

# **Recreation Master Plan**

for

## **Aucilla Wildlife Management Area**



**Florida Fish and Wildlife Conservation Commission**



**Draft**  
**January 2007**

# DRAFT AUCILLA WMA RECREATION MASTER PLAN

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## **I. Introduction**

### Purpose of the Recreation Management Plan

The purpose of this Recreation Master Plan (RMP) is to serve as a guide for providing recreational experiences focused on wildlife viewing and nature study on Aucilla Wildlife Management Area (AWMA). The plan contains specific recommendations for recreational enhancements and interpretive products and programs. It also provides guidelines for monitoring recreation-related use to avoid negative resource impacts and to ensure satisfactory visitor experiences.

In the RMP for AWMA, emphasis is placed on integrating recreation and interpretive planning. Using this approach, the type of recreational experience offered and the location of recreation amenities provided, is strongly influenced by the interpretive goals for the area. Recreation opportunities thus become a means to an end - reaching visitors with important concepts about an area's natural resources, plant communities, wildlife and wildlife management.

### Location of AWMA

AWMA is primarily located in southern Jefferson County, Florida (Figure 1). AWMA lands in Jefferson County managed by FWC have an area of approximately 41,208 acres. A relatively small portion (1,297 acres) of AWMA is located within western Taylor County. The total approximate acreage of within AWMA is 42,505 acres. The Suwannee River Water Management District (SRWMD) owns other lands currently leased to FWC, and established as a part of AWMA. The total area for the established AWMA is 47,532 acres.

### Significance of AWMA

The purchase of AWMA has helped to link a somewhat discontinuous 200-mile stretch of coast already in public conservation ownership in Florida's Big Bend region, and has allowed for its protection from over-development. Public conservation ownership within this 200-mile stretch includes the St. Marks National Wildlife Refuge (NWR), Big Bend Wildlife Management Area, and the Lower Suwannee NWR. The purchase of the Wacissa Tract insured protection of the geologically unique Aucilla River Sinks, as well as the Wacissa River and its associated floodplains.

Project assessment documents prepared for the CARL program prior to purchase of the AWMA indicate: "The primary uses of this Project should continue to be hunting and fishing. Local residents have become accustomed to using this land for these purposes. The vast majority of the property could be managed and maintained as wildlife management areas."

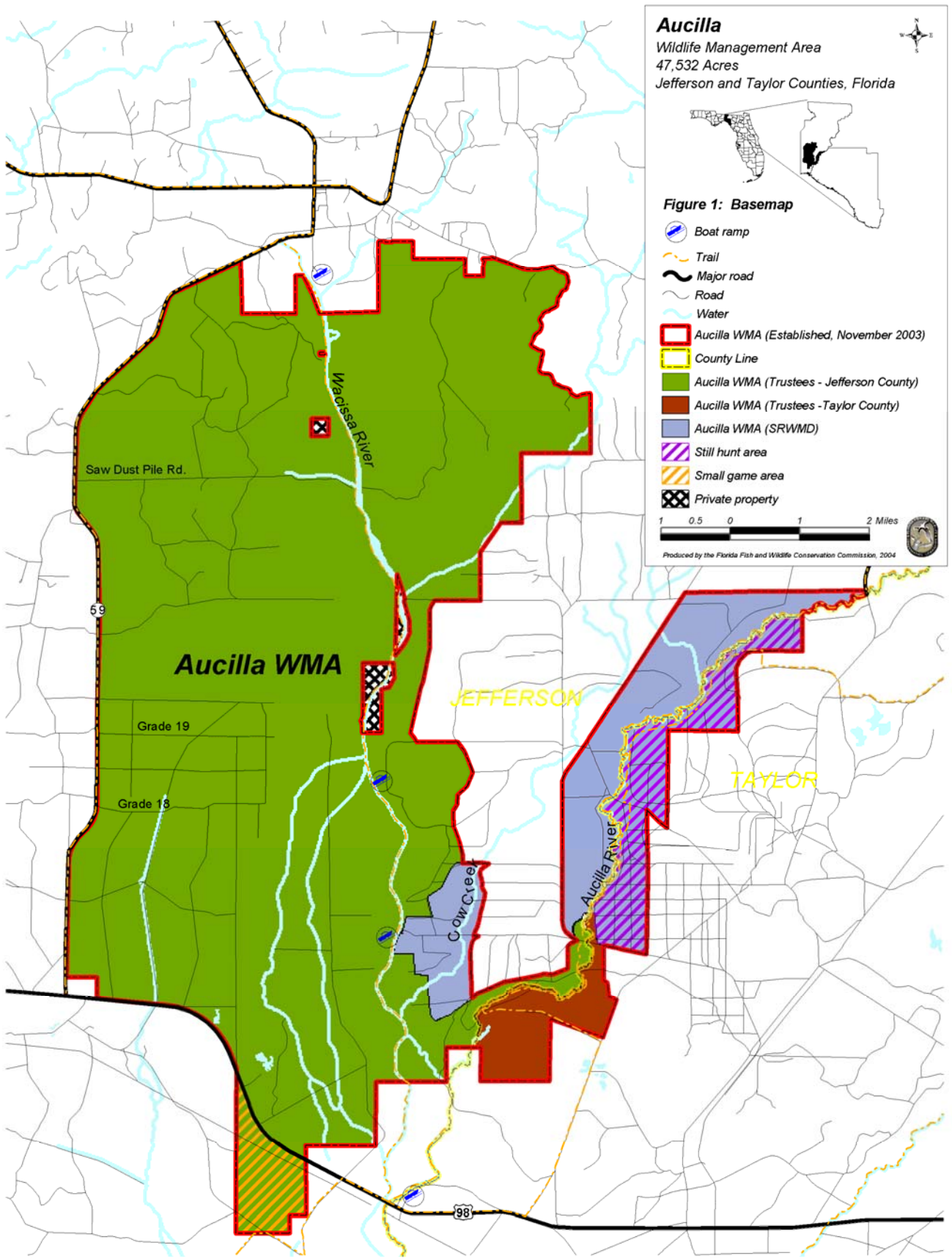


Figure 1. AWMA Boundaries

The AWMA is being managed for multiple uses. Major emphasis is placed on protecting and promoting native communities where appropriate and feasible. Additional uses include wildlife habitat enhancement, fisheries management, nature-based recreation, and the maintenance or restoration of natural hydroperiods.

## II. Resource Inventory

### Natural Communities (Figure 2)

Thirteen major natural communities are currently known to occur on AWMA, and include the following:

- (1) basin marsh – wetland herbaceous community found in large depressions. Characterized at Aucilla by sawgrass and muhly grass, along with beakrush.
- (2) basin swamp - forested wetlands of primarily deciduous trees occurring in broad depressions. At AWMA, species composition of basin swamps resembles that of dome swamps where the basin swamp occurs on acid sandy soils, and resembles that of floodplain swamps in areas where limestone is near the surface.
- (3) baygall - forested wetlands dominated by evergreen shrubs or bay trees. At AWMA baygalls are a tall, dense shrub community dominated by black and white titi (*Cliftonia monophylla* and *Cyrilla racemiflora*), often with lesser amounts of big gallberry (*Ilex coriacea*), shiny lyonia (*Lyonia lucida*) and wax myrtle (*Myrica cerifera*).
- (4) dome swamp - forested wetlands of primarily deciduous trees, often found in depressions within a flatwoods matrix. At AWMA, scattered taller trees of pond cypress (*Taxodium ascendens*) are often emergent over a closed canopy of black gum (*Nyssa biflora*); other frequent canopy trees include red maple (*Acer rubrum*) and sweetbay (*Magnolia virginiana*); the subcanopy is usually sparse, consisting of young trees of the canopy species and swamp bay (*Persea palustris*).
- (5) floodplain forest - At AWMA this community is found on broad flats along the Wacissa River and has a canopy composed of a mixture of species typical of hydric hammock, i.e., diamond-leaf oak (*Quercus laurifolia*) and sweetbay (*Magnolia virginiana*) and those typical of floodplain swamp, i.e., black gum (*Nyssa biflora*) and green ash (*Fraxinus pennsylvanica*).
- (6) floodplain swamp - primarily deciduous forest occurring along rivers and larger streams and composed of trees tolerant of prolonged flooding. This forest consists of a closed canopy of tall, straight trees with little shrub or herb layer and large areas of bare mucky soil exposed. At AWMA the canopy is dominated by green ash (*Fraxinus pennsylvanica*), bald cypress (*Taxodium distichum*), black gum (*Nyssa biflora*), and red maple (*Acer rubrum*). Large bald cypress stumps, 4-5 feet in diameter, are frequently encountered. At AWMA this community is found as a band along the Wacissa River and

also is intricately intermingled with the large hydric hammock community occupying a broad depression along the river drainage.

