roadbed causing unnatural stormwater retention in the southwest corner of the park. Further modification of drainage features adjacent to U.S. Highway 41 has caused storm water runoff from the U.S.Highway 41 roadbed to flow from the south directly into the natural flatwoods community, causing unnatural stormwater retention in the southeast corner of the park as well.Storm water drainage along the south boundary needs to be restored to historical

configurations along Corkscrew Rd. A flapper gate is needed on the culvert system along U.S. Highway 41 to prevent the back flow of storm water into the southeastern corner of the park. Division staff are working with Lee County Planning staff, Lee County DOT and Watermark Communities development staff to resolve these drainage issues.

During periods of heavy rainfall, there is a distinct sheet flow from south to north primarily in the western areas of the park, west of the road to the campground and picnic area. Koreshan drainage features channel flow into a series of landscape ditches that flow through the Sunken Gardens cultural landscape area of the historic district directly into the Estero River. These drainage features are fed by waters flowing from the natural plant communities and pose no serious threat to water quality of the river.

Pelican Sound is a recent housing development adjacent to the park. Storm water drainage and retention features were added during its construction. Storm water drains occur immediately adjacent to the west park boundary and the south boundary of the Vesta Newcomb Preserve. These features may divert waters from the parklands into the storm water drainage system of the development. It is not known if any back flow from these systems is possible during flood events. This area should be monitored during the rainy season to determine what effects if any, these features may have on the hydrologic features of the park.

An indirect hydrological management need is control of the minor erosion along the banks of the Estero River. Erosion is not due to flow patterns of the river but is caused and exacerbated by boat traffic. Lee County has designated this section of the river a "No Wake" zone. This ordinance is enforced with periodic law enforcement patrols and with the posting of warning signs. Wakes from occasional violators during the winter months is undermining and eroding numerous areas along the south side of the river, especially at two overlooks and along the nature trail.

Native vegetation on the north shoreline of the river absorbs wake action created by boating violators. Best management practices shall be implemented as needed to counter erosion on the south bank.

Park staff maintain water quality monitoring station EBV003 as part of the Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network. The park monitoring station is located at the mouth of the Estero River. Activities associated with this project occur on the first Monday of each month at dawn. Two park staff members are assigned to do testing each month. Quality control training is routinely conducted to insure standardized procedures throughout the network, to provide fresh testing chemicals and water quality collection bottles.

Prescribed Burning

The objectives of prescribed burning are to create those conditions that are most natural for a particular community, and to maintain ecological diversity within the unit's natural communities. To meet these objectives, the park is partitioned into burn zones, and burn prescriptions are implemented for each zone. The park burn plan is updated annually to meet current conditions. All prescribed burns are conducted with authorization from the Department of Agriculture and Consumer Services, Division of Forestry (DOF). Wildfire suppression activities will be coordinated between the Division and the DOF.

Extreme care must be taken when burning the seven small burn zones in the park described below. Some of the zones are sub-divided for burning by mowing, or by using wet lines, or foam. It is standard procedure to request assistance from the Estero and/or San Carlos fire departments for stand by with fire-fighting equipment. The urban interface, which has developed in the past five years, has made smoke management an issue of concern. This

situation requires closer review of weather conditions and puts limitations on the number of suitable burn days available to this park.

Zones 1 and 2. These two zones are divided by an asphalt access road that leads to the parking lot for the historic settlement. This land was originally mesic flatwoods. There has been some disturbance and the original South Florida slash pines are gone, replaced by a plantation of North Florida slash pines. Stands of melaleuca and eucalyptus trees, which had invaded these zones, were removed in 1989, and the mesic flatwoods understory was reduced to ground level.

These zones should be burned on a one to three-year rotation to manage what remains of the original vegetation. The ground cover is uniform and carries fire well. The western end of the two zones is shaded by oaks and does not burn well. Zone 1 is the best preserved; palmettos have thinned and wiregrass and associated herbaceous ground covers thrive. The slash pines appear to be dying at a relatively steady rate. Zone 2 has a dense palmetto ground cover. Roller chopping may be implemented to reduce the length of saw palmetto and to create a more diverse herbaceous ground cover. A refuse area, possibly cultural resource materials, metal and glass, has been identified in this zone near the Koreshan industrial buildings on the northwest side. Impacts on this area by mowing equipment during burn prep should be minimized.

Zone 3. This approximately one acre zone is burned with Zone 1, on the same rotation. The burning scheme has encouraged the growth of a native grass/herb understory that carries fire fairly well.

Zone 4. Enough flatwoods vegetation remains at the south end of this zone, so it may be managed as such. A large downy rose myrtle infestation has been treated as part of a contract invasive plant species removal project in 1999. Burns will be attempted to initially eliminate fuel loads in the southern section of the zone and prevent the re-establishment of exotics. Burning will then be conducted on a one to three year rotation.

Zone 5. This zone, like the previous one, appears to be manageable as a mesic flatwoods. Burning will be conducted on a one-to-three-year rotation. A refuse area, possibly cultural resource materials, glass and metals has been identified in this zone. Impacts on this area by mowing equipment during burn prep should be minimized.

Zone 6. This narrow zone was formerly mesic flatwoods and perhaps scrubby flatwoods. The pine trees remain and some saw palmetto and other native vegetation, but the ground cover was greatly disturbed by the removal of melaleuca trees in 1989. Burns have been conducted on a one to three year rotation. A cultural drainage feature located on the east side of the deepest borrow pit has been impacted by road improvement work along the south boundary of the park. Park management is coordinating restoration of the original drainage feature with the Pelican Sound development staff.

This zone is bisected by two borrow pits that are associated with the creation of the Corkscrew Road grade in the 1930s. The western side of Zone 6 has mesic flatwoods habitat on the south, along the roadside, which grades into an open grass habitat. This area is mowed in preparation for burns and invasive grasses are being treated as part of the contract invasive plant removal project. Zone 6 is also the site of the park's burn pile.

Zone 7. This is the largest zone and the one least disturbed by human impact. The southern and western portions contain some scrubby flatwoods vegetation. The remainder is mesic flatwoods. The southeast corner of this zone includes the park residences. The southwest corner is the location of the filter beds associated with the parks waste treatment facility. A refuse area, possibly cultural resource materials, metals and glass, has been identified in this zone. There are also remains of old wooden fence lines that feature heart pine fence

posts and an interesting variety of barbed wire. Impacts on this area by mowing equipment during burn prep should be minimized.

This zone is divided into three areas for burning purposes in order to protect the facilities found in it. Cabbage palm and some oaks remain north of the resident sites. These trees serve to buffer the structures so they cannot be viewed from the park drive. Downy rose myrtle has been removed from this area, and a burn has been conducted to reduce fuel loads around the homes. The result has improved the visual qualities of the mesic flatwoods.

Zone 8. This zone is predominantly mesic flatwoods grading into oak hammock habitats in the campground and picnic area. Some burning may be needed along the south side of the zone between the campground access road and the main park road. There may be a need to address a request by the Estero Fire Department and Florida Division of Forestry to reduce fuel levels around individual campsites for public safety and limited access.

Designated Species Protection

The welfare of designated species is an important concern of the Division. In many cases, these species will benefit most from proper management of their natural communities. At times, however, additional management measures are needed because of the poor condition of some communities, or because of unusual circumstances that aggravate the particular problems of a species. The Division will consult and coordinate with appropriate federal, state and local agencies for management of designated species.

Several designated species have been identified at Koreshan State Historic Site. The only two requiring specific management actions are the Gopher tortoise and the West Indian Manatee.

The Gopher tortoises are common in the flatwoods communities. Habitat considerations require that these communities be maintained in an early successional stage if gophers are to be maintained at maximum numbers. Since development is closing in on this site, prescribed burning may have to be augmented with mechanical treatments. It is not known if the park, isolated by development of large subdivisions, is large enough to sustain the gopher tortoise. The gopher tortoise benefits from early successional scrubby flatwoods and healthy mesic flatwoods communities. Some combination of prescribed burning and mechanical treatment may be necessary to maintain these communities in a habitable condition.

The tortoises also frequent mowed lawn habitats in the park. Numerous individuals of varying ages frequent the property north of the river as well as the historic settlement. Cultural resource management concerns require an extra effort to manage the burrowing activities of this species in association with structures, vegetation and the gravesite. The tortoises may also be adversely impacted by treatments directed at preservation of the structures as well as by human activity associated with special events. Installation of fencing below ground level will be implemented in areas where burrowing activities have negative impacts adjacent to cultural features. Animals that may be impacted by treatment activities will be captured and moved to a nearby area of the park. Burrows are routinely marked with stakes and flagging during special events and interpretive materials are made available to park visitors.

Some of the gopher tortoises of the park have an extended range beyond the western boundary of the park into the Pelican Sound residential community. These animals may potentially be threatened by activities outside the park boundaries including traffic on Corkscrew Road and Pinehurst Greens Drive, domestic pets and activities associated with routine landscape maintenance. The curb area created in 1998 along the north and south

sides of Corkscrew Road incorporated an eight-inch retaining feature to prevent tortoises from entering the roadbed. The park entrance road is the only direct route of access into the road for the tortoises at this time. It is important that the feature be maintained during the process of landscape maintenance and mulching.

The West Indian manatee is an infrequent visitor to the waters of the Estero River, which flows along the northern boundary of the park on the west, and within the park boundary on the northeast quarter of the park. Speed zones and manatee protection areas have already been designated in this area of the Estero River. Interpretive signage indicating the protected designation of the area is needed in the river at the boat ramp area on the western boundary of the park and at the eastern park boundary, at the U.S. Highway 41 bridge.

Exotic Species Control

Exotic species are those plants or animals that are not native to Florida, but were introduced because of human-related activities. Exotics have fewer natural enemies and may have a higher survival rate than do native species, as well. They may also harbor diseases or parasites that significantly affect non-resistant native species. Consequently, it is the strategy of the Division to remove exotic species from native natural communities.

Plants. The natural communities at Koreshan have, in the past, been heavily infested with exotic plants, particularly melaleuca, Brazilian pepper and downy rose myrtle. The Koreshans imported and established a number of these plants and as a consequence, southern Lee County is the site of southern Florida's heavy infestations of melaleuca trees.

An aggressive melaleuca eradication program was begun in 1989. Efforts have followed with an aggressive maintenance herbicide program.

The following non-indigenous species are currently targeted in the parks exotic plant removal program: rosary pea (*Abrus precatoris*), tree of heaven (*Ailanthus altissima*), woman's-tongue (*Albizia lebeck*), common bamboo (*Bambusa vulgaris*), Australian pine (*Casuarina equisetifolia*), umbrella plant (*Cyperus involucratus*), air potato (*Dioscorea bulbifera*), eucalyptus (*Eucalyptus globosus*), cogon grass (*Imperata cylindrica*), kalanchoe (*Kalanchoe tubiflora*), lantana (*Lantana camara*), lead tree (*Leucaena leucocephala*), old world climbing fern (*Lygodium microphyllum*), melaleuca (*Melaleuca quinquenervia*), chinaberry (*Melia azedarach*), torpedo grass (*Panicum repens*), guinea grass (*Panicum maximum*), kudzu (*Pueraria montana* var. *lobata*), downy rosemyrtle (*Rhodomyrtus tomentosus*), African bowstring hemp (*Sansevieria hyacinthoides*), Brazilian pepper (*Schinus terebinthifolius*), Jambolan plum (*Syzygium cumini*) and Bay Biscayne creeping-oxeye or wedelia (*Wedelia trilobata*).

An invasive pest plant removal project proposal was prepared in 1999 to facilitate removal of all invasive pest plant species found in natural plant community zones in the park. Three Zones, 4, 5 and 6, were treated in the initial phase of this project in May 1999.

Zone 1. The primary exotics are immature melaleuca, downy rose myrtle, and Guinea grass and cogon grass. The cogon grass has been mapped, treated and is monitored for follow up treatment needs. Incidental individual pest plants are routinely monitored and treated.

Zone 2. The primary exotics are melaleuca, downy rose myrtle and Brazilian pepper. A historic Koreshan drainage ditch runs north and south through the zone around which is a large stand of Guinea grass. Incidental pest plant re-growth is routinely monitored and retreated as necessary.

Zone 3. The primary exotics are melaleuca; downy rose myrtle, Chinaberry and wedelia. A moderate depression located in this zone is wet during the summer months. With the exception of a large patch of wedelia, the northern area in this zone has recovered from a

Brazilian pepper infestation removed in 1989. The remaining infestation of downy rose myrtle has been treated. The eastern edge of the zone consists of a Koreshan drainage feature, where the vegetation growth is dominated by Guinea grass that is treated after mowing.

Zone 3A. The primary exotics are melaleuca, downy rose myrtle, Chinaberry, and wedelia. A moderate depression located in this zone is wet during the summer months. With the exception of a large patch of wedelia, the northern area in this zone has recovered from Brazilian pepper infestation, removed in 1989. The remaining infestation of downy rose myrtle has been treated. The eastern edge of the zone consists of a Koreshan drainage feature, where the vegetation growth is dominated by Guinea grass that is treated after mowing.

Zone 4. The primary exotics have been downy rose myrtle, melaleuca, Brazilian pepper, Guinea grass, rosary pea, and lantana. A substantial exotic removal project was completed in May 1999. Monitoring and follow-up treatment will be routinely followed.

Zone 4A. The primary exotics have been downy rose myrtle, melaleuca, Brazilian pepper, Guinea grass, rosary pea, and lantana. This zone has been highly disturbed in the past, restoration is unlikely; therefore, the area of mature cabbage palms has been supplemented with additional plantings of native oak trees. All invasive pest plants in this zone were treated with herbicide during the removal project in May 1999, with an anticipated 80 percent kill rate. Follow up will be necessary. Screening vegetation will need to be planted along the park entrance area.

Zone 5. Primary exotics include downy rose myrtle, melaleuca, Brazilian pepper, rosary pea, and Guinea grass. A ranger residence, pole barn, chemical shed and nursery are located within this zone. All invasive pest plants in this zone were treated with herbicide during the removal project in May 1999, with an 80 percent kill rate achieved as a result. Follow up will be necessary.

Zone 6. This zone is characterized by mesic flatwoods and ruderal habitats. Primary exotics include melaleuca, downy rose myrtle, bamboo, cogon grass, torpedo grass, wedelia, Guinea grass, Brazilian pepper, and air potato. Parts of this zone are dotted with depressions that hold water during the rainy season; a shallow marsh-like borrow pit and a deep rectangular borrow pit. All invasive pest plants in this zone were treated with herbicide during the removal project in May 1999, when the marshy areas were dry. An 80 percent kill rate was achieved as a result of this project. Follow up will be necessary. Screening vegetation and a fence line may be necessary as a buffer on the west side of this zone.

Zone 7. This zone is predominantly mesic flatwoods habitat that is divided into three areas. The largest area is referred to as Zone 7 and the smaller areas denoted as 7A and 7B. The division of this zone facilitates safety considerations during burns.

Zone 7 is bordered by a gravel park road on the north, Zone 9 on the east, a service road and fire lane on the south and the Pelican Sound community on the west. Primary exotics in this area are cogon grass, melaleuca, downy rose myrtle, Jambolan plum, eucalyptus and Brazilian pepper. The cogon grass has been mapped, treated and is monitored for follow up activities by the zone manager. A drainage ditch flows along the east side of the fire lane next to Pelican Sound. This ditch drains the flatwoods and flows directly into the Estero River. The mounded filter bed system for wastewater treatment is found on the southwest corner of this area. Elimination of this system may become an option as central sewage facilities become available in the surrounding community.

Area 7A is bordered by a fire lane on the north, service roads to residences and shop area

on the east, Zone 6 on the south, the Pelican Sound community to the west. Primary exotics are melaleuca, cogon grass and downy rose myrtle. A drainage ditch is located along the northern fire land and holds water during the rainy season. This ditch is impounded by fire lanes and has no direct drainage destination.

Area 7B is approximately one acre and is bordered by the Park Manager's residence on the south, a mowed fire lane on the north, the Assistant Manager's residence on the west and the park drive on the east. The primary exotics in this zone include melaleuca; downy rose myrtle, mimosa, rosary pea and Jambolan plum.

Zone 8. There is a small quarter-acre patch of Estuarine Tidal Swamp found adjacent to the Estero River in the Picnic area. Primary exotics are Brazilian pepper, air potato, woman's tongue, lead tree, Guinea grass and melaleuca. This zone includes a boat ramp, 60-site campground and a picnic area. Domestic cats are periodically observed in the campground.

Zone 9. Primary exotic pest plants include Australian pine, melaleuca, Brazilian pepper, air potato, Chinaberry, bowstring hemp, bamboo and Guinea grass. Care should be taken not to disturb numerous historically significant artifacts and sites in this zone including vegetable gardens and fruit and ornamental trees associated with the cultural landscape of the Koreshan Unity Settlement. Some of the bamboo in this area is associated with the cultural landscape. Any manmade artifacts or building ruins located during removal activities should be left in place, flagged and brought to the attention of the zone manager to allow for documentation and mapping.

Zone 10. The habitat is scrubby flatwoods mixed with Koreshan landscape plants and fruit trees. The remainder of this zone is mowed extensively. The primary species of exotics, which can be treated or removed, are Brazilian pepper and bowstring hemp. This zone comprises the Koreshan Unity Settlement historic district. Much of the non-native vegetation associated with the cultural landscape of this historic community is managed as a cultural feature of the park. Particular care must be taken in this area when removing the bowstring hemp to minimize soil disturbance to approximately the upper six inches of the surface. Any man-made artifacts or building ruins inadvertently located during this process must be, left in place, flagged and brought to the attention of the site manager or designee to allow for documentation and mapping.

Zone 11. This zone is located north of the Estero river it is bordered by the Sunny Grove retirement community on the north and west, U.S. Highway 41 on the east, and the Estero river on the south. Primary exotics are, Brazilian pepper, air potato, lead tree, Guinea grass, bowstring hemp, melaleuca, umbrella grass and bamboo. The zone manager must demonstrate appropriate concern to herbicide labeling when treating is this area adjacent to the river. When possible hand removal is utilized.

A wastewater treatment facility and filter beds associated with Sunny Grove are found on the neighboring property on the west boundary of the zone. Most of this zone is maintained as a mowed landscape. A vegetative buffer along perimeter fence lines would improve the visual and audio aspects of this zone.

Animals. Four species of exotic vertebrate animals have been identified: the armadillo, the Cuban tree frog, the brown anole and domestic cats and dogs. There is no practical way of eradicating the tree frog and brown anole. The armadillo should be removed whenever possible. Domestic cats and dogs do, on occasion, stray into the park and are removed to preclude disturbance to native wildlife.

The fifth exotic animal, an invertebrate is the fire ant (*Solenopsis invicta*). Amdro is being used on the colonies.

Problem Species

Problem species are defined as native species whose habits create specific management problems or concerns. Occasionally, problem species are also a designated species, such as alligators. The Division will consult and coordinate with appropriate federal, state and local agencies for management of designated species that are considered a threat or problem.

The American alligator poses a limited threat to park visitors using the Estero River for recreational purposes. Although swimming is not permitted from park facilities, canoers and occasionally picnickers do not heed posted warnings. Visitors inquiring about swimming are directed to nearby Lee County swimming pool facilities and the beaches at Lovers Key State Recreation Area and Delnor-Wiggins Pass State Recreations Area.

Raccoons pose an occasional threat to campers. Cautionary literature is posted at the campground restrooms. Camper complaints are initially handled by providing suggestions on securing foodstuffs and dissuading animal activity with sprayed water or vinegar spray. These techniques prove to be successful in most cases. Live trapping and removal is utilized on animals that may pose significant threat to visitors' health and safety.

Management Measures for Cultural Resources

The management of cultural resources is often complicated because these resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. Approval from Department of State, Division of Historical Resources (DHR) must be obtained before taking any actions, such as development or site improvements that could affect or disturb the cultural resources on state lands (see **DHR Cultural Management Statement**).

Actions that require permits or approval from DHR include development, site excavations or surveys, disturbances of sites or structures, disturbances of the substrate, and any other actions that may affect the integrity of the cultural resources. These actions could damage evidence that would someday be useful to researchers attempting to interpret the past. The overall management goal at Koreshan State Historic Site is to restore the settlement as nearly as practicable, and to illustrate the evolution of the Koreshan Settlement from its incipience through its decline. While most of the structures and grounds were constructed and developed during the "Golden Years", 1894-1910, it is important to reflect the decline following Cyrus Teed's death. Therefore, restoration and interpretive efforts will encompass the period 1882 to 1982.

Some areas of the park have been surveyed for structural or archaeological remains, but there is no record of comprehensive survey of the park as a whole. The historic settlement area has been extensively surveyed and additional survey materials are generated as projects are funded.

Management of park cultural resources has been scheduled and carried out in accordance with all existing Division standards.

Buildings are scheduled for condition assessment as initial parts of the process of implementing previously approved but generalized rehabilitation or restoration projects. Certain elements of management depends on other state or federal agencies: preservation and management of the New Store building (045001), which will be affected by (federally funded or supported) construction to improve US Rte 41, is a prime example of this. Management operates in a proactive manner in these and other, more ordinary situations.

Great care must be taken to provide adequate and appropriate management of the structures and collections associated with the material culture of the Koreshan Unity.

Management has trained staff and volunteer staff in aspects of cultural resource management that relate to care of historic structures. Staff members are placed in charge of buildings and maintain comprehensive written and photographic records of their activities at the building site and checklists of conditions, as well as suggested future projects. In all, this is a very satisfactory approach to cultural resource management, as it shares “ownership” of the resource with staff.

Routine building maintenance is performed by the staff member in charge. Large or complex tasks are accomplished with help from other staff, as well as from volunteers, as needed. Maintenance tasks are routinely written. Checklists relating to standard maintenance have been established and are kept in notebooks in each building.

Record keeping at Koreshan is well organized. Staff members maintain cultural resource management records at their buildings, and activities that are not appropriate for documentation at that level are recorded at the park office. Records of activities within buildings are replicated at the park office. The park is in the process of developing a duplicate set of necessary records for lodging in a safe place, the District 4 Office. In the event of irreparable damage to park files, the duplicates may be copied for use at the park. to enable immediate resumption of activities and provide documentation of damage or loss.

Much of necessary conservation activities associated with the preservation of the objects in this collection fall outside of the capabilities of park staff. Professional conservators will have to be consulted and contracted for many of the conservation projects needed in the park.

Historical structure reports are needed to document the building features, current condition and stabilization, preservation and restoration needs. Development of these reports will require professional architects with experience in working with historic buildings and established standards. Structural maintenance or repairs on any historic buildings in the Koreshan Unity Settlement must be in compliance with established standards. It is in the best interests of historic preservation to conduct maintenance of the special features in a manner that accurately reflects the original fabric and appearance of the object or structure being restored. Preservation activities and structural projects, which involves replacement, alteration or modification of structural fabrics, are submitted to the Bureau of Natural and Cultural Resources and the Division of Historic Resources for compliance review and approval prior to initiation of such projects. Any ground alteration or excavation associated with management activities in the park, particularly in the National Historic District, also require written proposals and formal review by BNCR and DHR.

The Bureau of Natural and Cultural Resources provide consultation for manager and staff in the form of training, project review (stabilization, restoration, preservation and facilities), informal site inspections, staffing support (OPS funding), program and display development. Specific recommendations for individual structures and collections objects described in the management needs and problems should be implemented as allocated funding permits.

Protection of the structures and collections includes the documentation process as well as developing procedures to protect the objects from theft, fire, vandalism, environmental impacts and other threats without compromising objects’ integrity or unduly limiting their appreciation by the public. There are great needs in this area, including installation of fire, security, termite detection and prevention, and disaster preparedness systems.

Disaster preparedness procedures have been implemented but still need to be enhanced in order to provide for adequate protection and recovery. Plywood shutter systems have been developed for three of the historic structures. Other structures on the site currently are not

shuttered in storms or have plywood affixed to the actual structure with wood screws. There is a need to formalize building closure systems throughout the settlement that will meet the codes for coastal hurricane protection. Only two of the structures have tie-down features that have been added in the process of restoration. Historic records suggest that the structures have physically moved during flooding resulting from storm events. It is imperative that initial expense should be focused on completing historic structure reports on all structures in the settlement to facilitate repair and recovery after a storm.

Pre-storm preparation procedures have been developed as part of the Park Protection Plan and will be refined on an annual basis. Storm preparations also include a provision for evacuation of minimal site collection records, photographs and other documentation necessary for initiating recovery activities. Hurricane recovery supplies needed to stabilize collection objects are strategically placed in areas that may survive storms. As restoration of buildings is completed, the survivability of the structures and their contents will improve.

A final consideration in disaster planning is to arrange immediate access to the park following the storm event. Timing is a crucial aspect of cultural resource recovery. Many items in this collection will need immediate attention to facilitate their recovery. It is a matter of hours after a storm event during which irreversible damage can occur to these objects. Authorized access needs to be arranged at the highest levels of Emergency Management for necessary staff to begin assessment. A prioritized collection list will also be necessary for recovery activities. Access coordination may fall outside the capabilities of the park manager and may have to be addressed on higher levels by state agency personnel directly involved in emergency management.

Research Needs

Natural Resources

Any research or other activity that involves the collection of plant or animal species on park property requires a collecting permit from the Department of Environmental Protection. Additional permits from the Florida Fish and Wildlife Conservation Commission, the Department of Agriculture and Consumer Services, or the U.S. Fish and Wildlife Service may also be required.

There are no major natural resource research needs for this unit. Plant and animal inventories are ongoing and documentation of species present, as well as records maintained of resource management conducted, will provide a firm data base for future study of success of management conducted, will provide a firm data base for future study of success for management measures.

Cultural Resources

The Koreshans published periodicals of their own, and since their activities were often controversial, others wrote about them. Personal accounts of life in the unity have also been provided through personal interviews. Several research reports have been completed on the Koreshans, both by students and by the Division of Historic Resources. Although the life and times of the Koreshans were well documented both photographically and in writing, there are several outstanding research needs at this unit. Research grants need to be sought and obtained for all interpretation and restoration projects.

A thorough archaeological survey is required to determine exact locations of landscape features, the arboretum, outbuildings and other ancillary structures and features within the settlement. Historic structures reports are needed on all of the buildings found in the settlement. A structures report on extant structures should involve archival work to ascertain if architectural drawings ever existed for these buildings and to discover any additional photographs or plans which would permit more accurate restoration.

Architectural drawings are needed for all buildings for restoration purposes as well as for documentation in the event of natural disaster.

A landscape restoration plan is equally important to the plans for restoration of the site. Elements needing particular attention are the sunken gardens, major landscape plantings, mounds, decorative vases and pottery, bridges, walkways and nursery area. Any formal plan needs to focus on specific horticultural information that would supplement invasive plant specie removal programs. This effort should identify Koreshan landscape features and distinguish between invasive plant infestations and remains of the cultural landscape.

It is important to continue tracing the origin of the artifacts that are being used to interpret the site and to catalogue the collection's items. A historical Furnishings Report would assist in documenting the age and appropriateness of items in the collection and help prioritize restoration and conservation needs.

Resource Management Schedule

A priority schedule for conducting all management activities that is based on the purposes for which these lands were acquired, and to enhance the resource values, is contained in Addendum 6. Cost estimates for conducting priority management activities are based on the most cost effective methods and recommendations currently available (see Addendum 6).

Land Management Review

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation, and recreation lands titled in the name of the Board of Trustees of the Internal Improvement Trust Fund (board) are being managed for the purposes for which they were acquired and in accordance with a land management plan adopted pursuant to s. 259.032, the board of trustees, acting through the Department of Environmental Protection (department). The managing agency shall consider the findings and recommendations of the land management review team in finalizing the required 10-year update of its management plan.

Koreshan State Historic Site was the subject of a land management review October 17, 2001. The review team made the following determinations:

1. The land is being managed for the purpose for which it was acquired.
2. The actual management practices, including public access, complied with the management plan for this site.

The land management review team report, including the Division response to that report, is contained in Addendum 7.

LAND USE COMPONENT

INTRODUCTION

Land use planning and park development decisions for the state park system are based on the dual responsibilities of the Division of Recreation and Parks. These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operation and management, through public workshops, and environmental groups. With this approach, the Division objective is to provide quality development for resource-based recreation throughout the state with a high level of sensitivity to the natural and cultural resources at each park.

This component of the unit plan includes a brief inventory of the external conditions and the recreational potential of the unit. Existing uses, facilities, special conditions on use, and specific areas within the park that will be given special protection, are identified. The land use component then summarizes the current conceptual land use plan for the park, identifying the existing or proposed activities suited to the resource base of the park. Any new facilities needed to support the proposed activities are described and located in general terms.

EXTERNAL CONDITIONS

An assessment of the conditions that exist beyond the boundaries of the unit can identify any special development problems or opportunities that exist because of the unit's unique setting or environment. This also provides an opportunity to deal systematically with various planning issues such as location, adjacent land uses, and the park interaction with other facilities.

Both Lee and Collier Counties continue to experience a rapid population growth with a 32 and 65 percent change, respectively, in the last 10 years. A 22 percent increase is projected for Lee County in the next 10 years and Collier County is anticipated to grow nearly 37 percent (BEBR, University of Florida, 2002). A large part of the growth in the region is focused in the Estero area, between Ft. Myers and Naples.

This growth is changing the profile of the population. The median age for the area is 47 and projected to be 49 in 2010. In 1999, the per capita income for Collier was the highest in the state; Lee County's was average for Florida (Census, 2000). The continued growth of the surrounding area's population, particularly among the higher income retirees is anticipated to increase public interest in and visitation to Koreshan. It is within an hours drive for over 400,000 residents, and easily accessible to tourists traveling on U.S. Highway 41 and Interstate 75.

Existing Use of Adjacent Lands

Koreshan State Historic Site is comprised of three disjunct parcels. The historic district contains approximately 142 acres of natural landscapes and the remains of a utopian, pioneer settlement dating to the 1890's. This parcel is surrounded primarily by residential and commercial land uses and fronts U.S. Highway 41, a busy four-lane connector route between the cities of Fort Myers and Naples. To the south, the boundary is Corkscrew Road and an undeveloped parcel. The western boundary is a residential development and the Vesta Newcomb Preserve, an Audubon owned parcel. The northern boundary is the Estero River. A small parcel to the north of the river, also part of Koreshan, is bordered on the north by a residential community. The Estero areas has seen an explosion of single-family residential

development in the last couple of years and the land immediately to the southeast supports a new shopping center.

The two other parcels, totaling approximately 52 acres, all mangrove community, are located at the mouth of the Estero River and are surrounded by the Estero Aquatic Bay Preserve.

Planned Use of Adjacent Lands

The FDOT plans to expand U.S. Highway 41 from four lanes to a six-lane divided highway within the next five years and a major challenge will be to ensure the protection and preservation of Koreshan State Historic Site's cultural landscape from these changes. Significant visual impacts on the character of the historic district could result with the higher traffic volume and if adjacent land is converted to residential or commercial uses. Division staff will continue to communicate these concerns to the planning staff of Lee County and the FDOT to encourage the incorporation of protective measures in the planning and decision-making process in the visible and the audible vicinity of this unique historic site.

Development of residential and commercial land uses near the park should be anticipated and this conversion could produce or exacerbate serious impacts on the state park. Anticipated effects are changes in the water quality of the Estero River, alteration of the ambiance within and on approach to the site, degradation of the views from the site, importation of invasive exotic plant and animal species, and complication of the Division's prescribed fire management activities.

In particular, the southern and northern boundaries of the historic site are not yet fully developed and are important to the atmosphere and views from and to the site. The southern boundary has an existing conservation easement and provides a visual buffer across Corkscrew Road that is important to the esthetics of the site. The central section of the northern boundary is under single ownership and is largely undeveloped, providing a sense of privacy and an outstanding view from the camping area, picnic area and boat ramp. A hiking trail with scenic overlooks and nature trail are located along this shore as well. It will be important for the park staff to monitor proposed changes on land use adjacent to the park to mitigate the impacts of additional development in these areas.

PROPERTY ANALYSIS

Effective planning requires a thorough understanding of the unit's natural and cultural resources. This section describes the resource characteristics and existing uses of the property. The unit's recreation resource elements are examined to identify the opportunities and constraints they present for recreational development. Past and present uses are assessed for their effects on the property, compatibility with the site, and relation to the unit's classification.