(7) hydric hammock - forested wetlands with a canopy of mixed deciduous and evergreen hardwoods, usually including diamond-leaf oak (*Quercus laurifolia*), with cabbage palm (*Sabal palmetto*) in the subcanopy, occurring in the ecotone between floodplain swamp and upland communities. Most of the hardwood forest at AWMA is hydric hammock, which occupies a broad lowland along the Wacissa River. The diverse, closed canopy consists of four equally abundant tree species, including (in addition to diamond-leaf oak), sweetbay (*Magnolia virginiana*), red maple (*Acer rubrum*), and sweetgum (*Liquidambar styraciflua*), with green ash (*Fraxinus pennsylvanica*), bald cypress (*Taxodium distichum*) and swamp black gum (*Nyssa biflora*) becoming more frequent in wetter depressions within this community. Along with cabbage palm, the subcanopy is often dominated by blue beech (*Carpinus caroliniana*), which may form a dense layer where the canopy trees have been thinned.

(8) mesic flatwoods - upland forest with an open pine canopy and understory composed of varying mixtures of shrubs and grasses. At AWMA this community is rare and occurs as two types, one type in the ecotone between hydric hammock and pine plantation along the west boundary of the WMA, and the second in an open area surrounded by hydric hammock south of U.S. 98.

(9) mesic hammock - upland forest of evergreen broadleaved trees. At AWMA this community is uncommon, found between mesic flatwoods and hydric hammock. It has a closed canopy of water oak (*Quercus nigra*), sweetgum (*Liquidambar styraciflua*) and loblolly pine (*Pinus taeda*), a subcanopy of cabbage palm (*Sabal palmetto*) and sparse shrub layer of wax myrtle (*Myrica cerifera*), yaupon (*Ilex vomitoria*) and saw palmetto (*Serenoa repens*).

(10) scrubby flatwoods - upland community similar to flatwoods in structure and species composition, but including scrub oaks. Only one small stand of this community occurs on AWMA, south of U.S. 98. It had a canopy of widely scattered slash pine (*Pinus elliottii*), a subcanopy of scattered cabbage palm (*Sabal palmetto*), sand laurel oak (*Quercus hemisphaerica*), and sand live oak (*Quercus geminata*)

(11) strand swamp - Strand swamp – forested wetlands of primarily deciduous trees occurring in shallow elongated depressions. At AWMA the structure and species composition of this community is similar to that of dome swamp, the main difference being the elongated narrow shape of the strand swamp.

(12) upland hardwood forest - Upland hardwood forest occurs along the Aucilla sinks and on higher areas within the broad depression occupied by hydric hammock, as well as between this community and the upland pine plantations bordering it. Areas of this community that are regenerating after disturbance are dominated by dense stands of young sand laurel oak (*Quercus hemisphaerica*) and water oak, 4-6" dbh, mingled with scattered upland hardwood canopy species and having little or no understory layers.

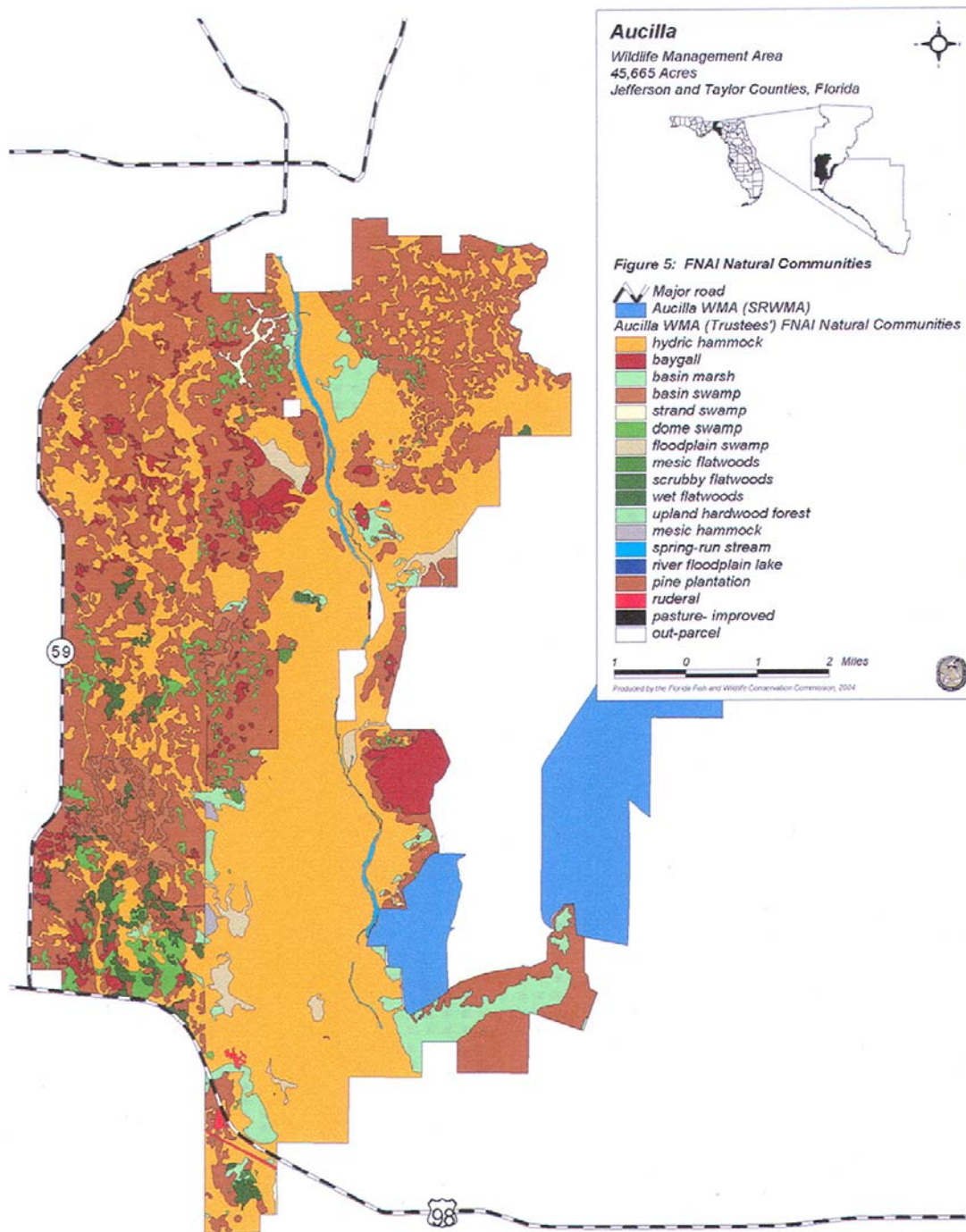


Figure 2. Natural Communities on Aucilla WMA.

Areas of this community that have been clearcut may be covered by an impenetrable stand of blackberry (*Rubus argutus*).

(13) wet flatwoods – wetland forest with pine canopy and shrubby and/or herbaceous understory. At AWMA this community occurs south of U.S. 98 and consists of woody islands of scattered slash pines (*Pinus elliottii*) over tall dense clumps of young trees and tall shrubs, including cabbage palm (*Sabal palmetto*), sweetbay (*Magnolia virginiana*), wax myrtle (*Myrica cerifera*) and saw palmetto (*Serenoa repens*). These islands alternate with open areas of sawgrass (*Cladium jamaicense*) and beakrushes (*Rhynchospora decurrens*, *R. divergens*), plus the subshrubs, St. John’s wort (*Hypericum brachyphyllum*) and Queen’s delight (*Stillingia aquatica*).

### Wildlife

The size and diversity of the AWMA creates a habitat mosaic for a variety of wildlife species. Resident wildlife is managed for optimum diversity and abundance. In addition to resident wildlife, AWMA provides resources critical to many migratory birds including waterfowl, passerines, raptors, shorebirds and others. Habitats important to migratory species are protected, maintained or enhanced.

Freshwater angling opportunities exist on many portions of AWMA. The most significant freshwater fisheries are on the interior of the property and consist of the Wacissa River, Aucilla River Sinks and Western Sloughs. These natural fisheries support many species of game fish, including largemouth bass, catfish and several species of sunfish. Other natural fisheries are found in streams, creeks and small ponds throughout the area. All fisheries management is implemented through the FWC Division of Freshwater Fisheries.

### Especially rare or unique species

Wood stork (Wacissa River)  
American alligator (Wacissa River)  
Bald eagle (area wide)  
Florida black bear (area wide)  
Gopher tortoise (pine uplands)  
Limpkin (Wacissa River)  
Little blue heron (Wacissa River)  
Reddish egret (Wacissa River)  
Snowy egret (Wacissa River)  
Tricolored heron (Wacissa River)  
White ibis (Wacissa River)

### Species of particular interest to visitors

Swallowtail kite (Wacissa River )

Florida Black Bear (area wide)  
River Otter (Wacissa River)  
Bald Eagle (area wide)  
Limpkin (Wacissa River)  
American Alligator (Wacissa River)

### Scenic Resources

The Wacissa and Aucilla Rivers that flow through portions of AWMA offer an excellent scenic river corridor experience to boaters and paddlers. Of particular interest are the many springs that feed the Wacissa and the sinks and shoals associated with the Aucilla. The Slave Canal, a man-made waterway connecting the Wacissa River to the Aucilla River, offers a distinctive wilderness canoe or kayak adventure for those willing to undertake the effort.

The Aucilla River sinks geologic formations offer unique viewing opportunities for those interested in karst features including the many sinkholes and caves created by the disappearing and resurfacing of the river.

Good examples of many upland and bottomland/wetland natural community types can be viewed throughout AWMA particularly along the tram roads in the Western Sloughs area. Hardwood hammock islands covered with zephyr lilies and wild iris are one of the striking features of early spring.

### Cultural Resources

The AWMA has some of the most bountiful paleontological resources found in the southeastern United States resulting from the 12,000 years of human activity in the area.

To date, 248 cultural sites have been documented on the area by the Florida Department of State, Division of Historical Resources (DHR), including 25 Native American burial sites. There is a high probability that many sites remain unknown or undocumented.

In 1995 The Aucilla River Prehistory Project (ARPP) initiated a comprehensive underwater archaeological effort to reveal and understand the rich prehistoric record of the Aucilla River. Since then, this collaboration of scientist, students, and volunteers has contributed greatly toward understanding plant and animal interactions in the Pleistocene landscape of Florida by uncovering a wealth of stratified evidence including lithics, wood (and other plant remains), bones, teeth, and hair.

### Resource Management

FWC has initiated an objective-based approach to habitat management on Trustees-owned lands where the FWC is designated lead manager. This approach includes delineation of management units, determination of management objectives for those units, and regular plant community monitoring.

In general, hardwood stands will be allowed to succeed naturally and will not be harvested or otherwise disturbed except for the control of invasive plants. Many pine plantations on the property are comprised of off-site pine species. Where feasible, off-site pines will be removed, and the site restored to the naturally occurring plant community. Bedding will not be used during replanting and restoration efforts. Portions of converted off-site forest stands will be selected and maintained in an open early successional stage to provide valuable habitat for wildlife species that depend on this type of community. Re-establishment and maintenance of native groundcover species is a key element in the overall management of pine communities. Equally important in some natural communities (e.g. mesic flatwoods) is the development of a midstory and appropriate vertical diversity within the stands. Prescribed burning and thinning of pine stands will continue to be the primary technique used to effect understory establishment and maintenance. A prescribed burning plan has been developed for the fire-dependent communities of AWMA. Prescribed fire, mechanical, and chemical treatments will be used to control invasive exotic plant species including known occurrences of cogon grass and Japanese climbing fern.

The size and diversity of the AWMA creates a habitat mosaic for a variety of wildlife species. Resident wildlife is managed for optimum diversity and abundance. In addition to resident wildlife, AWMA provides resources critical to many migratory birds including waterfowl, passerines, raptors, shorebirds and others. Habitats important to migratory species are protected, maintained or enhanced. Management practices are designed to restore, enhance or maintain listed species and their habitats.

Portions of disturbed sites are managed to specifically benefit wildlife species that thrive in open early successional plant communities. Selected roads and clearcuts are planted in non-invasive agronomic plants such as millet and wheat, or maintained in natural grasses and forbs to (1) provide forage for quail, dove, deer, and wild turkey, and (2) enhance wildlife viewing opportunities. These sites also benefit numerous non-game species including the southeastern American kestrel, red-shouldered hawk, red-tailed hawk, northern harrier, barred owl, great-horned owl, eastern meadowlark, common ground dove, and eastern bluebird.

In general, game wildlife populations are managed to provide recreational sport hunting opportunities. The feral hog is a popular game species on AWMA. This exotic species is controlled on the area by providing a variety of public hunting opportunities. Impacts associated with feral hogs will continue to be monitored.

The floodplain swamps and hammocks along the Wacissa River, including the Western Sloughs will be preserved in order to maintain natural hydroperiods and the integrity of the system. Past management practices have significantly altered the natural hydrology of the area. These include the construction of logging trams and ditches, as well as bedding practices on pine plantations. Bedding practices channel water and impede the movement of fire across these sites. The hydrology of the area will be evaluated to determine appropriate restoration. During reforestation efforts the practice of bedding

will not be used. All hydrological restoration plans and management activities will be implemented in cooperation and coordination with the SRWMD.

Many of the cultural and paleontological sites known to occur have been degraded due to unauthorized collection of artifacts, paleontological relicts and human remains. FWC will continue to aggressively enforce current laws and regulations governing the collection of artifacts on state-owned lands, and continue to coordinate with DHR to ensure the protection of these valuable resources. Management activities on the area will be planned to minimize any disturbance to existing historical and archaeological sites, and sites with a high potential for archaeological site presence.

Access to the property is restricted as necessary to protect sensitive or critical habitats and to minimize disturbance to wildlife and cultural resources. To help meet management goals a formal assessment is being conducted to develop an access management plan for the area.

### **III. Interpretation**

#### Interpretive Themes

Interpretive themes are categorized as primary and secondary. Primary themes are critical concepts that we want visitors to remember after they have left AWMA. Primary themes help set visitor experience goals and priorities and are considered in the design of amenities offered to nature-based recreationists. Secondary themes are important but are not quite as significant as primary themes.

#### **Primary Interpretive Themes**

1. The human relationship with the wildlife-rich landscape of the Aucilla River basin extends back 12,000 years to the time when mastodons roamed Florida. With good management by FWC and stewardship by area users, wildlife viewing and related recreation opportunities will extend well into the future.
2. Springs reflect the health of our drinking water supplies (the aquifer). How we manage the land directly affects the purity and quantity of these rivers.

#### **Secondary Interpretive Themes**

We will use the preceding themes to drive the design of amenities we offer to nature-based recreationists, bolstered by the following secondary material, which will be the “bones” of the story we hope our visitors will remember.

##### **1. Wildlife**

The extensive forested wetlands on AWMA support a rich variety of wildlife, including many game species and a sizable black bear population. The rivers are home to such

notable species as bald eagles, swallow-tailed kites, limpkins and the rare and regionally endemic Suwannee bass.

The Aucilla river is a time machine, revealing the stratified record of plant and animal interactions of the Pleistocene era when cave bears, giant ground sloths, lions, saber-tooth tigers, horses, and llamas roamed a landscape that resembled the African savannah of today [see article: <http://www.littletownmart.com/fdh/mammoths.htm>]

## **2. Geology/Hydrology**

The geologic history of the karst landscape is evident in the unique assemblage of clear water and black water springs, sinks, runs and windows. The Wacissa River alone is home to over a dozen springs, including 'Big Blue' a very popular swimming hole.

For many Floridians it is rare to encounter a landscape full of rocks: in Aucilla, many areas are riddled with large chunks of limestone, often revealing their prehistoric past with small embedded fossil shells.

## **3. Restoration**

The restoration of historic natural communities including introduction of fire management practices, and the restoration of natural hydrologic flow are priorities of the management staff .

This landscape underwent drastic changes during the logging era; clues are the tram roads and large tree stumps.

## **4. Special Feature**

One of the most famous historical features on the property is the *Slave Canal*. This connector channel dug between the Wacissa River and the Aucilla River has been a popular and fabled destination for local paddlers for years. It was originally dug in the 1800s to allow cotton to be hauled down the Wacissa River, through the canal, and out the Aucilla River to the Gulf of Mexico for shipment.