Recreation Resource Elements

This section assesses the unit's recreation resource elements those physical qualities that, either singly or in certain combinations, supports the various resource-based recreation activities. Breaking down the property into such elements provides a means for measuring the property's capability to support individual recreation activities. This process also analyzes the existing spatial factors that either favor or limit the provision of each activity.

Land and Water Area

The primary focal point of Koreshan State Historic Site contains natural landscapes and the remains of a utopian, pioneer settlement dating to the 1890's. The general topography is relatively flat, with a slight slope towards the Estero River. The upland natural communities of this park include mesic and scrubby flatwoods. The wetland communities include estuarine tidal swamp and blackwater stream.

The river mouth parcels, are Estuarine Tidal Swamp and contain no facilities.

Archaeological and Historical Features

Though the park has some variety in natural scenery and recreation facilities, its primary recreational resource is the historic site of the utopian Koreshan community. The unique status of Koreshan State Historic Site has wide-ranging implications for the Division's day-to-day operations, resource and visitor management activities. The historic character of the land located within the primary parcel of Koreshan State Historic Site exemplifies and preserves the qualities of a late-19th Century utopian community.

Historic integrity, as defined by the Secretary of the Interior's Criteria for Nomination to the National Register of Historic Places, refers to the authenticity of a cultural resource's historic identity, as evidenced by the survival of physical characteristics from a historic period. The seven aspects of historic integrity used to evaluate nominations to the National Register include location, design, setting, materials, workmanship, feeling and association. These aspects, as related to the architectural and biological artifact that is Koreshan State Historic Site, comprise the key interpretive resource elements of the historic site. Preservation of these aspects of the buildings, gardens and ornamental plantings are critical to successful explanation of Koreshan State Historic Site to visitors, many of who will have had little experience with, or knowledge of utopian communities.

Secondary interpretive resource elements at the primary parcel of Koreshan State Historic Site are the Division's resource management activities. Historic preservation treatments to stabilize and repair the structures, and inventory and management efforts of the artifacts and gardens will introduce visitors to the interrelated issues involved in stewardship of cultural resources. Moving outward from the boundaries of the historic site, the Division's efforts to mitigate the potential impacts of changing land uses and abate the auditory impacts of an expanding transportation corridor will serve to heighten the visitor's recognition and experience of a simpler way of life. Additional interpretive elements are available with the extensive prescribed burn program that is conducted on the flatwoods community on the western portion of the site.

Assessment of Use

All legal boundaries, significant natural features, structures, facilities, roads, trails and easements existing in the unit are delineated on the base map (see Base Map). Specific uses made of the unit are briefly described in the following sections.

Past Uses

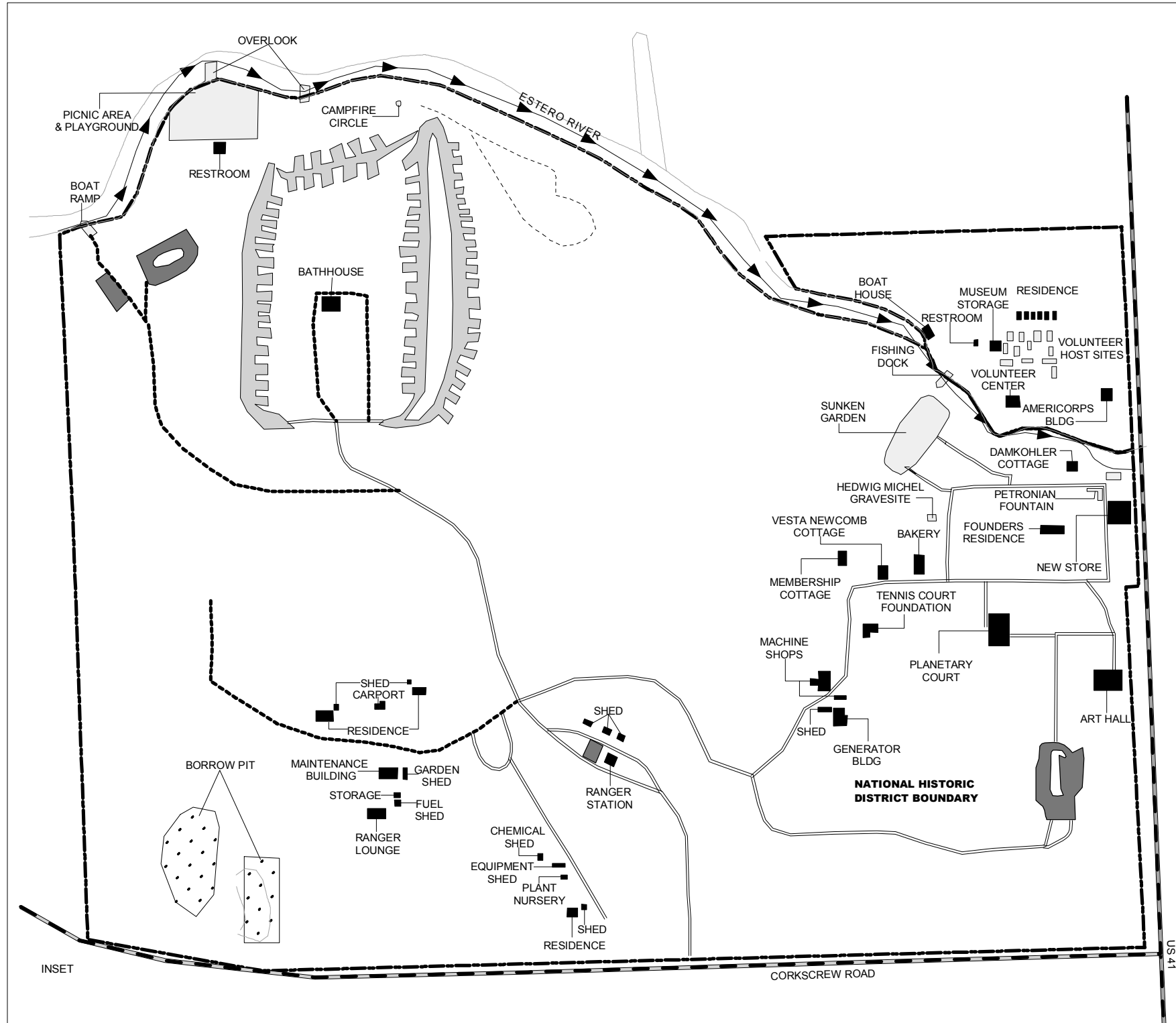
The members of the Koreshan Unity settled on Gustave Damkoler's property in 1894. The community's history is detailed in the Cultural Resources section of this plan. In 1961, the remaining members of the Koreshan Unity donated the acreage to the state. To allow public use of part of the land, the Division constructed the existing recreation and support facilities in the northwest sector. What remains of the Koreshan settlement is designated as a national historic district.

Recreational Uses

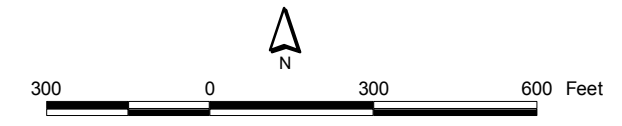
Recreational uses of the historic property include interpretation, picnicking, fishing, camping, nature study, and boating. There are guided and self-guided tours to the settlement buildings and grounds. Special events are held throughout the year to raise public awareness and support for the continued preservation of the historic settlement.

Other Uses

No other specific uses are designated at this time.



- LEGEND**
- Park boundary
 - Canoe/Kayak Trail
 - Hiking Trail
 - County Road
 - Park Road Paved
 - Park Road Unpaved
 - US Highway
 - Park boundary
 - Structures
 - Camping sites
 - Special use
 - Parking lots



KORESHAN STATE HISTORIC SITE

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Division of Recreation and Parks
Office of Park Planning

BASE MAP

Protected Zones

A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive resource use, such as parking lots, camping areas, shops or maintenance areas, are not permitted in protected zones. Facilities with minimal resource impacts, such as trails, interpretive signs, and boardwalks are generally allowed. All decisions involving the use of protected zones are made on a case-by-case basis after careful site planning and analysis.

At the primary parcel of Koreshan State Historic Site, the historic district, Koreshan gardens, and the wetland community have been designated as protected zones as delineated on the Base Map. The two other parcels, entirely wetland community, are designated as protected zones.

Existing Facilities

The historic district of the Koreshan State Historic Site is unique in the number and quality of original buildings and artifacts. The Planetary Court has just been renovated. The Art Hall is currently undergoing extensive renovations. Many of the other buildings housing interpretive displays and signage, are located throughout the site providing for self-guided tours. The landscape is maintained but much of it is not original to the settlement. The sunken garden is overgrown and not accessible to the public.

A climate-controlled museum collections building for storage of artifacts from the settlement was recently built north of the Estero River at the Volunteer/ Host Site. This site is largely used for volunteer and host campsites, employee owned trailer sites for park rangers, and a central office for Americorps volunteers.

The picnic area, campground, and boat ramp are functional but showing signs of age. The bathhouse in the campground has recently been renovated and plans are in place to pave the roads and parking lots in these areas.

Recreation Facilities

Historic District

Art Hall
Planetary Court
Founder's Home
New Store
Damkoler cottage
Bamboo Landing
Hedwig Michel gravesite
Bakery
Vesta Newcomb cottage
Membership cottage
Large Machine Shop
Small Machine Shop
Generator Building / Woodshed
2 bridges in sunken garden area
Scattered interpretive signs

Picnic Area

Scattered Tables and grills
Observation deck (2)
Playground
Interpretive sign

Campground

60 sites
Campfire Circle

Trails

Nature Trail (0.4 mi.)

Boat Ramp

Support Facilities

Historic District

Parking area (25 vehicles)
Restroom (next to Art Hall)

Picnic Area

Unimproved parking area (25 vehicles)
Restroom

Campground

Bathhouse
 Pump-house (storage building)

Boat Ramp

Unimproved parking area (20 vehicles)
 Canoes and racks

Volunteer/ Host Site

Recreation Hall
 Interpretive support building (Americorps Center)
 Volunteer host sites (15)
 Restrooms
 Museum collections building
 Employee owned trailer sites (6)

Ranger station

Ranger station
 Canoe paddle and vest storage
 Wood shed

Shop Area

Shop
 Ranger lounge
 Garden shed
 Paint shed
 Fuel shed
 Pole barn
 Dump station
 Chemical shed
 Plant nursery
 Lift station and filter beds for waste treatment
 Residences (2)
 Storage shed (3)
 Carport
 Employee owned trailer sites (6)

CONCEPTUAL LAND USE PLAN

The following narrative represents the current conceptual land use proposal for this park. As new information is provided regarding the environment of the park, cultural resources, recreational use, and as new land is acquired, the conceptual land use plan may be amended to address the new conditions (see Conceptual Land Use Plan). A detailed development plan for the park and a site plan for specific facilities will be developed based on this conceptual land use plan, as funding becomes available.

During the development of the unit management plan, the Division assesses potential impacts of proposed uses on the resources of the property. Uses that could result in unacceptable impacts are not included in the conceptual land use plan. Potential impacts are more thoroughly identified and assessed through the site planning process once funding is available for the development project. At that stage, design elements, such as sewage disposal and stormwater management, and design constraints, such as designated species or cultural site locations, are more thoroughly investigated. Advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal. Stormwater management systems are designed to minimize impervious surfaces to the greatest extent feasible, and all facilities are designed and constructed using best management practices to avoid impacts and to mitigate those that cannot be avoided. Federal, state and local permit and regulatory requirements are met by the final design of the projects. This includes the design of all new park facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, the park staff monitors conditions to ensure that impacts remain within acceptable levels.

Potential Uses and Proposed Facilities

At Koreshan State Historic Site, the primary emphasis is placed on restoration and interpretation of the cultural resources within the historic district while the secondary emphasis is on the recreational opportunities offered at the campground, picnic area, boat ramp and natural areas.

Based on the unique character and condition of the natural and cultural resources, the primary parcel of Koreshan State Historic Site has the potential to expand programs for interpretive and environmental education. Identifying the historic uses of the buildings and landscape and



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HISTORIC SITE**



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CONCEPTUAL LAND USE PLAN

restoring those elements will also add to the interpretation potential. This plan also proposes the expansion of the park and trail systems to enhance recreational opportunities and connectivity between use areas.

Interpretive facilities. Since the park opened, an ambitious interpretive and educational program has been envisioned and partially developed in response to the unique character of this park. Restoration of the existing buildings is continuing and increasing opportunities for interpretation. These programs have been hampered, however, by the lack of a facility that directly supports many of their components. To address that need, a visitor orientation facility is recommended to be located near the existing southern entrance to the historic district near the parking lot. The visitor orientation center will provide gathering space to allow individuals and groups to be introduced to the cultural landscape of Koreshan, and familiarize them with this community's story and with the national interest in utopian communities in the late 1800's. The purpose of orientation is to create a transitional experience for visitors as they leave the modern world for the time-period and lifestyles of the Koreshan community. Interpretation at this center should include audio, video, graphic, and live presentations. The orientation center should include office space for administrative and managerial duties related to the historic site.

The historic district will be the core interpretive area of the historic site, since this area was the central location of daily activities of the Koreshan Unity. The site will provide a setting for guided and self-guided tours, and will continue to provide for living history demonstrations and activities. Non-interpretive signage will be avoided in the historic district. Static signage should be sized and positioned in a manner that will not detract from the historic atmosphere.

Universal design for accessibility to the historic site is an important goal of the Division's management at Koreshan State Historic Site. Accessibility issues will be evaluated as decisions are made regarding the treatment of historic structures. Where access to a structure is crucial to understanding and experiencing the site, structural improvements will be considered. Most of the historic district's outdoor areas may be accessible without improvement. Where path surface improvements are necessary for appropriate levels of accessibility, shell or other non-intrusive materials will be used to stabilize the path. Accessible routes within the historic zones will not be paved with conventional materials such as concrete or asphalt.

Benches will be placed in strategic points within the historic district to allow visitors to rest. Care will be taken in placing benches to avoid undue impact to the character of the site.

Opportunities for visitors to gain a broader perspective of the cultural landscape will be important so an interpretive trail that links the Koreshan building and garden areas is proposed. This will allow park management to expand the interpretation of communal life in the Koreshan settlement.

Koreshan Gardens. The primary public use of this parcel of Koreshan State Historic Site is visiting the Koreshan historic district. Currently visitation focuses on the remaining structures of this historic community but the linkage between the historic activities of the Koreshan community and surrounding gardens are an important interpretive aspect of the site.

The restoration of the gardens will enhance the visitor experience and the staff's ability to interpret the daily activities of the Koreshan Community. Additionally, it will promote community involvement in the park, encourage repeat visitation with a visibly changing seasonal landscape, and attract other special events such as weddings, concerts, and plays. The first step in the process is to develop a restoration master plan based on photos, written

transcripts, and existing plants and land formations. Since plant installation and maintenance is seasonally dependent, this plan would guide volunteer and staff in the proper timing as well as the direction of the restoration work.

A more thorough assessment of the archaeological resources available in the garden area should be conducted before any ground disturbing activities.

Visual protection/noise reduction buffer. One of the major challenges facing the Division will be the protection of Koreshan State Historic Site from the impacts of adjacent land uses. The bucolic character of the landscape is changing rapidly. Suburban residential and commercial development is extending from Ft. Myers to Naples along U.S. Highway 41, and will be accelerated by expansion of the state road to a 6-lane divided highway. It is crucial to preserving the character of this unique site to maintain or develop visual buffers and sound barriers along the property boundary adjacent to U.S. 41.

Highway construction will affect the historic zone by destabilizing the historic buildings (through ground vibrations), as noted previously in the *Management Measures* section of this plan, and with noise and visual pollution. Both highway visibility and noise reduction will occur if an on-site buffer is included within the boundaries of the historic district. While this solution will influence the historic visual integrity of this cultural landscape, it will ultimately protect and preserve its bucolic character. Some plantings presently provide a visual buffer but potential sound barriers should be researched. A vegetative buffer should hide a constructed barrier. Location of any wall or fence barrier must take place under the guidance of the Bureau of Natural and Cultural Resources and the Division of Historic Resources and in full coordination with the Florida Department of Transportation.

Picnic area. Erosion and the trampling of vegetation are a problem on the riverbank in the picnic area. The installation of an additional scenic overlook/deck would alleviate these conditions, allows the Division to stabilize the shoreline, increase visitor safety and provide visitors with enhanced views of the river. The overlooks combined with interpretive signage would keep visitors from venturing onto the riverbank in search of better vistas, and increased water access. A medium-sized picnic shelter should be added and the restroom needs replacement.

Trails. To improve the recreational experience provided at Koreshan State Historic Site, several shared use trails for hiking and biking are recommended within the flatwoods community. Interpretive stations are proposed at locations throughout the existing and proposed trail systems to inform the public regarding ongoing management activities and incorporating the larger preservation, stewardship, land use and cultural resource issues exemplified by this park. Trailside rest areas at appropriate scenic locations along these trails are also recommended. Where possible these trails will follow existing firebreaks. A trail connecting the picnic and campground area with the historic district is also recommended.

Support Facilities

Historic District. The construction of a visitor orientation facility in the existing parking area requires the installation of an alternate parking area. For this purpose, two smaller parking areas, up to 25 vehicles each, are south of the existing parking lots within the mesic flatwoods.

This plan also proposes the replacement of the existing power-lines with underground ones, as they detract from the integrity of the historic district. The facilities in the historic area of the park should be put on municipal water and sewer as soon as the line extends far enough south along State Road 41.

The existing restroom adjacent to the Art Hall and is recommended to be replaced due to

historic integrity when the Art Hall renovations are complete. This would be a small facility accessible from within the historic district, possibly near the entrance. It is recommended this be a separate facility since it will be needed before the visitor's orientation center is complete and would still serve a need after completion.

Campground. The bathhouse is insufficient to serve a 60-site campground. A second bathhouse in the central area of the campground is needed. The upgrading of a portion of the campsites for universal accessibility is also recommended.

Volunteer/Host Site. The removal of the existing fishing deck is proposed. Due to its condition, the deck is a safety hazard, with no immediate connection to any of the public facilities. With the removal of the exotic vegetation of the north bank of the Estero River, consideration should be given to the creation of a native vegetative buffer on that side of the river. This would shield the historic district, and park visitors, from the volunteer host sites and support activities occurring in this area.

Boating/canoeing. Shoreline degradation and erosion require the permanent stabilization of the boat ramp area. It is recommended that the boat ramp be upgraded. A small dock should be added to assist with launching.

Shop Area. The existing shop facility is inadequate and it should be expanded or an additional structure built.

Other Support Facilities. Construction of an additional storage building to serve as an artifact facility in the park shop area should be considered for long-term management of the artifact collection. New administrative offices are proposed within the ruderal area between the main entrance and the shop area.

The following is a summary of the facilities needed to implement this plan:

Recreation Facilities

Historic District

Visitor Center
Scattered benches
Historic landscape restoration plan

Picnic Area

Scenic overlooks (1)
Medium picnic shelter

Support Facilities

Historic District

Replace/ Relocate Art Hall restroom
Vegetative buffer/sound barrier along US.
41
Parking areas (2)

Campground

Universal accessibility upgrades

Volunteer / Host Sites

Vegetative buffer

Trails

Shared use trails (2-3 miles)
Trail connection between campground and historic district

Picnic Area

Replace restroom

Camping Area

Additional bathhouse

Volunteer / Host Sites

Remove old fishing deck

Boat Ramp

Pave boat ramp area
Pave parking area
Repair and upgrade boat ramp
Boat dock

Shop Area

Expand shop facility with addition or new building

Other Support FacilitiesAdministrative offices
Artifact storage building**Facilities Development**

Preliminary cost estimates for the following list of proposed facilities are provided in Addendum 6. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist the Division in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes.

Existing Use and Optimum Carrying Capacity

Carrying capacity is an estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site. The carrying capacity of a unit is determined by identifying the land and water requirements for each recreation activity at the unit, and then applying these requirements to the unit's land and water base. Next, guidelines are applied which estimate the physical capacity of the unit's natural communities to withstand recreational uses without significant degradation. This analysis identifies a range within which the carrying capacity most appropriate to the specific activity, the activity site, and the unit's classification is selected (see Table 1).

The optimum carrying capacity for this park is a preliminary estimate of the number of users the unit could accommodate after the current conceptual development program has been implemented. When developed, the proposed new facilities would approximately increase the unit's carrying capacity as shown in Table 1.

Table 1--Existing Use And Optimum Carrying Capacity

Activity/Facility	Existing		Proposed		Estimated	
	One	Daily	One	Daily	One	Daily
Historic Site						
Visitor orientation center			60	240		
Koreshan gardens	140	560			140	560
Camping						
Standard	240	240			240	240
Trails						
Nature	24	96			24	96
Hiking and Bicycling			60	240	60	240
Picnicking						
	120	240			120	240
Boat Ramp						
	40	80			40	80
TOTAL	564	1,216	120	480	624	1,456

Optimum Boundary

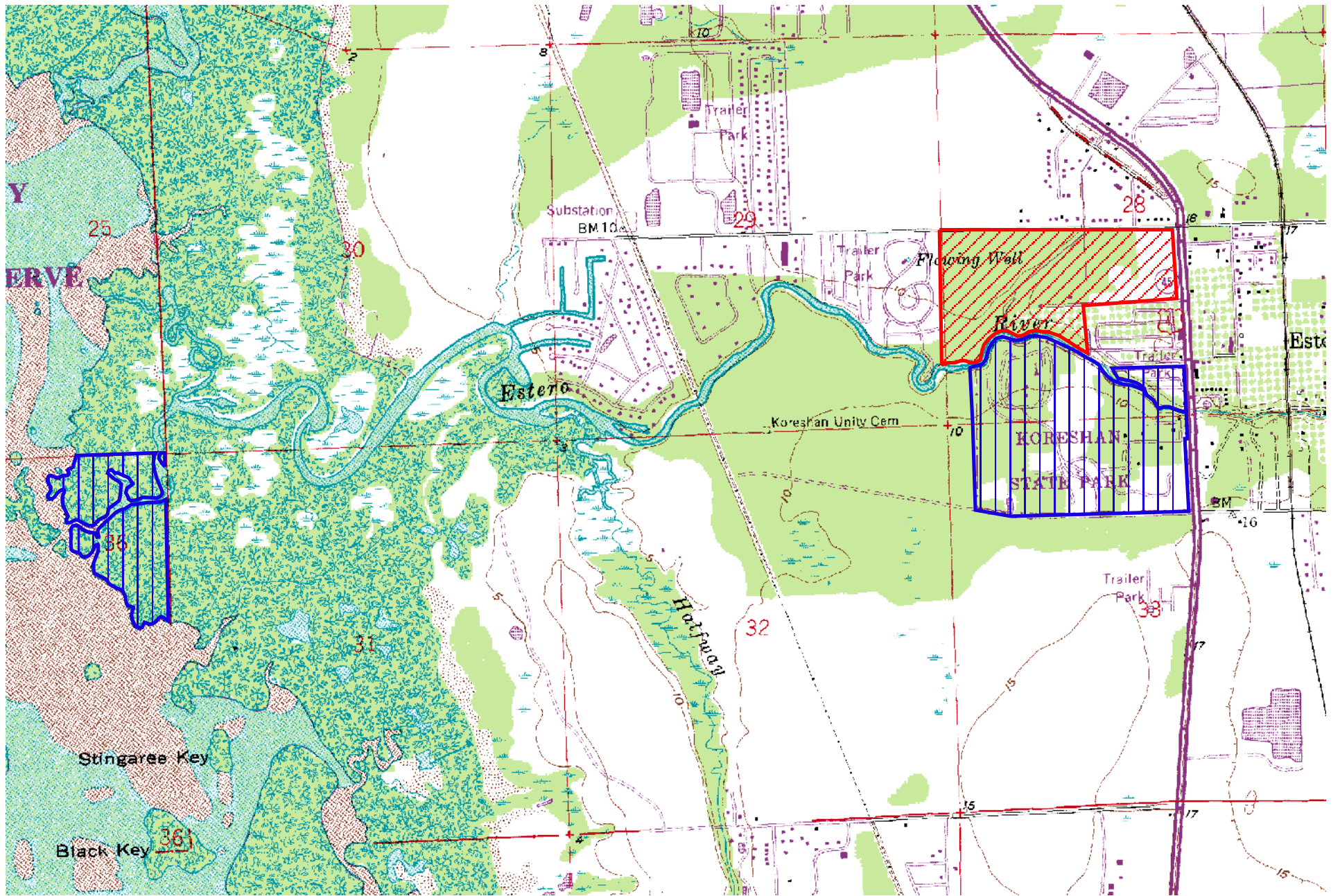
As additional needs are identified through park use, development, research, and as adjacent land uses change on private properties, modification of the unit's optimum boundary may occur for the enhancement of natural and cultural resources, recreational values, and management efficiency. At this time, no lands are considered surplus to the needs of the park.

Identification of lands on the optimum boundary map is solely for planning purposes and not for regulatory purposes. A property's identification on the optimum boundary map is not meant to be used by any party or other government body to reduce or restrict the lawful right of private landowners. Identification on the map does not empower or require any government entity to impose additional or more restrictive environmental land use or zoning regulations. Identification is not meant to be used as the basis for permit denial or the imposition of permit conditions.

The optimum boundary map reflects lands identified for direct management by the Division as part of the park. These parcels may include public as well as privately owned lands that improve the continuity of existing park lands, provide additional natural and cultural resource protection, and/or allow for future expansion of recreational activities.

The rapid urbanization in this area will soon result in a total build out of available land leading to added pressure on the park to provide the traditional recreational facilities. The proposed optimum boundary for Koreshan will provide land for some of these opportunities in an area separate from the historic district. Additionally, the Estero River played a large part in the development of the Koreshan community. Preserving the river corridor in a natural state is important for the historic value and esthetic enhancement of the community as well as for protection of the natural resource.

The two parcels, totaling approximately 52 acres, at the mouth of the Estero River are surrounded by the Estero Aquatic Bay Preserve and consist entirely of Estuarine Tidal Swamp community. Coastal and Aquatic Managed Areas could more effectively manage these parcels.



KORESHAN STATE
HISTORIC SITE



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OPTIMUM BOUNDARY
MAP

Addendum 1—Acquisition History And Advisory Group Documentation

**Koreshan State Historic Site
Acquisition History**

Purpose of Acquisition

The State of Florida acquired Koreshan State Historic Site to protect, develop, operate, and maintain said property for public outdoor recreational, park, conservation, historic and related purposes.

Sequence of Acquisition

On November 2, 1961, the the Board of Trustees of the Internal Improvement Trust Fund (Trustees) obtained title to the property which later became Koreshan State Historic Site. The property was acquired from Koreshan Unity, Inc. by donation. On July 2, 1976, the Trustees acquired an additional parcel through a donation. The two donations constitute the current area of Koreshan State Historic Site.

On January 23, 1968, the Trustees conveyed the management authority of Koreshan State Historic Site to the Division under Lease No. 2324 for a period of ninety-nine (99) years. In 1988, the Trustees assigned a new lease number to Koreshan State Historic Site without making any changes to the terms and conditions of Lease No. 2324. The new lease, Lease No. 3630, will expire on January 22, 2067.

Title Interest

The Trustees hold fee simple title to Koreshan State Historic Site.

Special Conditions on Use

Koreshan State Historic Site is designated single-use to provide resource-based public outdoor recreation and other related uses. Uses such as, water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the park.

Outstanding Reservations

The lease from the Trustees stipulates that all the property be utilized for public outdoor recreation and related purposes. Following is a listing of outstanding rights, reservations, and encumbrances that apply to Koreshan State Historic Site.

Instrument:	Deed and Trust Agreement
Instrument Holder:	Koreshan Unity, Inc.
Beginning Date:	November 2, 1961
Ending Date:	There is no specific ending date given.
Outstanding Rights, Uses, Etc.:	The deed and trust agreement is subject to specific reservations, restrictions, limitations, and conditions stated in the instrument.

Instrument:	Agreement Related to Deed and Trust Agreement
Instrument Holder:	Koreshan Unity, Inc.
Beginning Date:	July 12, 1962
Ending Date:	There is no specific ending date given.
Outstanding Rights, Uses, Etc.:	The agreement waives the reverter provisions contained in the Deed and Trust Agreement of November 2, 1961, concerning future use of Tract One.

Instrument:	Amendment to Deed and Trust Agreement
Instrument Holder:	Koreshan Unity, Inc.
Beginning Date:	November 15, 1973
Ending Date:	There is no specific ending date given.
Outstanding Rights, Uses, Etc.:	The instruments amends the November 2, 1961, Deed and Trust Agreement.

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**Koreshan State Historic Site
Advisory Group Staff Report**

The Advisory Group appointed to review the proposed unit management plans for Koreshan State Historic Site and Mound Key Archaeological State Park met at the Recreation Hall at Koreshan on May 30th, 2003. Ms. Tamara Pigott represented D.T. Minich and The Honorable Ray Judah. Nancy Douglas, Brian McKee, Jim English, Brenda Swann, Laura Ortega, Neil Noethlich, Jorge Borrelli, Laura Wererka, Cathy Stripling, Gary Davis, Gloria Sajgo, and Ellen Peterson did not attend. All other appointed Advisory Group members were present. Attending staff were John Robinson, Ken Alvarez, John Scafidi, Karen LaCivita, Kate Ohnemus, and Carol Perfit.

Ms. Perfit began the meeting by explaining the purpose of the advisory group and reviewing the meeting agenda and provided a brief overview of the Division's planning process. She then asked each member of the advisory group to express his or her comments on the plan.

Summary Of Advisory Group Comments

Bill Grace commented that he would like to have money identified for the restoration of historic structures at Koreshan and the trails at Mound Key. The funds from the DHR have been reduced from 10-17 million a year in the last few years to 2.3 million this year. This 2.3 million will be allocated to nine projects. Since we are entering a time of difficulty in funding, he would like to see DEP research some funding sources. He would also like the plans to include a prioritized budget with money identified for the projects. He expressed concern that Mound Key may not get the funding before the resource is lost.

Charles Duray commented on the crisis that historical parks are facing with fewer funding sources available. The answer, he said, must come from the private sector. The College of Life Foundation would like to assist in proper preservation, assist in underwriting of programs and other potential cooperative ventures with the park. He also would like to see the park attract visitors from the increased traffic along US 41 and support living history programs.

Beth Kelso questioned the position of a trail representative on the Advisory Group. **Carol Perfit** explained the formation of the Advisory Groups. Koreshan and Mound Key have three focus areas: historical, camping and hiking. Both unit management plans propose trail expansion. **Jon Robinson** identified two areas where assistance may be needed: trail access to the cemetery on the Vesta Newcomb Preserve where the concern is permissions and a Hold Harmless Agreement required by the state; the erosion problems along the trails on Mound Key. Beth replied that the Florida Trail Association would like to work with the park on these issues.

Jim Goodwin reported that the draft unit management plans look ok as written.

Tamara Pigott indicated that Lee County is a potential funding source especially on the shoreline projects such as the trail improvements at Mound Key. There are no new projects being funded this year since the money was earmarked for beach re-nourishment projects but the county likes to get new projects so next year is a potential. The money must be funded through a public entity. Lee County tourist bureau is presently working on designating a paddling trail and Koreshan State Historic Site provides the only publicly owned campground along the trail. Jon Robinson reported that the park has recently purchased kayaks for ranger use in ranger led tours in cooperation with the private vendors and would like to be involved in the paddling trail.

Heather Stafford's comments were on the Koreshan State Historic Site plan. She wanted some clarification on goal 6D and suggested language changes to the section on Existing Use of Adjacent Lands and Optimum Boundary. She recommended more additions to the Optimum Boundaries detailed in the plan: the properties immediately to the south, across Corkscrew Road, and to the east, across US 41. Both of these properties are owned by the College of Life Foundation and **Charles Duray** expressed some concern about adding these to the optimum boundary designation but was reassured that the state would not condemn the properties to obtain them. **Carol Perfit** explained that the property across Corkscrew Road is not on the list due to the existing conservation easement held by The Nature Conservancy but Heather was afraid the conservation easement could be fought in court again. Heather also expressed a desire to have the entire property to the north of Koreshan added to the

**Koreshan State Historic Site
Advisory Group Staff Report**

optimum boundary and a joint purchase and management with the Coastal and Aquatic Managed Areas worked out. **Carol Perfit** explained that a portion of this property along the Estero River is now on the map to maintain the esthetics of the campsites and picnic area and that to be added to the Optimum Boundary a reasonable use or preservation feature of the property must be given. Mimi Straub mentioned that there are three owners to that property and all must agree with the purchase. **Heather** agreed with the plan's statement that the two parcels at the mouth of the Estero River could be "more effectively managed" by Coastal and Aquatic Managed Areas. **Jon Robinson** indicated that the deed restrictions would need to be researched before a transfer of title could be worked out.