### Visitor Experience Goals

At AWMA, the FWC will provide opportunities for visitors to:

1. Become oriented to and participate in a range of recreational activities on AWMA and adjoining natural areas while:
  - becoming acquainted with wildlife and natural plant communities on the AWMA and
  - understanding AWMA's natural, cultural and commercial history, in context with the history and prehistory of Florida.

2. Learn information and stories associated with major interpretive themes, and other related information, through interpretive materials accompanying welcome kiosks, and hiking and biking trails, and wildlife viewing facilities.
3. Have an enjoyable recreational experience without impairing the natural and cultural values of the site. In terms of wildlife viewing, FWC's goal will be to facilitate positive, memorable experiences that keep wildlife disturbances to a minimum.
4. Understand the management role and goals of the FWC on AWMA.

#### **IV. Recreation Assessment**

##### Appropriate Recreational Uses on AWMA

AWMA lands and waters will be managed for a variety of high quality nature-based recreational and interpretation experiences. These activities will be managed by means of time or space separation to provide high quality, uncrowded outdoor experiences. An effort will be made to identify possible incompatibilities among user groups and resolve them through this spatial or temporal separation of conflicting uses. Interpretive programs for natural and cultural resources will include informational signs and kiosks and printed interpretive materials.

Based on the interpretive themes developed for the area, the analysis of existing resources and uses, and the approved uses and activities as stated in the current Conceptual Management Plan, the following activities should be continued and enhanced on AWMA:

- Hunting
- Fishing
- Wildlife viewing
- Nature study
- Photography
- Hiking
- Biking
- Paddling
- Horseback riding
- Picnicking

The 2000 Florida Statewide Comprehensive Outdoor Recreation Plan (SCORP) indicates that saltwater beach activities, bicycle riding, and visiting archaeological and historic sites are currently the most popular resource-based activities in the Apalachee Region. The plan identified a need for resources and facilities to meet a regional demand for bicycle trails through 2010.

Future land use and development patterns in the Big Bend Region will certainly have implications for recreation planning on AWMA. The rapid conversion of St. Joe properties from agricultural and forest land to suburban developments (Southwood, Fanlew Preserve, White Fence Farms, and St. Marks Reserve) will result in a substantial increase in the population within a 20 to 30 minute drive of AWMA in the near future. Adding to the development pressure is the planned Northern Extension of the Florida Turnpike and the Suncoast Expressway, limited access highways that are being constructed to take pressure off of I-75 in north Florida. Once completed, the new highways are expected to generate a large increase in traffic on U.S. 19 through the Big Bend. Increased traffic translates into more tourism and development in the region which will increase the recreational demand and use on all conservation lands in the vicinity of AWMA.

### Existing Recreational Use and Facilities

A map which locates existing site features and facilities is provided in Figure 3.

### **Public Access/Entrances:**

AWMA is open to public access year-round. Motor vehicles may be operated only on designated roads and only in those areas that have not been closed to vehicular traffic. The use of all-terrain vehicles (ATV's) is prohibited.

As a result of the past land use of forestry and logging, the area contains an extensive grid of unpaved roads (approximately 172 miles) with many access points from surrounding public roads. Many of the area roads are in relatively good condition allowing for vehicular access throughout much of the property resulting in a number of management problems. An assessment of the road network was recently conducted FWC to propose designations of roads to determine their level of use, trafficability, and maintenance schedules. Restoring hydrology, protecting cultural resources and facilitating traditional forms of recreation were also considered.

Recommendations from the proposed access plan (Appendix 5) include maintaining 9 miles of primary roads, 55 miles of secondary roads, 32 miles of unimproved roads, and 25 miles of administrative/service roads. Fifty-one miles of roads would be closed and the number of entrances would be reduced to six except during general gun season when most access points would remain open.

AWMA has four distinct management units/use areas (Western Pines (the area between the Wacissa River and Highway 59), Western Sloughs, Aucilla Sinks, and the Small Game Unit). Presently, there is no road or trail access between the units due to wetland, river or highway barriers. The disjunct nature of the units creates special challenges for locating and developing one central visitor contact points. Some location options are discussed at the end of this section.

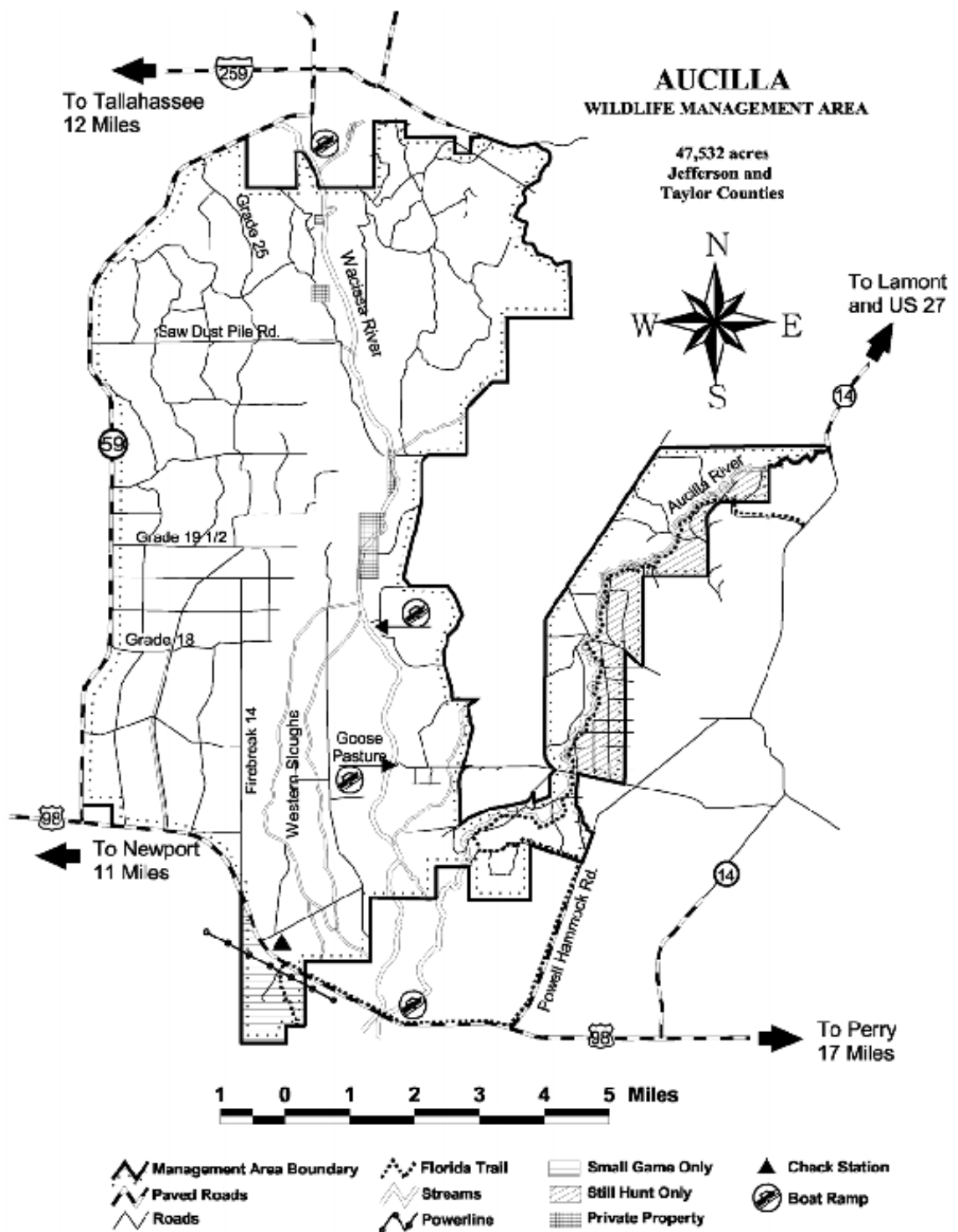


Figure 3. Existing Facilities on AWMA

## Western Sloughs

The intersection of the tram road into Western Sloughs and Highway 98 is the primary entrance into the area. This location features a primary entrance sign, a picnic shelter with one table, established parking for several cars, a pedestal grill, and a bulletin board with hunting regulation information.

The unpaved road into the Small Game Unit provides the only vehicular access on the south side of Highway 98. Located at this intersection is a small kiosk and a secondary entrance sign. A segment of the Florida Trail traverses this portion of the property.