Mimi Straub expressed her desire for the park to look at the 1997 plans for Koreshan that place the Visitor Center on the northside of the Estero River and provide footbridge access to the historic district. Jon Robinson replied that this would provide two entrances to the park that would have to be staffed on a consistent basis and staffing is a persistent problem. John Scafidi pointed out that the footbridge would have to be built to meet ADA guidelines. Mimi Straub recommended that a children's education center be developed, live re-enactment of the Solar and Lunar Festivals be established, the ravine gardens and bridges be restored, the rustic tea room recreated, and that the frontage on US 41 be improved with ficus hedges and using the historic design of the wooden gate. **John Scafidi** explained that the ficus is an invasive plant and that alternate native plants will be chosen. Ms. Straub is also concerned that a better use of docents needs to be found. Her suggestions include running electric boat tours along the Estero River and to Mound Key, standardizing attire worn by docents, holding docent training classes and meetings between park staff and docents, and improving the communication line for docents. She feels that the private sector has much to offer and is not being fully utilized.

Ken Alvarez asked if there were any plans to rebuild the dining hall that stood as the center of activity for the Koreshan community. Ken explained that the dining hall was the "hub" of the settlement. Residents took three daily meals there, and the women lived in the two upper floors. On a visit in 1982, a woman who had grown up in the settlement had difficulty orienting herself because of the absence of the dining hall. It was the building all Koreshans were most familiar with. It is not missed today because people presently involved with the settlement have never seen it, but a restored settlement would not be whole unless it could be rebuilt. **John Scafidi** replied that in order to keep the historic district designation it would have to be on the exact footprint and be a good re-creation and this requires a lot of money.

Jon Robinson reported that the restroom next to the Art Hall is going to be moved 10 feet to the west because the septic tank has failed but by moving just a short distance the existing drain field can still be used.

The meeting was then adjourned.

Written Comments

The following is a summary of substantive comments submitted in advance by an Advisory Group member who could not attend the meeting.

Gloria Sajgo expressed concern that both parks have been designated an historic resource under the Lee County Land Development Code, Chapter 22, Historic Preservation and this should be mentioned in the plans. She also commented that the original entrance to the Koreshan historic district from US 41 needs a cultural assessment. DOT has done an assessment of this area but a park-led assessment would be more thorough. It should include the listing of the gateway features as historic. If these were listed then protection of this area in the widening of US 41 would be easier.

Staff Response: The county designation as an historic resource is noted in the Koreshan plan but not in the Mound Key plan.

Staff Recommendation

Staff recommends approval of the proposed management plan for Koreshan State Historic Site as

**Koreshan State Historic Site
Advisory Group Staff Report**

presented with the following recommendations.

Optimum Boundary Map

- Division staff is discussing adding the parcel south of the park on Corkscrew Road to the Optimum Boundary.
- The two parcels at the mouth of the Estero River were deeded as part of the Koreshan donation. A letter of consent from the College of Life Foundation is needed before proceeding with a transfer of title on the parcels. Staff recommends proceeding with this process.

Additions to Goals and Objectives:

- Pursue funding to complete a cultural assessment of the US 41 boundary including the historic entry feature before DOT widens this section of the road.
- Research potential funding sources for the restoration of the historic district.

Staff recommends approval of the proposed management plan for Mound Key Archaeological State Park as presented with the following recommendations.

Resource Management Component

- The Lee County designation of the park as an historic resource under the Lee County Land Development Code, Chapter 22, Historic Preservation should be added.

Addendum 2—References Cited

Koreshan State Historic Site
References Cited

- Bureau of Economic and Business Research (BEBR), University of Florida. 2003. Florida Statistical Abstract 2003. Gainesville, Florida.
- Florida Natural Areas Inventory and the Florida Department of Natural Resources, 1990. Guide to the natural communities of Florida. Tallahassee, FL. 111 pp.
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- Noble, 1998. personal communication.
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Addendum 3—Soils Descriptions

Koreshan State Historic Site
Soils Descriptions

(10) Pompano fine sand. This is a nearly level, poorly drained soil on sloughs. Slopes are smooth to concave and range from 0 to 1 percent.

Typically, the surface layer is dark gray fine sand about 4 inches thick. The underlying layers are light gray, very pale brown, or white fine sand and extend to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Malabar, Anclote, and Valkaria soils. Also included are small areas of a soil that has limestone at a depth of 40 to 80 inches. The included soils make up about 10 to 15 percent of any mapped area.

In most years, under natural conditions, the water table is at a depth of less than 10 inches for 2 to 4 months and at a depth of 10 to 40 inches for about 6 months. It recedes to a depth of more than 40 inches for about 3 months. During periods of high rainfall, the soil is covered by slowly moving water for periods of about 7 to 30 days or more.

The available water capacity is very low. Natural fertility is low. Permeability is rapid. Natural vegetation consists of pineland threeawn, scattered South Florida slash pine, bluestem, maidencane, and scattered saw palmetto.

This soil is poorly suited to cultivated crops because of wetness and sandy texture. The kinds of crops that will grow on this soil are limited unless very intensive management practices are followed. With good water control measures and soil-improving measures, this soil can be made suitable for some vegetable crops. A water control system is needed to remove excess water in wet seasons and provide water through subsurface irrigation in dry seasons. Row crops should be rotated with close-growing, soil-improving crops. The rotation should keep the soil-improving crops on the land three-fourths of the time. Seedbed preparation should include bedding of the rows. Fertilizer and lime should be added according to the needs of the crops.

The soil is poorly suited to citrus. It is suitable for citrus only after a carefully designed water control system has been installed that will maintain the water table below a depth of 4 feet. The trees should be planted on beds and a vegetative cover maintained between the trees. Regular applications of fertilizer and lime are needed.

The soil is well suited to pasture. Pangolagrass, improved bahiagrasses, and white clover grow well when they are well managed. Water control measures are needed to remove excess surface water after heavy rains. Regular applications of fertilizer and lime are needed. Controlling grazing helps to prevent overgrazing and weakening of the plants.

The soil has moderately high potential productivity for South Florida slash pine.

This soil has high potential for desirable range plant production. The dominant forage consists of blue maidencane, chalky bluestem, and bluejoint panicum. Management practices should include deferred grazing. This Pompano soil is in the Slough range site.

The soil has severe limitations for urban and recreational uses because of the high water table.

This Pompano soil is in capability subclass IVw.

(11) Myakka fine sand. This is a nearly level, poorly drained soil on broad flatwoods areas. Slopes are smooth to slightly concave and range from 0 to 2 percent.

Typically, the surface layer is very dark gray fine sand about 3 inches thick. The subsurface layer is fine sand about 23 inches thick. In the upper 3 inches it is gray, and in the lower 20 inches it is light gray. The subsoil is fine sand to a depth of 80 inches or more. The upper 4 inches is black and firm, the next five inches is dark reddish brown and friable, the next 17 inches is mixed black and dark reddish brown and friable.

Included with this soil in mapping are EauGallie, Immokalee, Oldsmar, Smyrna, and Wabasso

Koreshan State Historic Site
Soils Descriptions

soils. Also included are small areas of similar soils with subsoils low in organic matter content and less than 12 inches thick. Included soils make up 10 to 15 percent of any mapped area.

In most years, under natural conditions, the water table is within 10 inches of the surface for 1 to 3 months and 10 to 40 inches below the surface for 2 to 6 months. It is more than 40 inches below the surface during extended dry periods.

The available water capacity is medium in the subsoil and very low in the surface and subsurface layers. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and moderate to moderately rapid in the subsoil.

Natural vegetation consists of saw palmetto, fetterbush, pineland threeawn, and South Florida slash pine.

(13) Boca fine sand. This is a nearly level, poorly drained soil on flatwoods. Slopes are smooth and range from 0 to 2 percent.

Typically, the surface layer is gray fine sand about 3 inches thick. The subsurface layer is fine sand about 22 inches thick. The upper 11 inches is light gray and the lower 11 inches is very pale brown. The subsoil, about 5 inches thick, is gray fine sandy loam with brownish yellow mottles and calcareous nodules. At a depth of 30 inches is a layer of fractured limestone.

Included with this soil in mapping are small areas of Hallandale, Wabasso, and Felda that have a yellowish horizon between the subsurface layer and subsoil. Also included are soils with limestone at a depth of 40 to 72 inches and small areas where the soil is better drained than is typical. Included soils make about 15 percent of any mapped area.

In most years, under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months. It recedes below the limestone for about 6 months.

The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil.

Natural vegetation consists of saw palmetto, pineland threeawn, South Florida slash pine, and wax myrtle.

(26) Pineada sand. This is a nearly level, poorly drained soil on sloughs. Slopes are smooth to slightly concave and range from 0 to 1 percent.

Typically, the surface layer is black fine sand about 1 inch thick. The subsurface layer is very pale brown fine sand about 4 inches thick. The upper part of the subsoil is brownish yellow fine sand about 8 inches thick. The next 10 inches is strong brown fine sand. The next 6 inches is yellowish brown fine sand. The next 7 inches is light gray fine sand with brownish yellow mottles. The lower part of the subsoil is light brownish gray fine sandy loam with light gray sandy intrusions about 18 inches thick. The substratum is light gray fine sand to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Wabasso, Valkaria, Felda, Hallandale, Boca, and Malabar soils. Also included are small areas of Pineda soils that are in higher positions on the landscape. Small areas of Pineda, depressional, soils are included. Some areas of this soil are underlain by limestone or shell fragments at a depth of 60 inches or more. In a few places, a thin layer of very friable calcareous material is at a depth of 10 to 30 inches, and other places a thin dark brown or black layer occurs at the base of the subsurface layer. Included soils make up about 10 to 15 percent of any mapped area.

In most years, under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months. It is 10 to 40 inches below the surface during extended dry periods. During periods of high

Koreshan State Historic Site
Soils Descriptions

rainfall, the soil is covered by a shallow layer of slowly moving water for periods of about 7 to 30 days or more (fig. 4).

The available water capacity is very low in the surface and subsurface layers and in the upper, sandy part of the subsoil and medium in the lower loamy part of the subsoil. Natural fertility is low. Permeability is rapid in the surface layers and in the upper, sandy part of the subsoil and slow or very slow in the lower, loamy part of the subsoil.

Natural vegetation consists of pineland, threeawn, panicums, sedges, maidencane, waxmyrtle, South Florida slash pine, and scattered clumps of saw palmettos.

(28) Immokalee sand. Immokalee sand is a nearly level, poorly drained soil in flatwoods areas. Slopes are smooth to convex and range from 0 to 2 percent. Typically, the surface layer is black sand about 4 inches thick. The subsurface layer is dark gray sand in the upper 5 inches and light gray in the lower 27 inches. The subsoil is sand to a depth of 69 inches. The upper 14 inches is black and firm, the next 5 inches is dark reddish, brown, and the lower 14 inches is dark yellowish brown. The substratum is very pale brown sand to a depth of 80 inches or more.

Included with this soil in mapping are EauGallie, Myakka, Oldsmar, Smyrna, and Wabasso soils. Also included are small areas of soils with a subsoil that is low in organic matter content and less than 12 inches thick. Included soils make up less than 15 percent of any mapped area.

In most years, under natural conditions, the water table is within 10 inches of the surface for 1 to 3 months and 10 to 40 inches below the surface for 2 to 6 months. It recedes to a depth of more than 40 inches during extended dry periods.

The available water capacity is medium in the subsoil and very low in the surface and subsurface layers. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and moderate to moderately rapid in the subsoil.

Natural vegetation consists of saw palmetto, fetterbush, pineland threeawn, and South Florida slash pine.

(55) Cocoa fine sand. This is a nearly level to gently sloping, moderately well drain soil on ridges. Slopes are smooth to slightly convex and range from 0 to 2 percent.

Typically, the surface layer is brown fine sand about 3 inches thick. The subsurface layer is reddish yellow fine sand about 10 inches thick. The next layer is yellowish red fine sand about 4 inches thick. The next 10 inches is reddish yellow fine sand, and below this is 4 inches of strong brown fine sand. Fractured limestone bedrock is at a depth of 31 inches.

Included with this soil in mapping are small areas of Boca and Hallandale soils and soils that are similar to Cocoa soils but that have a loamy subsoil below a depth of 40 inches. Also included are small areas of soils that are similar but that have a loamy subsoil below a depth of 40 inches and sandy soils that do not have a clay increase and have limestone at a depth of 10 to 40 inches. Included soils make up about 15 percent of any mapped area.

In most years, under natural conditions, the water table is within 24 inches of the surface for 1 to 2 months and 24 to 40 inches below the surface during extended dry periods.

The available water capacity is low. Natural fertility is low. Permeability is rapid.

Natural vegetation consists of bluejack oak, South Florida slash pine, saw palmetto, bluestem, and pineland threeawn.

(64) Hallandale-Urban land complex. This map unit consists of nearly level Hallandale fine sand and Urban land. The areas of Hallandale soil and Urban land are so intermingled that they cannot be separated at the scale used for mapping.

Koreshan State Historic Site Soils Descriptions

About 50 to 70 percent of each mapped area consists of nearly level Hallandale soils or Hallandale soils that have been reworked or reshaped but which are still recognizable as Hallandale soils. Areas of these soils that have been modified by grading and shaping are not as extensive in the older communities as in the newer ones. Typically, Hallandale soils have a surface layer of dark gray fine sand about 2 inches thick. The subsurface layer is light gray fine sand about 9 inches thick. Hard, fractured limestone is at a depth of 11 inches.

About 15 to 50 percent of each mapped area is Urban land that is used for houses, streets, driveways, buildings, parking lots, and other related uses.

Most areas have drainage ditches that alter the depth to the seasonal high water table. In undrained areas, the water table is within 10 inches of the surface for 2 to 4 months in most years. It recedes below the limestone during the dry season.

Unoccupied areas are mostly areas of Hallandale soils in lawns, vacant lots, or playgrounds. Boca, Felda, Malabar, and Pineda soils make up as much as 15 percent of the land not covered by urban facilities.

Present land use precludes using this soil for cultivated crops, citrus, woodland, or improved pasture.

This complex has not been assigned to a capability subclass.