The primary entrance at Western Sloughs could be improved with the addition of a large information kiosk with a map panel and other materials to orient visitors and provide information about available recreation opportunities on the area. The problem with locating a primary entrance kiosk at this location is that many of the recreation opportunities on the area are not accessible from this entrance.

## Western Pines

AWMA is also accessed by a series of roads located along Highway 59, most of which are gated and unmarked. Currently, Saw Dust Pile Road and Grade 25 provide year round access to the interior of the property and to a private private inholding on the Wacissa River. In the Proposed Access Plan for Aucilla Wildlife Management Area (Appendix 5), it is recommended that Grade 25 remain as a year round entrance, Saw Dust Pile Road be changed to a hunting season only access, and that Grade 17 be changed to year round entrance.

It is recommended that an entrance kiosk and small parking area be established at Grade 25. Information on the kiosk would include a map of the Western Pines roads and an interpretive panel to describe the restoration activities in the area. In the future, Grade 17 could receive the same treatment should it be warranted by an increase in visitors.

## Aucilla Sinks

The Florida Trail runs along the Aucilla River on the north side of Goose Pasture Road. It enters the property south of Goose Pasture Road and continues south through the Aucilla Sinks area for a few miles before turning east to Powell Hammock Road. Florida Trail markers and blazes identify the trail as it enters the property. There is no signage at this point that would inform visitors of the unique geological features in the area.

Where the Florida Trail enters the property, south of Goose Pasture Road, it is recommended that a trailhead be established to enhance the visitor experience. The facility should include a small parking area and a kiosk with a map and interpretive information. Due to the high risk of vandalism on Goose Pasture Road, it might be better to locate the kiosk further down the trail to be out of sight from passing vehicles.

With the permission of SRWMD, an area map posted in a kiosk at the Goose Pasture Recreation Area could be used to better inform boaters about access to the Wacissa River and the Aucilla River via the Slave Canal.

### **Hunting:**

Hunting is a major traditional recreational use of these lands. Hunting opportunities currently provided include a variety of hunting seasons including archery, muzzleloading gun, general (modern) gun, small game, and spring turkey.

Deer, wild hog, turkey, and gray squirrel are the favored game species on the area. Rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria, bobcat, otter, and migratory birds are also taken.

For the 2005-06 season, AWMA offererd 184 hunting days for the following hunt types:

- Archery - September 24-October 23
- Muzzleloading Gun – October 28-30
- General Gun – November 12-January 8
- Small Game – January 9-March 5
- Spring Turkey – March 18-April 23
- Trapping – January 9-March 1

Quotas limiting the number of hunters accessing the area during certain hunting seasons are employed as necessary in order to provide a safe, high-quality-hunting experience. Quota permit information for the 2005-06 season is listed below.

- Muzzleloading Gun: 550, no-cost, special quota permits
- General Gun (first nine days only): 550, no-cost, regular quota permits

Shooting hours are one-half hour before sunrise until one-half an hour after sunset except for spring turkey season when shooting ends at 1 p.m.

The highest hunting use on the area occurs during the General Gun season by dog hunters for deer. Most of this activity occurs in the Western Pines area, between Highway 59 and the Wacissa River, where the grid of forest roads creates a convenient pattern of hunting blocks.

The area is open to other uses during hunting season so there is the potential for conflicts between hunters and other area users. Although there have been no reported conflicts, it would be wise to clearly communicate hunting days and hours at all entrances to the property to minimize the likelihood of problems in the future. While the entrance to Western Sloughs is well defined and well posted, information at other entrances is generally lacking.

## **Fishing**

Aucilla WMA offers several different fishing opportunities. The Western Sloughs are popular with bank fishermen who target redbreast sunfish, redear sunfish (shellcracker), spotted sunfish (stumpknocker), bluegill and largemouth bass. Several footbridges provide access to both sides of a small stream that runs along the main tram road. Several small, roadside benches have also been provided for bank fishermen.

The Aucilla River Sinks is a good place to combine hiking along the Florida National Scenic Trail with fishing in the numerous sinkholes and river rises for bream and catfish.

The Wacissa River offers many angling opportunities for various species of bream. Early mornings out of Goose Pasture campground can be productive for largemouth bass. The Wacissa is one of only a handful of rivers in north Florida with Suwannee bass, a smaller cousin to the largemouth bass.

There are currently no known or reported areas of conflict between anglers and other users.

## **Wildlife Viewing and Nature Study**

The best way to see wildlife on the area is by canoe or kayak early in the morning or evening or by walking quietly along the Aucilla Sinks Trail or the many unimproved roads that bisect the area. Along the Wacissa, visitors may see the prothonotary and yellow-throated warbler, black-crowned night heron, yellow-crowned night heron, nesting osprey, limpkin, white ibis and purple gallinule. The endangered wood stork is found in marshy areas and often feeds in ditches. Pine warblers are common in the pinelands, and Swainson's warbler, although uncommon, is sometimes seen in shrubby moist undergrowth. Red-shouldered hawks are common and nest along the Florida Trail at Aucilla Sinks. White-eyed vireos are also common year round. Acadian flycatchers and hooded warblers commonly nest in moist, swampy forests, and the great crested flycatcher is an abundant breeding bird throughout. In the late summer scores of swallow-tailed kites gather in the cypress along the river before their migration to South America for the winter. Occasionally, visitors will get a fleeting glimpse of the Florida Black bear as they cross area roads.

Portions of disturbed sites are managed to specifically benefit wildlife species that thrive in open early successional plant communities. Selected roads and clearcuts are planted in non-invasive agronomic plants such as millet and wheat, or maintained in natural grasses and forbs to (1) provide forage for quail, dove, deer, and wild turkey, and (2) enhance wildlife viewing opportunities. These sites also benefit numerous non-game species including the southeastern American kestrel, red-shouldered hawk, red-tailed hawk, northern harrier, barred owl, great-horned owl, eastern meadowlark, common ground dove, and eastern bluebird.

The Aucilla Sinks is a unique geological area that visitors can currently experience as they hike along the FNST which traverses the area. A strategically constructed observation platform on the rim of one of the sinks would allow visitors to observe the sink up close without damaging the rim. Interpretive panels could be mounted on the guard rails to educate visitors about the geology and sensitivity of these formations.

### **Boating/Paddling**

The Wacissa River, a state designated canoe trail, is a very popular Big Bend paddling and boating destination. The cold, spring-fed waters draw crowds to the headwaters and Big Blue Springs every summer. The mornings and evenings offer visitors an impressive variety of wildlife viewing opportunities. Twelve major springs feed the Wacissa River as it winds its way through swampy lowlands. The suggested paddling trail is 14 miles long. It begins at the head springs landing, approximately one mile south of the community of Wacissa and terminates at Nuttall Rise just north of Highway 98. Approximately 6 miles downstream from the headsprings an old tram crossing obstructs the passage for larger motor boats during low water stages. Below Goose Pasture, the trail follows the Slave Canal to Nuttall Rise. This scenic waterway was constructed during Antebellum times to get cotton barges through the Western Sloughs.

#### Wacissa River Access Points

The following Wacissa River access points, from north to south, are delineated on Figure 4.

Wacissa Landing is located just south of Wacissa at the head springs. This launch is maintained by Jefferson County. During the warmer months, especially on weekends, this landing is often loud and crowded with swimmers, boaters, and picnickers. The noise level increases dramatically when airboats and jet skis are launched here, as they frequently are on weekends.

Calico Hill Landing is located on the west side of Wacissa River on AWMA. It is accessible from Saw Dust Pile Road in the Western Pines section. If the nearby inholding were acquired in the future, this location could provide paddlers access to the river well downstream (approximately two miles) from the heavily used, and often raucous, Wacissa Landing. Constraints to promoting and improving this landing are the possible disturbances to the adjacent archaeological site and forested wetland.

Welaunee Landing is on the east side of the Wacissa River on AWMA. The launch is hardened. This site could offer another alternative to launching at the heads springs.

Goose Pasture is located on the east side of the Wacissa River. The improved launch (concrete ramp) and campground are maintained by Suwannee River WMD.

## Aucilla River Access Points

The Aucilla River is also a state designated canoe trail. The trail starts one mile south of Lamont on U.S. Highway 19/27 and continues for 19 miles to a point where the river disappears underground just north of Goose Pasture Road and becomes a string of deep sinks before finally reappearing near the village of Nuttall Rise. Some rocky shoals and whitewater make this trip moderately strenuous. The "Big Rapid" is a rock-strewn drop of 8-10 feet over about 30 yards.