Addendum 4—Plant And Animal List

Koreshan State Historic Site

Plants

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for designated species)
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FERNS & FERN ALLIES

Golden leather fern	<i>Acrostichum aureum</i>	64, 81
Giant leather fern	<i>Acrostichum danaeifolium</i>	64, 81
Swamp fern	<i>Blechnum serrulatum</i>	
Strap fern	<i>Campyloneurum phyllitidis</i>	
Nodding clubmoss	<i>Lycopodiella cernua</i>	8
Old World climbing fern *	<i>Lygodium microphyllum</i>	
Boston sword fern	<i>Nephrolepis exaltata</i>	
Plume polypody	<i>Pecluma plumula</i>	8
Golden polypody	<i>Phlebodium aureum</i>	
Resurrection fern	<i>Pleopeltis polypodioides var. michauxiana</i>	
Shoestring fern	<i>Vittaria lineata</i>	
Virginia chain fern	<i>Woodwardia virginica</i>	

GYMNOSPERMS

Monkey puzzle *	<i>Araucaria arascana</i>	
Sago palm *	<i>Cycas revoluta</i>	
Eastern red cedar	<i>Juniperus virginiana</i>	
Slash pine	<i>Pinus elliotii</i>	
Longleaf pine	<i>Pinus palustris</i>	
Podocarpus *	<i>Podocarpus macrophyllus</i>	
Florida arrowroot; Coontie	<i>Zamia pumila</i>	8

ANGIOSPERMS

DICOTS

Rosary-pea; Crab's-eye *	<i>Abrus precatorius</i>	
Tree-of-Heaven *	<i>Ailanthus altissima</i>	
Woman's-tongue *	<i>Albizia lebbek</i>	
Common ragweed	<i>Ambrosia artemisiifolia</i>	
Bastard indigo; False indigo-bush	<i>Amorpha fruticosa</i>	
Cluster-spike indigo-bush	<i>Amorpha herbacea</i>	
Pond apple	<i>Annona glabra</i>	
Island marlberry	<i>Ardisia escallonioides</i>	
Florida milkweed	<i>Asclepias feayi</i>	
Savannah milkweed	<i>Asclepias pedicellata</i>	
Butterfly-weed	<i>Asclepias tuberosa</i>	
Netted pawpaw	<i>Asimina reticulata</i>	
Silverling; Groundsel tree	<i>Baccharis glomeruliflora</i>	
Groundsel tree; Saltbush	<i>Baccharis halimifolia</i>	
Coastal water-hyssop	<i>Bacopa monnieri</i>	
Orchid tree *	<i>Bauhinia variegata</i>	
Tarflower	<i>Bejaria racemosa</i>	
Spanish needles; Beggar-ticks	<i>Bidens alba var. radiata</i>	
Bombax tree *	<i>Bombax ceiba</i>	
American blueheart	<i>Buchnera americana</i>	
Black olive; Oxhorn bucida *	<i>Bucida buceras</i>	

* Non-native Species

Koreshan State Historic Site

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
American beautyberry	<i>Callicarpa americana</i>	
Trumpet-vine; Trumpet-creeper	<i>Campsis radicans</i>	
Natal plum; Amatungula *	<i>Carissa macrocarpa</i>	
Florida paintbrush	<i>Carphephorus corymbosus</i>	
Vanilla plant; Vanilla-leaf	<i>Carphephorus odoratissimus</i>	
Pecan *	<i>Carya illinoensis</i>	
Love vine; Devil's gut	<i>Cassytha filiformis</i>	
Australian pine *	<i>Casuarina equisetifolia</i>	
Madagascar periwinkle *	<i>Catharanthus roseus</i>	
Buttonbush	<i>Cephalanthus occidentalis</i>	
Partridge-pea	<i>Chamaecrista fasciculata</i>	
Sensitive pea	<i>Chamaecrista nictitans var. aspera</i>	
Coco plum	<i>Chrysobalanus icaco</i>	
Coastal plain goldenaster	<i>Chrysopsis scabrella</i>	
Purple thistle; Yellow thistle	<i>Cirsium horridulum</i>	
Key lime *	<i>Citrus Xaurantifolia</i>	
Turk's-turban; Sky-rocket *	<i>Clerodendrum indicum</i>	
Seagrape	<i>Coccoloba uvifera</i>	
Dwarf horseweed	<i>Conyza canadensis var. pusilla</i>	
Leavenworth's tickseed	<i>Coreopsis leavenworthii</i>	
Smooth rattlebox *	<i>Crotalaria pallida var. obovata</i>	
Rabbit-bells	<i>Crotalaria rotundifolia</i>	
Showy rattlebox *	<i>Crotalaria spectabilis</i>	
Coin-vine	<i>Dalbergia ecastaphyllum</i>	
Royal poinciana *	<i>Delonix regia</i>	
Florida tick-trefoil	<i>Desmodium floridanum</i>	
Virginia buttonweed	<i>Diodia virginiana</i>	
Persimmon	<i>Diospyros virginiana</i>	
Tall elephant's-foot	<i>Elephantopus elatus</i>	
Earpod tree *	<i>Enterolobium contortisiliquum</i>	
Fireweed; American burn	<i>Erechtites hieraciifolius</i>	
Coralbean; Cherokee-bean	<i>Erythrina herbacea</i>	
Swamp mahogany *	<i>Eucalyptus robusta</i>	
Surinam cherry *	<i>Eugenia uniflora</i>	
Dog-fennel	<i>Eupatorium capillifolium</i>	
Mohr's thoroughwort	<i>Eupatorium mohrii</i>	
Lesser Florida spurge	<i>Euphorbia polyphylla</i>	
Flat-topped goldenrod	<i>Euthamia caroliniana</i>	
Florida strangler fig	<i>Ficus aurea</i>	
Weeping laurel; Benjamin fig *	<i>Ficus benjamina</i>	
India rubber tree *	<i>Ficus elastica</i>	
Florida privet	<i>Forestiera segregata</i>	
Pop ash; Water ash; Carolina ash	<i>Fraxinus caroliniana</i>	
Indian blanket; Firewheel	<i>Gaillardia pulchella</i>	
Elliott's milk pea	<i>Galactia elliotii</i>	
Eastern milk-pea; Florida milk-pea	<i>Galactia regularis</i>	
Southern beeblossom	<i>Gaura angustifolia</i>	

* Non-native Species

Koreshan State Historic Site

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Seven-year apple	<i>Genipa clusiifolia</i>	
Rough hedge-hyssop	<i>Gratiola hispida</i>	
Silk-oak *	<i>Grevillea robusta</i>	
Heliotrope	<i>Heliotropium polyphyllum</i>	
Camphorweed	<i>Heterotheca subaxillaris</i>	
Sea hibiscus; Mahoe *	<i>Hibiscus tiliaceus</i>	
Night-blooming cereus *	<i>Hylocereus undatus</i>	
Round-pod St. John's-wort	<i>Hypericum cistifolium</i>	
Atlantic St. John's wort	<i>Hypericum reductum</i>	
Four-petal St. John's-wort	<i>Hypericum tetrapetalum</i>	
Carolina holly; Sand holly	<i>Ilex ambigua</i>	
Dahoon holly	<i>Ilex cassine</i>	
Gallberry; Inkberry	<i>Ilex glabra</i>	
Carolina indigo	<i>Indigofera caroliniana</i>	
Chandelier plant; Pen-wiper *	<i>Kalanchoe tubiflora</i>	
Sausage tree *	<i>Kigelia pinnata</i>	
Indian crape-myrtle *	<i>Lagerstroemia indica</i>	
White mangrove	<i>Laguncularia racemosa</i>	
Shrub verbena; Hedgeflower *	<i>Lantana camara</i>	
Piedmont pinweed	<i>Lechea torreyi</i>	
Piedmont pinweed	<i>Lechea torreyi</i>	
Leadtree *	<i>Leucaena leucocephala</i>	
Gopher apple	<i>Licania michauxii</i>	
White lobelia	<i>Lobelia paludosa</i>	
Roserush	<i>Lygodesmia aphylla</i>	
Rusty lyonia; Rusty staggerbush	<i>Lyonia ferruginea</i>	
Coastal plain staggerbush	<i>Lyonia fruticosa</i>	
Fetterbush; Shinyleaf	<i>Lyonia lucida</i>	
Wing-angle loosestrife	<i>Lythrum alatum var. lanceolatum</i>	
Wild bush bean *	<i>Macroptilium lathyroides</i>	
Southern magnolia	<i>Magnolia grandiflora</i>	
Melaleuca; Punk tree; Cajeput *	<i>Melaleuca quinquenervia</i>	
Chinaberry *	<i>Melia azedarach</i>	
Bretonica peluda; Chocolate weed	<i>Melochia spicata</i>	
Alamo vine; Noyau-vine*	<i>Merremia dissecta</i>	
Climbing hempvine	<i>Mikania scandens</i>	
Wild balsam apple; Balsam-pear *	<i>Momordica charantia</i>	
Red mulberry	<i>Morus rubra</i>	
Simpson's stopper;		
Twinberry stopper	<i>Myrcianthes fragrans</i>	82
Wax myrtle; Southern bayberry	<i>Myrica cerifera</i>	
Oleander *	<i>Nerium oleander</i>	
Swamp tupelo; Swamp blackgum	<i>Nyssa sylvatica var. biflora</i>	
Cochineal nopal cactus *	<i>Opuntia cochenillifera</i>	
Prickly-pear cactus	<i>Opuntia humifusa</i>	
Feay's palafox	<i>Palafoxia feayi</i>	
Virginia creeper; Woodbine	<i>Parthenocissus quinquefolia</i>	

* Non-native Species

Koreshan State Historic Site

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Avocado *	<i>Persea americana</i>	
Redbay	<i>Persea borbonia</i>	
Carpetweed; Fog-fruit	<i>Phyla nodiflora</i>	
Starry-hair ground-cherry	<i>Physalis walteri</i>	
American pokeweed; Pokeberry	<i>Phytolacca americana</i>	
Wild pennyroyal	<i>Piloblephis rigida</i>	
Carolina stripeseed	<i>Piriqueta cistoides subsp. caroliniana</i>	
Grass-leaf goldenaster	<i>Pityopsis graminifolia</i>	
Oriental planetree *	<i>Platanus orientalis</i>	
Saltmarsh fleabane; Sweetscent	<i>Pluchea odorata</i>	
Rosy camphorweed	<i>Pluchea rosea</i>	
Painted-leaf; Fire-on-the-mountain	<i>Poinsettia cyathophora</i>	
Pineland spurge	<i>Poinsettia pinetorum</i>	
Large-flowered polygala	<i>Polygala grandiflora</i>	
Dwarf milkwort	<i>Polygala nana</i>	
Yellow milkwort	<i>Polygala rugelii</i>	
Jointweed; Octoberflower	<i>Polygonella polygama var. brachystachya</i>	
Guava *	<i>Psidium guajava</i>	
Wild coffee; Seminole balsamo	<i>Psychotria nervosa</i>	
Coastal blackroot; Rabbit-tobacco	<i>Pterocaulon pycnostachyum</i>	
Kudzu vine *	<i>Pueraria montana var. lobata</i>	
Chapman's oak	<i>Quercus chapmanii</i>	
Sand live oak	<i>Quercus geminata</i>	
Laurel oak; Diamond oak	<i>Quercus laurifolia</i>	
Dwarf live oak	<i>Quercus minima</i>	
Myrtle oak	<i>Quercus myrtifolia</i>	
Water oak	<i>Quercus nigra</i>	
Virginia live oak	<i>Quercus virginiana</i>	
White indigo-berry	<i>Randia aculeata</i>	
Myrsine; Guiana colicwood	<i>Rapanea punctata</i>	
Pale meadow beauty	<i>Rhexia mariana</i>	
Red mangrove	<i>Rhizophora mangle</i>	
Downy rose-myrtle *	<i>Rhodomyrtus tomentosa</i>	
Winged sumac; Shining sumac	<i>Rhus copallinum</i>	
Tropical mexican-clover *	<i>Richardia brasiliensis</i>	
Multiflora rose *	<i>Rosa multiflora</i>	
Large-flowered marsh-pink	<i>Sabatia grandiflora</i>	
Carolina willow;		
Coastalplain willow	<i>Salix caroliniana</i>	
Wingleaf soapberry	<i>Sapindus saponaria</i>	
Queensland umbrella tree;		
Schefflera *	<i>Schefflera actinophylla</i>	
Brazilian pepper; Florida holly *	<i>Schinus terebinthifolius</i>	
Sweet broom; Licoriceweed	<i>Scoparia dulcis</i>	
Snake cactus *	<i>Selenicereus pteranthus</i>	
Piedmont seymeria	<i>Seymeria pectinata</i>	
Chapman's goldenrod	<i>Solidago odora var. chapmanii</i>	

* Non-native Species

Koreshan State Historic Site

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Creeping-oxeye *	<i>Sphagneticola trilobata</i>	
Rose apple; Java plum *	<i>Syzygium jambos</i>	
Florida hoary-pea	<i>Tephrosia florida</i>	
Oriental arborvitae *	<i>Thuja orientalis</i>	
Blackeyed Susan vine clockvine *	<i>Thunbergia alata</i>	
Eastern poison ivy	<i>Toxicodendron radicans</i>	
Confederate jasmine *	<i>Trachelospermum jasminoides</i>	
Caesar weed *	<i>Urena lobata</i>	
Tree sparkleberry	<i>Vaccinium arboreum</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Southern fox grape	<i>Vitis rotundifolia</i>	
Calusa grape	<i>Vitis shuttleworthii</i>	
Tallowood; Hog plum	<i>Ximenia americana</i>	

MONOCOTS

False sisal	<i>Agave decipiens</i>	
Bushy bluestem	<i>Andropogon glomeratus var. pumilus</i>	
Long-beard bluestem	<i>Andropogon longiberbis</i>	
Broomsedge	<i>Andropogon virginicus</i>	
Chalky bluestem	<i>Andropogon virginicus var. glaucus</i>	
Queen palm *	<i>Arecastrum romanzoffianum</i>	
Bottlebrush threeawn	<i>Aristida spiciformis</i>	
Wiregrass; Pineland threeawn	<i>Aristida stricta var. beyrichiana</i>	
Switch cane	<i>Arundinaria gigantea</i>	
Sprenger's asparagus-fern *	<i>Asparagus aethiopicus</i>	
Common bamboo *	<i>Bambusa vulgaris</i>	
Southern sandspur	<i>Cenchrus echinatus</i>	
Coast sandspur	<i>Cenchrus spinifex</i>	
Rhodesgrass *	<i>Chloris gayana</i>	
Day-flower	<i>Commelina erecta</i>	
String-lily; Swamp lily	<i>Crinum americanum</i>	
European bermudagrass *	<i>Cynodon dactylon</i>	
Umbrella plant *	<i>Cyperus involucratus</i>	
Alabama swamp flatsedge	<i>Cyperus ligularis</i>	
Many-spike flatsedge	<i>Cyperus polystachyos</i>	
pine-barren flatsedge	<i>Cyperus retrorsus</i>	
Thalia lovegrass *	<i>Eragrostis atrovirens</i>	
Coastal lovegrass	<i>Eragrostis virginica</i>	
Ten-angle pipewort	<i>Eriocaulon decangulare</i>	
Pinewoods fingergrass	<i>Eustachys petraea</i>	
Southern umbrellasedge	<i>Fuirena scirpoidea</i>	
Fringed yellow-star grass	<i>Hypoxis juncea</i>	
Cogongrass *	<i>Imperata cylindrica</i>	
Bog rush	<i>Juncus elliotii</i>	
Grass-leaf rush; Shore rush	<i>Juncus marginatus</i>	
big-head rush	<i>Juncus megacephalus</i>	
Needle-pod rush	<i>Juncus scirpoides</i>	

* Non-native Species

Koreshan State Historic Site

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Bloodroot; Carolina redroot	<i>Lachnanthes carolina</i>	
White-head bog-buttons	<i>Lachnocaulon anceps</i>	
Molassesgrass *	<i>Melinis minutiflora</i>	
Bromeliad *	<i>Neophytum sp.</i>	
Bromeliad *	<i>Neoregelia carolinae</i>	
Gaping panicum	<i>Panicum hians</i>	
Guineagrass *	<i>Panicum maximum</i>	
Torepodo grass *	<i>Panicum repens</i>	
Bahiagrass *	<i>Paspalum notatum</i>	
Thin paspalum	<i>Paspalum setaceum</i>	
Vaseygrass *	<i>Paspalum urvillei</i>	
Elephantgrass; Napiergrass *	<i>Pennisetum purpureum</i>	
Canary Island date palm *	<i>Phoenix canariensis</i>	
Senegal date palm *	<i>Phoenix reclinata</i>	
Red Natalgrass *	<i>Rhynchelytrum repens</i>	
White-tops; Star rush	<i>Rhynchospora colorata</i>	
Fasciculate beaksedge	<i>Rhynchospora fascicularis</i>	
Southern beaksedge	<i>Rhynchospora microcarpa</i>	
Florida royal palm	<i>Roystonea regia</i>	
Cabbage palm	<i>Sabal palmetto</i>	82
Leafless beaked ladies'-tresses	<i>Sacoila lanceolata</i>	
Bull-tongue arrowhead	<i>Sagittaria lancifolia</i>	
African bowstring hemp *	<i>Sansevieria hyacinthoides</i>	
Saw palmetto	<i>Serenoa repens</i>	
Knotroot foxtail	<i>Setaria parviflora</i>	
Ear-leaf greenbrier	<i>Smilax auriculata</i>	
Saw greenbrier	<i>Smilax bona-nox</i>	
Bamboo vine	<i>Smilax laurifolia</i>	
Lace-lip ladies'-tresses	<i>Spiranthes laciniata</i>	64
West Indies dropseed *	<i>Sporobolus indicus var. pyramidalis</i>	
Bantam-buttons; Yellow hatpins	<i>Syngonanthus flavidulus</i>	
Giant air plant	<i>Tillandsia fasciculata</i>	15,81,82
Twisted air plant	<i>Tillandsia flexuosa</i>	64
Ball moss	<i>Tillandsia recurvata</i>	
Southern Needleleaf	<i>Tillandsia setacea</i>	
Spanish moss	<i>Tillandsia usneoides</i>	
Giant air plant; Spreading air plant	<i>Tillandsia utriculata</i>	8,15,81,82
Oyster-plant; Boat-lily *	<i>Tradescantia spathacea</i>	
Eastern gamagrass	<i>Tripsacum dactyloides</i>	
Paragrass *	<i>Urochloa mutica</i>	
Washington palm *	<i>Washingtonia robusta</i>	
Carolina yellow-eyed grass	<i>Xyris caroliniana</i>	
Elliott's yellow-eyed grass	<i>Xyris elliotii</i>	
Spanish bayonet; Spanish dagger	<i>Yucca aloifolia</i>	
Adam's needle	<i>Yucca filamentosa</i>	
Atamasco lily; Rain lily	<i>Zephyranthes atamasca</i>	8

* Non-native Species

Koreshan State Historic Site

Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
FISHES		
Walking catfish*	<i>Clarias batrachus</i>	81
AMPHIBIANS		
Cuban treefrog*	<i>Osteopilus septentrionalis</i>	82
REPTILES		
American alligator	<i>Alligator mississippiensis</i>	53
American crocodile	<i>Crocodylus acutus</i>	53
Florida box turtle	<i>Terrapene carolina bauri</i>	8
Florida cooter	<i>Pseudemys floridana floridana</i>	53,81
Gopher tortoise	<i>Gopherus polyphemus</i>	15,81
Cuban brown anole*	<i>Anolis sagrei sagrei</i>	81
Florida green water snake	<i>Nerodia cyclopion floridana</i>	53
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	8,81
Peninsula ribbon snake	<i>Thamnophis sauritus sackeni</i>	8,81
Southern ringneck snake	<i>Diadophis punctatus punctatus</i>	8,81,82
Southern black racer	<i>Coluber constrictor priapus</i>	8,81,82
Eastern coachwhip	<i>Masticophis flagellum flagellum</i>	15,81
Rough green snake	<i>Opheodrys aestivus</i>	81
Eastern indigo snake	<i>Drymarchon corais couperi</i>	8,15,81
Corn snake	<i>Elaphe guttata guttata</i>	8,81
Yellow rat snake	<i>Elaphe obsoleta quadrivittata</i>	8,81
Eastern kingsnake	<i>Lampropeltis getulus getulus</i>	8,81
Scarlet kingsnake	<i>Lampropeltis triangulum elapsoides</i>	8,81
Eastern hognose snake	<i>Heterodon platyrhinos</i>	8,81
Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i>	53,81
Dusky pigmy rattlesnake	<i>Sistrurus miliarius barbouri</i>	81
Eastern diamondback rattlesnake	<i>Crotalus adamanteus</i>	8,15,81
BIRDS		
Horned grebe	<i>Podiceps auritus</i>	53
Pied-billed grebe	<i>Podilymbus podiceps</i>	53
Eastern brown pelican	<i>Pelecanus occidentalis carolinensis</i>	53,OF
Magnificent frigatebird	<i>Fregata magnificens</i>	OF
Great blue heron	<i>Ardea herodias</i>	81,53
Green heron	<i>Butorides virescens</i>	53
Cattle egret	<i>Bubulcus ibis</i>	81
Little blue heron	<i>Egretta caerulea</i>	81,53
Reddish egret	<i>Egretta rufescens</i>	65
Great egret	<i>Ardea alba</i>	53,65
Snowy egret	<i>Egretta thula</i>	53,65
Tricolored heron	<i>Egretta tricolor</i>	53,OF
Wood stork	<i>Mycteria americana</i>	53,OF
White ibis	<i>Eudocimus albus</i>	OF

* Non-native Species

Koreshan State Historic Site

Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Roseate spoonbill	<i>Ajaia ajaja</i>	53
Red-breasted merganser	<i>Mergus serrator</i>	53
Turkey vulture	<i>Cathartes aura</i>	OF
Black vulture	<i>Coragyps atratus</i>	OF
White-tailed kite	<i>Elanus leucurus</i>	OF
Swallow-tailed kite	<i>Elanoides forficatus</i>	OF
Cooper's hawk	<i>Accipiter cooperii</i>	OF
Red-tailed hawk	<i>Buteo jamaicensis</i>	8,OF
Red-shouldered hawk	<i>Buteo lineatus</i>	8,OF
Short-tailed hawk	<i>Buteo brachyurus</i>	OF
Southern bald eagle	<i>Haliaeetus leucocephalus</i>	OF
Northern harrier	<i>Circus cyaneus</i>	8
Osprey	<i>Pandion haliaetus</i>	53,OF
Merlin	<i>Falco columbarius</i>	OF
American kestrel	<i>Falco sparverius</i>	OF
Northern bobwhite	<i>Colinus virginianus</i>	8
Wild turkey	<i>Meleagris gallopavo</i>	8,81
Killdeer	<i>Charadrius vociferus</i>	81
Ring-billed gull	<i>Larus delawarensis</i>	53,OF
Laughing gull	<i>Larus atricilla</i>	53,OF
Rock dove	<i>Columba livia</i>	82
Mourning dove	<i>Zenaida macroura</i>	8,81
Common ground-dove	<i>Columbina passerina</i>	8,81
Eastern screech-owl	<i>Otus asio</i>	8
Great horned owl	<i>Bubo virginianus</i>	8
Barred owl	<i>Strix varia</i>	8
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>	8
Whip-poor-will	<i>Caprimulgus vociferus</i>	8
Common nighthawk	<i>Chordeiles minor</i>	OF
Chimney swift	<i>Chaetura pelagica</i>	OF
Ruby-throated hummingbird	<i>Archilochus colubris</i>	81,OF
Belted kingfisher	<i>Ceryle alcyon</i>	OF
Northern flicker	<i>Colaptes auratus</i>	8
Pileated woodpecker	<i>Dryocopus pileatus</i>	8
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	8
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	8
Downy woodpecker	<i>Picoides pubescens</i>	8
Great crested flycatcher	<i>Myiarchus crinitus</i>	8
Tree swallow	<i>Tachycineta bicolor</i>	OF
Barn swallow	<i>Hirundo rustica</i>	OF
Purple martin	<i>Progne subis</i>	OF
Blue jay	<i>Cyanocitta cristata</i>	8,81
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	15
Fish crow	<i>Corvus ossifragus</i>	OF
House wren	<i>Troglodytes aedon</i>	81
Carolina wren	<i>Thryothorus ludovicianus</i>	8,81
Northern mockingbird	<i>Mimus polyglottos</i>	8,81

* Non-native Species

Koreshan State Historic Site

Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Gray catbird	<i>Dumetella carolinensis</i>	8,81
Brown thrasher	<i>Toxostoma rufum</i>	8,81
American robin	<i>Turdus migratorius</i>	8,81
Hermit thrush	<i>Catharus guttatus</i>	8,81
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	8,81
Ruby-crowned kinglet	<i>Regulus calendula</i>	8,81
Cedar waxwing	<i>Bombycilla cedrorum</i>	81
Loggerhead shrike	<i>Lanius ludovicianus</i>	8,81
European starling*	<i>Sturnus vulgaris</i>	81,82
White-eyed vireo	<i>Vireo griseus</i>	8,81
Blue-headed vireo	<i>Vireo solitarius</i>	8,81
Black-throated blue warbler	<i>Dendroica caerulescens</i>	8,81
Yellow-rumped warbler	<i>Dendroica coronata</i>	8,81
Blackpoll warbler	<i>Dendroica striata</i>	8,81
Pine warbler	<i>Dendroica pinus</i>	8,81
Prairie warbler	<i>Dendroica discolor</i>	8,81
Palm warbler	<i>Dendroica palmarum</i>	8,81
Ovenbird	<i>Seiurus aurocapillus</i>	81
Common yellowthroat	<i>Geothlypis trichas</i>	8,81
American redstart	<i>Setophaga ruticilla ruticilla</i>	8
Eastern meadowlark	<i>Sturnella magna</i>	8
Red-winged blackbird	<i>Agelaius phoeniceus</i>	81
Orchard oriole	<i>Icterus spurius</i>	81
Baltimore oriole	<i>Icterus galbula</i>	81
Boat-tailed grackle	<i>Quiscalus major</i>	81
Common grackle	<i>Quiscalus quiscula</i>	81
Brown-headed cowbird	<i>Molothrus ater</i>	81
Northern cardinal	<i>Cardinalis cardinalis</i>	8,81
Indigo bunting	<i>Passerina cyanea</i>	81
Eastern towhee	<i>Pipilo erythrophthalmus</i>	8,81
Savannah sparrow	<i>Passerculus sandwichensis</i>	8,81
Chipping sparrow	<i>Spizella passerina</i>	8,81
Swamp sparrow	<i>Melospiza georgiana</i>	81
American goldfinch	<i>Carduelis tristis</i>	8,81
House sparrow*	<i>Passer domesticus</i>	81,82
MAMMALS		
Virginia opossum	<i>Didelphis virginiana</i>	8,81
Nine-banded armadillo*	<i>Dasyus novemcinctus</i>	8
Eastern cottontail	<i>Sylvilagus floridanus</i>	8,81
Big Cypress fox squirrel	<i>Sciurus niger avicennia</i>	8,81
Black rat*	<i>Rattus rattus</i>	81,82
Red fox*	<i>Vulpes vulpes</i>	MTC
Gray fox	<i>Urocyon cinereoargenteus</i>	MTC
Raccoon	<i>Procyon lotor</i>	81
River otter	<i>Lutra canadensis</i>	53
Eastern spotted skunk	<i>Spilogale putorius</i>	81

* Non-native Species

Koreshan State Historic Site

Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Florida panther	<i>Felis concolor coryi</i>	8,81
Bobcat	<i>Felis rufus</i>	MTC
West Indian manatee	<i>Trichechus manatus</i>	53
White-tailed deer	<i>Odocoileus virginianus</i>	8,81

Natural Community Habitat Designation

Terrestrial

1. Beach Dune
2. Bluff
3. Coastal Berm
4. Coastal Rock Barren
5. Coastal Strand
6. Dry Prairie
7. Maritime Hammock
8. Mesic Flatwoods
9. Coastal Grasslands
10. Pine Rockland
11. Prairie Hammock
12. Rockland Hammock
13. Sandhill
14. Scrub
15. Scrubby Flatwoods
16. Shell Mound
17. Sinkhole
18. Slope Forest
19. Upland Glade
20. Upland Hardwood Forest
21. Upland Mixed Forest
22. Upland Pine Forest
23. Xeric Hammock

Palustrine

24. Basin Marsh
25. Basin Swamp
26. Baygall
27. Bog
28. Bottomland Forest
29. Depression Marsh
30. Dome
31. Floodplain Forest
32. Floodplain Marsh
33. Floodplain Swamp
34. Freshwater Tidal Swamp
35. Hydric Hammock
36. Marl Prairie
37. Seepage Slope
38. Slough
39. Strand Swamp
40. Swale
41. Wet Flatwoods
42. Wet Prairie

Lacustrine

43. Clastic Upland Lake
44. Coastal Dune Lake
45. Coastal Rockland Lake
46. Flatwood/Prairie Lake
47. Marsh Lake
48. River Floodplain Lake
49. Sandhill Upland Lake
50. Sinkhole Lake

Lacustrine

51. Swamp Lake

Riverine

52. Alluvial Stream
53. Blackwater Stream
54. Seepage Stream
55. Spring-Run Stream

Estuarine

56. Estuarine Composite Substrate
57. Estuarine Consolidated Substrate
58. Estuarine Coral Reef
59. Estuarine Grass Bed
60. Estuarine Mollusk Reef
61. Estuarine Octocoral Bed
62. Estuarine Sponge Bed
63. Estuarine Tidal Marsh
64. Estuarine Tidal Swamp
65. Estuarine Unconsolidated Substrate
66. Estuarine Worm Reef

Marine

67. Marine Algal Bed
68. Marine Composite Substrate
69. Marine Consolidated Substrate
70. Marine Coral Reef
71. Marine Grass Bed
72. Marine Mollusk Reef
73. Marine Octocoral Bed
74. Marine Sponge Bed
75. Marine Tidal Marsh
76. Marine Tidal Swamp
77. Marine Unconsolidated Substrate
78. Marine Worm Reef

Subterranean

79. Aquatic Cave
80. Terrestrial Cave

Miscellaneous

81. Ruderal
82. Developed

MTC Many Types Of Communities

OF Overflying

Addendum 5—Designated Species List

**Rank Explanations
For FNAI Global Rank, FNAI State Rank, Federal Status,
And State Status**

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL RANK DEFINITIONS

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- G4 = apparently secure globally (may be rare in parts of range)
- G5 = demonstrably secure globally
- GH = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GX = believed to be extinct throughout range
- GXC = extirpated from the wild but still known from captivity or cultivation
- G#? = tentative rank (e.g., G2?)
- G#G# = range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T# = rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q = rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
- G#T#Q = same as above, but validity as subspecies or variety is questioned.
- GU = due to lack of information, no rank or range can be assigned (e.g., GUT2).
- G? = not yet ranked (temporary)
- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- S4 = apparently secure in Florida (may be rare in parts of range)
- S5 = demonstrably secure in Florida
- SH = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-

**Rank Explanations
For FNAI Global Rank, FNAI State Rank, Federal Status,
And State Status**

- billed woodpecker)
- SX = believed to be extinct throughout range
- SA = accidental in Florida, i.e., not part of the established biota
- SE = an exotic species established in Florida may be native elsewhere in North America
- SN = regularly occurring, but widely and unreliably distributed; sites for conservation hard to determine
- SU = due to lack of information, no rank or range can be assigned (e.g., SUT2).
- S? = not yet ranked (temporary)

LEGAL STATUS

- N = Not currently listed, nor currently being considered for listing, by state or federal agencies.

FEDERAL (Listed by the U. S. Fish and Wildlife Service - USFWS)

- LE = Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.
- PE = Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT = Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.
- PT = Proposed for listing as Threatened Species.
- C = Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.
- E(S/A) = Endangered due to similarity of appearance.
- T(S/A) = Threatened due to similarity of appearance.

STATE

Animals (Listed by the Florida Fish and Wildlife Conservation Commission - FFWCC)

- LE = Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT = Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- LS = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

Plants (Listed by the Florida Department of Agriculture and Consumer Services -

Rank Explanations
For FNAI Global Rank, FNAI State Rank, Federal Status,
And State Status

FDACS)

- LE = Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
- LT = Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.

Koreshan State Historic Site

Designated Species

Plants

Common Name/ Scientific Name	Designated Species Status		
	FDA	USFWS	FNAI
Golden leather fern <i>Acrostichum aureum</i>	LT		G5/S3
Giant leather fern <i>Acrostichum danaeifolium</i>	CE		
Nodding clubmoss <i>Lycopodiella cernua</i>	CE		
Simpson's stopper; Twinberry <i>Myrcianthes fragrans</i>	LT		
Plume polypody <i>Pecluma plumula</i>	LE		
Florida royal palm <i>Roystonea regia</i>	LE		G2Q/S2
Lace-lip ladies' tresses; Lace-lip spiral orchid <i>Spiranthes laciniata</i>	LT		
Common wild pine Stiff-leaved wild pine <i>Tillandsia fasciculata</i>	LE		
Banded wild pine; Twisted wild pine <i>Tillandsia flexuosa</i>	LT		G4/S3
Giant wild pine; Giant air plant <i>Tillandsia utriculata</i>	LE		
Florida arrowroot; Coontie <i>Zamia pumila</i>	CE		
Atamasco lily; Rain lily <i>Zephyranthes atamasco</i>	LT		

Koreshan State Historic Site

Designated Species

Animals

Common Name/ Scientific Name	Designated Species Status		
	FFWCC	USFWS	FNAI
REPTILES			
American alligator <i>Alligator mississippiensis</i>	LS	T(S/A)	G5,S4
American crocodile <i>Crocodylus acutus</i>	LE	LE	G2,S1
Gopher tortoise <i>Gopherus polyphemus</i>	LS		G3,S3
Eastern indigo snake <i>Drymarchon corais</i>	LT	LT	G4T3,S3
BIRDS			
Eastern brown pelican <i>Pelecanus occidentalis</i>	LS		G4,S3
Magnificent frigatebird <i>Fregata magnificens</i>			G5,S1
Little blue heron <i>Egretta caerulea</i>	LS		G5,S4
Reddish egret <i>Egretta rufescens</i>	LS		G4,S2
Great egret <i>Ardea alba</i>			G5,S4
Snowy egret <i>Egretta thula</i>	LS		G5,S4
Tricolored heron <i>Egretta tricolor</i>	LS		G5,S4
Wood stork <i>Mycteria americana</i>	LE	LE	G4,S2
White ibis <i>Eudocimus albus</i>	LS		G5,S4
Roseate spoonbill <i>Ajaia ajaja</i>	LS		G5,S2S3
White-tailed kite <i>Elanus leucurus</i>			G5,S1S3
Swallow-tailed kite <i>Elanoides forficatus</i>			G4,S2S3
Cooper's hawk <i>Accipiter cooperii</i>			G4,S3?
Short-tailed hawk <i>Buteo brachyurus</i>			G4?,S3
Southern bald eagle <i>Haliaeetus leucocephalus</i>	LT	LT	G4,S3
Osprey <i>Pandion haliaetus</i>			G5,S3S4
Merlin <i>Falco columbarius</i>			G5,SU
Florida scrub-jay <i>Aphelocoma coerulescens</i>	LT	LT	G3,S3

**Koreshan State Historic Site
Designated Species
Animals**

Common Name/ Scientific Name	<u>Designated Species Status</u>		
	FFWCC	USFWS	FNAI
American redstart <i>Setophaga ruticilla</i>			G5,S3
	MAMMALS		
Big Cypress fox squirrel <i>Sciurus niger</i>	LT		G5T2,S2
Florida panther <i>Felis concolor</i>	LE	LE	G5T1,S1
West Indian manatee <i>Trichechus manatus latirostris</i>	LE	LE	G2,S2

Addendum 6—Priority Schedule And Cost Estimates

Koreshan State Historic Site
Priority Schedule And Cost Estimates

Estimates are developed for the funding and staff resources needed to implement the management plan based on goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division's legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers, and partnerships with agencies, local governments and the private sector for supplementing normal legislative appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined by the availability of funding resources for these purposes.