The dark, tannic waters are very different from those of the Wacissa as they pass between high limestone banks and dense hardwood forests in some sections, and swampy areas of cypress and gums in others. The Aucilla regularly floods its banks in times of heavy rainfall.

The following Aucilla River access points, from north to south, are delineated on Figure 4:

The SRWMD maintains nine access points on the Aucilla River between County Road 14 and Goose Pasture Road. None of the landings have been hardened.

Aucilla Ramps #1 - # 6 - Located on the east side of the river.

Aucilla Ramps #7 - #9 - Located on the west side of the river.

Half Mile Rise Landing is located on the east side of the Aucilla River. It is accessible from Powell Hammock Road in the Goose Pasture section. The launch provides access to an isolated section of the Aucilla River approximately 1.5 miles in length.

Nuttall Rise Landing is located just north of Highway 98 on the east side of the river. This improved concrete launch is maintained by Taylor County.

For the most part, canoes, kayaks and small motor boats, are the most commonly used craft on the Wacissa and Aucilla Rivers. There is no size restriction on motors but smaller sizes are more appropriate in these shallow water bodies. Airboats and jet skis are commonly operated in the upper reaches of the Wacissa River, particularly on weekends during the summer months. To date there have been no reported collisions between paddlers and boaters.

FWC could help alleviate potential problems and conflicts by developing facilities and information that would provide and promote spatial and temporal separation of paddlers and motor boaters. One facility that could potentially be developed is a canoe/kayak launch in the vicinity of Calico Hill. This location, approximately two miles south of Wacissa Landing would allow paddlers to launch in a peaceful setting that is more in keeping with their expectations. At visitor contact points, FWC could provide detailed maps with launch sites, shuttle information, trip lengths, camp sites, descriptions of river

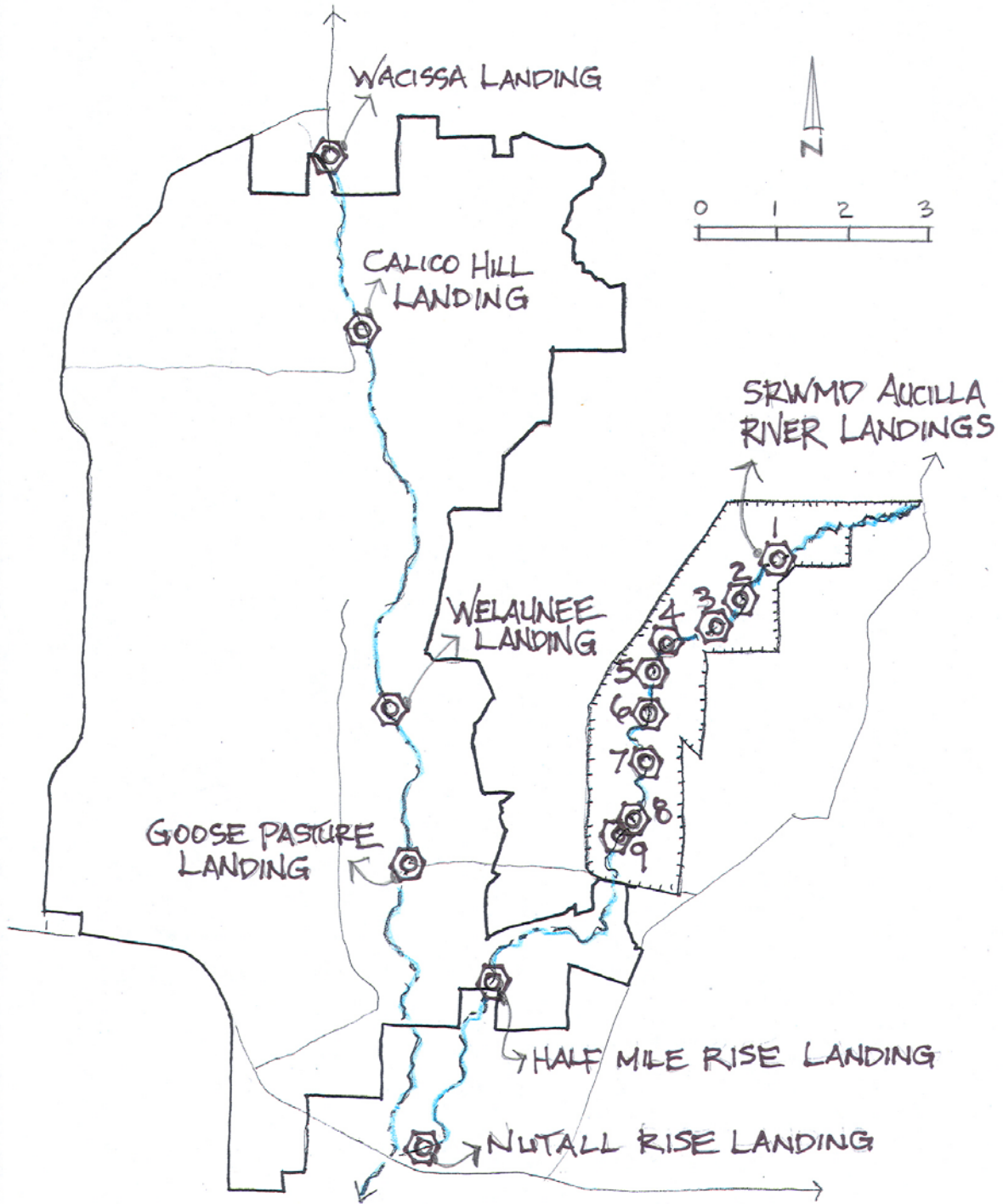


Figure 4. Wacissa and Aucilla River Access Points

conditions, safety information, etc. The information could be posted on kiosks and provided in a paddling/boating guide. Collaboration with the Suwannee River Water Management District on such a guide may be a possibility and should be explored further.

## **Hiking**

Hiking opportunities on designated trails are currently available on a section of the Florida National Scenic Trail (FNST) that traverses the banks of the Aucilla River, the Aucilla Sinks area and certain area roads (Figure 3).

### **Aucilla River Trail**

For approximately 7 miles, from a point just south of Walker Springs bridge to Goose Pasture Road, this section of the trail follows the east bank of the Aucilla River on SRWMD property. The banks are high and steep and heavily wooded.

### **Aucilla Sinks Trail**

According to Elizabeth Carter in *A Hiking Guide to Florida*, “Searching for the sinkholes makes for a fascinating hike since the woods are heavily forested with beautiful magnolia, oaks and other hardwoods.” North of Goose Pasture there are Roadside and Overflow Sinks and the Silver Blaze Tree, a 1984 commemoration of the completion of a major connection of the Florida Trail. Many more sinks can be found south of Goose Pasture Road including Chocolate, New, Mosquito Slap, Hurry Up, Kitchen, Long Suffering, Watts, Frink, Sunshine, Long, and Break-down Sinks.

Through the years some of the sinks have suffered significant erosion damage along their rims and sides caused by curious hikers who are naturally drawn to these scenic geological treasures. Where possible the FNST should be realigned through the area to route hikers away from the sensitive edges of the sinks. This won't totally alleviate the problem, as hikers will always be tempted to leave the designated trail explore the sinks. It is essential to post good interpretive information that describes the history of the sinks, their sensitivity and the negative impacts caused by too much foot traffic around their edges. The construction of at least one overlook structure should be considered so that hikers are provided a safe, sustainable alternative for sink viewing thereby satisfying the urge to explore and taking the pressure off of other sinks.

The U.S. Forest Service and FWC examining the feasibility of routing the FNST over the Wacissa River and Slave Canal via two pedestrian bridges. The proposed route would enable hikers to traverse a forested wetlands and connect to the Western Sloughs Road on the way south to the St. Marks Wildlife Refuge thus avoiding an unpleasant stretch of roadside hiking on Powell Hammock Road and Highway 98.

Another hiking opportunity exists in the Western Sloughs area to the east of Western Sloughs Road. There are several tram roads that penetrate the swamp on

either side of this road. Platforms or benches could be installed at the end of selected trams. This would allow visitors to travel as much as half a mile into the swamp without getting their feet wet.

### **Camping:**

Primitive camping (tents only) is allowed at designated sites along the Florida Trail.