Natural Resources

1. Implement exotic pest plant removal plan, pursue funding to complete plan within 0-5 years. Estimated Cost: 107 acres X \$910/acre = \$97,370.
2. Implement burn plan next five years, equipment and training not included. Estimated Cost: \$1000/burn x 3 burns/year for 5 years (includes hand tools, labor for 6 persons for 10 hours per burn, prep, fuel costs and post-burn evaluation).
3. Restoration of wetland habitat. Estimated Cost: \$200,000

Cultural Resources

4. Phase I—roof, @ 90% complete, Phase II—HVAC—grant in process. **Estimated Cost:** Restoration: \$500,000.
5. Implement restoration of the New Store. **Estimated Cost:** Restoration \$750,000.
6. Prepare historic structure report and implement restoration of the Membership and Vesta Newcomb Cottages. **Estimated Cost:** Report: \$10,000 Restoration: \$300,000.
7. Prepare historic structure report and implement restoration of the Industrial Building complex. **Estimated Cost:** Report: \$10,000. Restoration: \$250,000.
8. Prepare historic structures report & implement restoration of the Bakery. **Estimated Cost:** Report: \$18,000. Restoration: \$400,000.
9. Implement integrated pest management program for all historic structures. **Estimated Cost:** First year including tenting structures: \$18,200. Initial installation of termite bait systems: \$17,000. Annual Service Contract: \$3,850/ year x 5 = \$19,250. Baits are at Founder's Home only. Tenting has been completed at Art Hall, Store, Founder's, Planetary Court, Large Machine Shop, Generator Building, and Woodshed.
10. Upgrade current museum staff position from Museum Education Program Specialist to Museum Curator and facilitate additional curatorial and record keeping staff needs by maintaining and/or upgrading OPS Registrar position and OPS Archivist position. **Estimated Cost:** Additional for upgrade: \$15,000 and \$15,000 OPS.
11. Improve administrative record keeping capabilities and safe storage of cultural resource records and archives. **Estimated Cost:** \$20,000. \$3,000 is secured for fireproof safe for archives.
12. Contract landscape service maintenance for historic settlement grounds. **Estimated Cost:** \$15,000 per year x 5 = \$75,000.
13. Establish underground communication, water systems to each building in Historic District. **Estimated Cost:** \$60,000.
14. Annual Contract Fire and Security alarm systems for historic settlement structures. **Estimated Cost:** First year initial set up \$5,000 per building x 11 buildings = \$55,000. Annual Contract Service: \$1000/year x 4 = \$4000. Art Hall—complete, Founder's—security only, Planetary Court—pending completion.
15. Staff training/travel budget(s) 1) for historic/museum related education, 2) for reoccurring trainings i.e. Ranger Academy, Basic Interpretive workshop, etc, and 3) for natural resource, administrative, visitor service & protection education. 0-5 years. **Estimated Cost:** \$20,000.

**Koreshan State Historic Site
Priority Schedule And Cost Estimates**

16. Bury existing utilities along easement inside the National Historic District. **Estimated Cost:** \$30,000.
17. Implement staff residences in volunteer RV park on north side of the Estero River. Already in process—contact person—Hugh MacArthur, Bureau of Design & Rec. Services. **Estimated Cost:** \$30,000
18. Implement improved/heightened exhibit security in settlement buildings. Damkohler House and Small Machine shop pending completion--\$300 secured from BNCR. Need to complete Bakery and west Side of Vesta Newcomb's house. **Estimated Cost:** \$2,000.
19. Implement interior restoration of west side of Vesta Newcomb's and create an exhibit. **Estimated Cost:** \$3,000.
20. Remove restrooms from west side of Art Hall, move to Art Hall parking lot, research feasibility of expansion of Art Hall parking lot considering impact on gopher tortoise population. **Estimated Cost:** \$150,000.
21. Install new building for management offices near Ranger Station. Convert existing management office to gift shop. Research feasibility of expansion of Ranger Station parking lot. **Estimated Cost:** \$125,000.
22. Rebuild the Seminole Chickee, built by the Seminoles for the Koreshans during the historic period. **Estimated Cost:** \$10,000.

Total Estimated Resource Management and Programs Cost **\$3,215,820.**

**Koreshan State Historic Site
Priority Schedule And Cost Estimates**

Item	Quantity	Unit	Unit Price	Multiplier	Amount
Boat Ramp Area					
New Paved Parking (10 Car)	1.500	per 10	\$16,000.00	1.25	\$30,000.00
Pave Boat Ramp Area	1.000	LS	\$30,000.00	1.25	\$37,500.00
Repair and Upgrade Boat Dock Facility	1.000	LS	\$60,000.00	1.25	\$75,000.00
Campground					
Medium Bathhouse, off-grade	1.000	ea.	\$140,000.00	1.25	\$175,000.00
Upgrade Standardized Campsites	20.000	ea.	\$4,000.00	1.25	\$100,000.00
Historic District					
Benches	5.000	ea.	\$500.00	1.25	\$3,125.00
Garden Restoration	1.000	LS	\$50,000.00	1.25	\$62,500.00
Interpretive Signs	6.000	ea.	\$5,000.00	1.25	\$37,500.00
Medium Area Native Plant Buffer Landscape	1.000	LS	\$50,000.00	1.25	\$62,500.00
Medium Picnic Restroom	1.000	ea.	\$115,000.00	1.25	\$143,750.00
Sound Barrier Wall	500.000	LF	\$417.00	1.25	\$260,625.00
Stabilized Parking (10 Car)	2.000	per 10	\$2,500.00	1.25	\$6,250.00
Underground Electrical	5280.000	LF	\$10.00	1.25	\$66,000.00
Visitor Center Including Curatorial Space	1.000	ea.	\$700,000.00	1.25	\$875,000.00
Other					
Administrative Office	1.000	ea.	\$190,000.00	1.25	\$237,500.00
Flammable/Small Storage Building	1.000	ea.	\$9,600.00	1.25	\$12,000.00
Picnic Area					
Erosion Control Measures	1.000	LS	\$25,000.00	1.25	\$31,250.00
Medium Picnic Restroom	1.000	ea.	\$115,000.00	1.25	\$143,750.00
Medium Picnic Shelter	1.000	ea.	\$36,000.00	1.25	\$45,000.00
Scenic Overlook / Wildlife Blind	1.000	ea.	\$18,000.00	1.25	\$22,500.00
Shop Area					
3 Bay Shop Building	1.000	ea.	\$145,000.00	1.25	\$181,250.00
Trails					
Interpretive Signs	10.000	ea.	\$5,000.00	1.25	\$62,500.00
Off-Road Bicycle Trail	15000.000	LF	\$2.00	1.25	\$37,500.00
Volunteer/ Host Site					
Remove Old Fishing Deck	1.000	LS	\$20,000.00	1.25	\$25,000.00
Small Native Plant Buffer Landscape	1.000	LS	\$20,000.00	1.25	\$25,000.00
Sub-Total					\$2,758,000.00
20 Percent Design,/Permitting and Contingency Fee					\$551,600.00
Total					\$3,309,600.00

NOTE: These preliminary cost estimates, based on Divisions standards, do not include costs for site-specific elements not evident at the conceptual level of planning. Additional costs should be investigated before finalizing budget estimates.

Addendum 7—Final Land Management Review Report
LMR Review Date—October 17, 2001

**Koreshan State Historic Site
Final Land Management Review Report
LMR Review Date—October 17, 2001**

Management Review Team Members

Agency Represented	Team member Appointed	Team member In attendance
DEP/DRP	Sally Braem	Sally Braem
DEP	Ron MCGregor	Ron MCGregor
DACS/DOF	Bill Korn	Bill Korn
FWCC	Larry Campbell	Larry Campbell
Soil and Water Conservation County Commission	Tim Eckert	Tim Eckert
Conservation Organization	Jim Green	
Private Land Manager	Misty Nabers	Misty Nabers
	Eric Linblad	

Process for Implementing Regional Management Review Teams

Legislative Intent and Guidance:

Chapter 259.036, F. S. was enacted in 1997 to determine whether conservation, preservation, and recreation lands owned by the state Board of Trustees of the Internal Improvement Trust Fund (Board) are being managed properly. It directs the Department of Environmental Protection (DEP) to establish land management review teams to evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions, and archaeological features. The teams also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan. If a land management plan has not been adopted, the review shall consider the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices are in compliance with the management policy statement and management prospectus for that property. If the land management review team determines that reviewed lands are not being managed for the purposes for which they were acquired or in compliance with the adopted land management plan, management policy statement, or management prospectus, DEP shall provide the review findings to the Board, and the managing agency must report to the Board its reasons for managing the lands as it has. A report of the review findings are given to the managing agency under review, the Acquisition and Restoration Council (ARC), and to the Division of State Lands. Also, DEP shall report the annual review findings of its land management review teams to the Board no later than the second board meeting in October of each year.

Review Site

The management review of Koreshan State Historic Site considered approximately 109.79 acres in Lee County that are managed by the Division of Recreation and Parks (DRP). The team evaluated the extent to which current management actions are sufficient, whether the land is being managed for the purpose for which it was acquired, and whether actual management practices, including public access, are in compliance with the management plan. The Division of State Lands revised the management plan on May 30, 2000, and the management plan update is due June 1, 2005.

**Koreshan State Historic Site
Final Land Management Review Report
LMR Review Date—October 17, 2001**

Review Team Determination

1. Is the land being managed for the purpose for which it was acquired?

All six (6) team members agreed that the Koreshan State Historic Site is being managed for the purpose for which it was acquired.

2. Are actual management practices, including public access, in compliance with the management plan?

Six (6) team members agreed that actual management practices, including public access, were in compliance with the management plan for this site.

Commendations To The Managing Agency

The following commendation resulted from a discussion and vote of review team members.

1. The team commends the park manager for the aggressive program of prescribed fire in the flatwoods community considering its proximity to the highway and to subdivisions.
2. The team commends the park manager for being extremely proactive with the protection of historic and cultural resources.
3. The team commends the manager and staff for their diligent and comprehensive effort with control of exotic species throughout the park.

Exceptional management actions

The following items received high scores on the review team checklist that indicates that management actions exceeded expectations.

Protection and Maintenance of the Mesic Flatwoods
Protection and Preservation of cultural resources
Frequency and quality of prescribed fire
Protection and Preservation of listed plants and animals
Outstanding law enforcement, signage, and gates and fences
Outstanding roads and parking infrastructure
Outstanding recreational opportunities
Outstanding interpretive facilities
Outstanding environmental education and outreach programs

Recommendations And Checklist Findings

The management plan must include responses to the recommendations and checklist items that are identified below.

Recommendations

The following recommendations resulted from a discussion and vote of review team members.

1. The team recommends that a burn zone and exotic plant maps be included in the management plan to correspond to the text.

**Koreshan State Historic Site
Final Land Management Review Report
LMR Review Date—October 17, 2001**

Manager's Response. Agree. A draft of an updated map will be created. This issue will be addressed in the next revision of the unit management plan.

2. The team recommends that DRP should provide an addendum to the management plan for Koreshan to include the mangrove area at the mouth of the Estero River.

Manager's Response. Agree. This issue will be addressed in the next revision of the unit management plan.

3. The team recommends that the DRP verify the plants from the designated species list and historically significant species, that are occurring on the site, and include this information in the management plan update. Management issues relating to these species should be included in the management plan.

Manager's Response. Agree. The Division will verify the plants that are actually found on-site and incorporate an updated list in the next revision of the unit management plan.

4. The team recommends that the DRP secure dedicated funding for preservation plans and restoration of the historic structures and gardens.

Manager's Response. Agree. The funding that is needed to provide for adequate preservation plans and restoration of the historic structures and gardens will be pursued based on DRP and DEP budget resources, priorities, and the ability to obtain grants or funds from other sources, including the legislature.

5. The team recommends that DRP needs to reconcile whether scrubby flatwoods should be left to succeed, or should be managed to allow for early succession characteristics, with fire or mechanical treatment.

Manager's Response. Agree. Normally, scrubby flatwoods in a state park would be managed with fire in a state park to maintain early successional characteristics. This is not possible in this park, at the location where this community occurs, due to the facilities that are found in the area. This park is considered to be primarily a cultural site and the location of visitor facilities was selected so as to avoid impacting the cultural resources. The scrubby flatwoods under discussion will thus be allowed to succeed with careful management, including mechanical and manual reduction of fuel loads adjacent to campsites and around the facilities, until such time as this successional habitat becomes one that is less likely to burn.

6. The team recommends that DRP seek appropriate compensation or mitigation for the taking of state park lands by the developer of Pelican Sands, for their entrance road. The western boundary should be surveyed to avoid similar trespass.

Manager's Response. Disagree. This encroachment needs to be thoroughly reviewed to determine the legal responsibility for constructing the road before compensation or mitigation is sought from the developer. Funding will be pursued to complete a legal survey of the western boundary, based on DRP and DEP budget resources.

7. The team recommends that DRP needs to explore what is needed to connect all the sanitary facilities at Koreshan to the central sewer system, and to eliminate the septic systems.

**Koreshan State Historic Site
Final Land Management Review Report
LMR Review Date—October 17, 2001**

Manager's Response. Agree. The need to upgrade these facilities will be address in the next revision of the unit management plan. Funding is needed to adequately address this need and will be pursued based on DRP and DEP budget resources and priorities.

Checklist Findings

The following items received low scores on the review team checklist, which indicates that management actions were insufficient (f) or that the issue was not sufficiently addressed in the management plan (p). These items need to be addressed in the management plan update.

1. Protection and maintenance of the scrubby flatwoods community. (f)

Manager's Response. Agree. A decision to allow the natural succession of this community to one that is less dependent on fire will be incorporated into the next revision of the unit management plan. This area has extensive visitor facilities and will need to have dry fuels trimmed by hand. See Response 5. above.

2. Protection and preservation of the listed plants. (f)

Manager's Response. Agree. The revision of listed plants will be verified and a revised list will be included in the next revision of the unit management plan. If any additional protective measures are needed, based on a revised list, these will be included also in the next revision. See Response 3. above.

3. Boundary survey. (f)

Manager's Response. Agree. A survey is needed to determine and establish the boundary location on the western side of the park. This issue will be addressed in the next update of the unit management plan. See Response 6. above.

4. Sanitary facilities on septic systems. (f)

Managers Response. Agree. A recommendation to upgrade these facilities is supported based on funding allocations that will cover hook-up fees and construction costs. Funding is always contingent on DRP and DEP budget resources and priorities, and may also be dependent on legislative action. See Response 7 above.