### **Biking**

There are bicycling opportunities along approximately 9 miles of trams within the Western Sloughs area, accessible from Highway 98. Biking is also possible on the grid of forest roads in the Western Pines area. The scenery should improve here in the future as the rows of planted pines take on a more natural appearance as FWC restores this area.

### **Horseback Riding**

Currently, equestrian use on AWMA is low. Riding may increase in the future, as surrounding St. Joe properties are developed. Should demand increase in the future, the Western Pines area is the most appropriate section in which to provide trails and facilities for equestrians. Routes should be designated along existing secondary roads and trails with the fewest number of gravel low water crossings. Accommodating equestrians will also require trailer parking at a selected entrance.

### Recreation Management Zones

Recreation studies demonstrate that visitors come to recreate on public lands with many different expectations (NPS, 1997). Providing a variety of settings allows visitors to select the type of experience they desire, simplifies management and reduces conflicts between visitors who are seeking different types of experiences. The zones delineated by the planning team are provided on Figure 5: Recreation Management Zones. Each zone is described below in terms of the type of experience it offers, the natural resources related to the experience and the level of management required.

#### **Semi-primitive Zone**

The semi-primitive zone provides a sense of being immersed in a natural landscape with opportunities for solitude. Observation structures, boardwalks, interpretative signs, and unpaved trails are the types of recreational facilities that are appropriate in this zone. A moderate level of management is provided for resource protection and safety.

The primary community types that visitors will experience in the semi-primitive zone on AWMA are Flatwoods, Hardwood Hammocks and Cypress Swamps. Here they can learn about the complex relationship of upland and wetland communities in providing critical habitat to many species of wildlife. In the Western Pines area, visitors will be

able to see the process of natural community restoration as the planted pine stands are restored to flatwoods through ecological management.

### **Developed Zone**

Developed zones are areas with visitor facilities such as parking, picnicking and toilets. The visitor's experience in this zone is highly social. Trails may be paved or hardened for access by people with disabilities. Visitors and facilities are intensively managed in this zone for resource protection and safety purposes. Staff should monitor visitor behavior and attend to maintenance needs. The most intensive interpretation is provided in the developed zone. This is the most appropriate zone for building construction.

Currently, the most used developed visitor contact zones are the Wacissa and Goose Pasture Landings, neither of which is managed by FWC. It is recommended that FWC partner with SRWMD to improve the visitor information/interpretation at the Goose Pasture Landing. The same should be considered for the Wacissa Landing in partnership with Jefferson County as this is a major gateway to AWMA (the potential for vandalism at this site is a major constraint to such efforts).

### **Sensitive Resource Protection Zone**

Sensitive resource protection zones encompass areas with fragile habitats, rare and endangered species, archaeological/historical sites, and steep slopes. This zone can support little visitor impact. Only limited and strictly controlled access should be allowed for interpretation purposes.

The forested wetlands in the Western Sloughs and along the Wacissa and Aucilla Rivers should be classified as sensitive zones. The Aucilla Sinks geological area is another sensitive zone along with all archaeological sites.

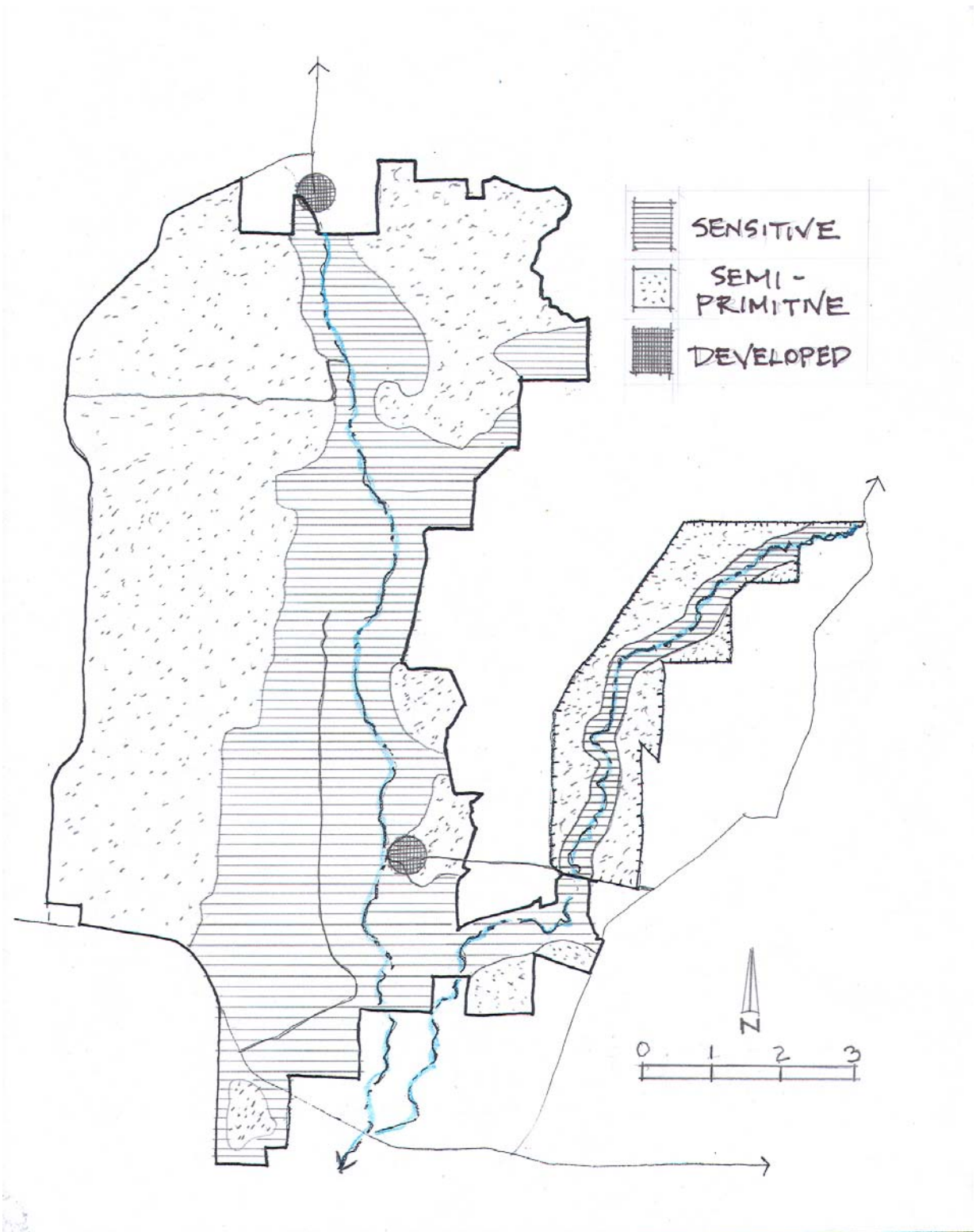


Figure 5. AWMA Recreation Management Zones

## V. Recreation Prescriptions

### Proposed Visitor Experiences and Recreation Facilities

The following narrative describes the overall experience that is intended for visitors to AWMA. A conceptual site plan for proposed recreation facilities is provided in Figure 6.

When visitors arrive at the primary visitor contact point they can stop at an information kiosk to review a large map and learn about all the recreational opportunities available on the area, including paddling, fishing, hiking, biking, and wildlife viewing. Area bird lists and recreational guides will also be available at this kiosk *[Note: There is a problem with locating a primary entrance kiosk at the Western Sloughs entrance in that many of the recreation opportunities on the area as a whole are not accessible from this entrance. It may be more effective to locate the kiosk and recreational information at a visitor contact point in the Wacissa community, on a private, commercial property such as J.R.'s store on Highway 98, or some type of roadside pulloff. Several options should be evaluated to select the most appropriate location].*

From the Western Sloughs entrance, visitors can hike, bike or drive on nine miles of tram roads to experience the shady, scenic hardwood swamps of the Western Sloughs. Trails off the main road provide hikers with the opportunity to experience the deepest interior of the swamp. Winter hiking is recommended to avoid high water and insects. Interpretive panels at selected trams describe the ecology and hydrology of the swamp.

Other hiking opportunities can be found on the east side of the property in the Aucilla River area. South of Goose Pasture Road, the Aucilla River rises and disappears in a series of beautiful limestone sinkholes along a two mile portion of the FNST. On the edge of one of the sinks a wooden observation structure provides visitors a safe vantage point for sinkhole viewing. Interpretive panels mounted on the structure tell the story of these unique geological formations. North of Goose Pasture Road, hikers can see the Aucilla River disappear underground. They can follow the trail north (on SRWMD property) along the east bank for approximately seven miles until the trail veers sharply east away from the river.

In the Western Pines area, the network of forest roads provides bikers and motorists the opportunity to wander through a maze of planted pines on its way to being restored to natural flatwoods conditions. Wading birds are commonly seen feeding in the roadside

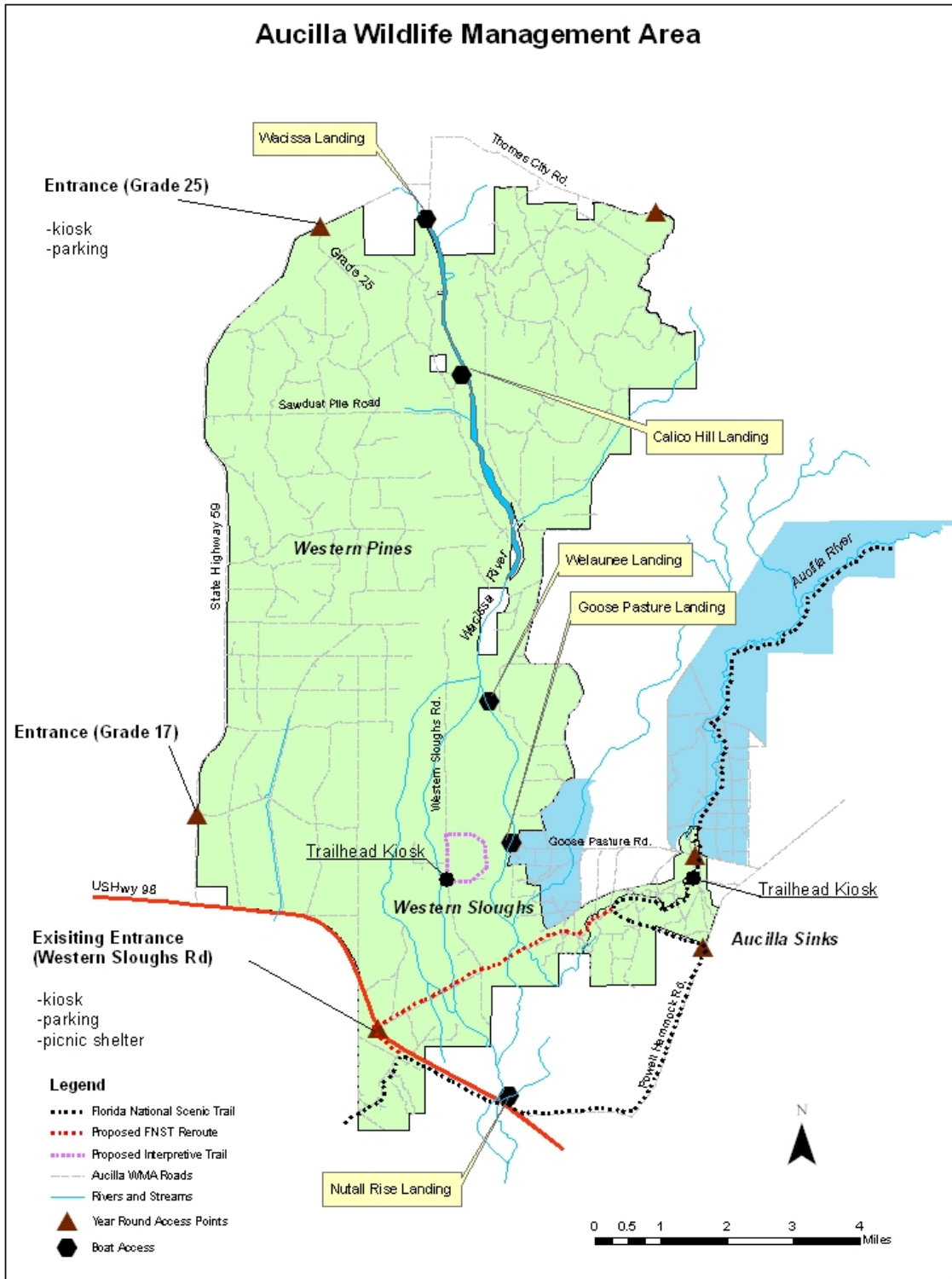


Figure 6. AWMA Conceptual Site Plan.

ditches, especially after a high water event. On occasion, the observant and lucky visitor may spot a black bear as it crosses one of the area roads.

### Recommended Nature-Based Recreation Goals and Objectives

Careful design and placement of recreational facilities can provide suitable visitor experiences and minimize impacts to the natural and cultural history of the area. All planning and implementation should be done in accordance with guidelines in Appendix 1. A conceptual site plan for proposed recreation facilities is provided in Figure 6.

#### **Goal A. Orient visitors to the area and its recreation opportunities and provide interpretive information**

1. Install information kiosks at key visitor contact points. Each kiosk would provide an area map, information about recreational opportunities on the area, and interpretive information about area wildlife, plant communities, historical/cultural resources and FWC's management role.
2. Develop area trail/paddling guide in collaboration with SRWMD
3. Develop and install new interpretive and wayfinding signs at appropriate locations (as described in the sign plan, Appendix 3).
4. Maintain up-to-date information about the area on the FWC website.

#### **Goal B: Design and implement recreational trail opportunities**

1. Develop interpretive trails on selected trams in the forested wetlands of Western Sloughs. New trails should be designed to enhance wildlife viewing opportunities and the overall interpretive program.
2. Work in partnership with the Florida Trail Association to assess the feasibility of routing the Florida National Scenic Trail through the Western Sloughs.
3. Determine the feasibility (and desirability) of developing a driving tour illustrate and explain the restoration of the Western Pines area.
4. Determine the feasibility (and desirability) of developing biking and equestrian routes along roads in the Western Pines area.
5. Develop a hiking trail guide for the.

**Goal C. Enhance the Wacissa and Aucilla River Paddling Trails**

1. Where necessary, install wayfinding signs to guide paddlers.
2. If private inholdings are acquired, explore the feasibility of improving the Calico Hill Landing to provide paddlers an alternative to launching at the very busy Wacissa Landing.
3. Develop a paddling guide for the Wacissa and Aucilla Rivers in partnership with the SRWMD (consider including the Econfina River in the guide).
4. Improve/promote Welaunee Landing for paddlers.

**Goal D. Renovate facilities and develop new wildlife viewing/recreation opportunities on AWMA**

1. Provide a sinkhole/wildlife viewing opportunity on the Aucilla Sinks Trail.
2. Improve picnic facilities at the Western Sloughs entrance.
3. Improve/promote Welaunee Landing for paddlers.

**Goal E: Direct and manage recreational use to minimize negative resource impacts and maximize visitor satisfaction**

1. Implement a monitoring strategy to assess resource impacts and institute corrective management actions if indicators begin to approach standards.
2. Collect and evaluate information about visitor use and satisfaction:
  - Number of visitors to the area and patterns of visitation
  - User group conflicts
  - Origin and length of stay
  - Motivations for visiting and preferred experiences
  - What they already know about the area, and primary interpretive themes

**Goal F. Coordinate with local, state and federal agencies and organizations when planning and implementing nature-based recreation opportunities**

1. Partner with the Florida Trail Association and the US Forest Service to assess the feasibility of constructing pedestrian bridges over the Wacissa River and the Slave Canal so the FNST can be rerouted through the Western Sloughs area.

2. Partner with the SRWMD to develop a paddling guide for the Wacissa and Aucilla Rivers.
3. Partner with SRWMD to enhance orientation and interpretive information at the Goose Pasture Landing.

## **Challenges and Strategies**

There are numerous challenges facing the effective implementation and management of nature-based recreation opportunities on the AWMA. Challenges and proposed strategies to address them are discussed in this section.

### Challenges:

- There is not a primary area in which to concentrate recreational use and wildlife viewing facilities due to the extensive wetlands and bisection of the area by two rivers.
- As recreational uses expand in scope and increase in volume, resource impacts may occur. Sensitive plant communities, wildlife habitats, geological features, and archaeological site could be adversely affected from soil disturbances resulting from inappropriate hiking, biking and boating activities.
- As recreational uses expand in scope and increase in volume conflicts among user groups may occur.

### Strategies:

- Distribute area information from all visitor contact points.
- Concentrate recreational planning and development on river-based wildlife viewing and nature study.
- Avoid sensitive environments to the greatest degree possible when planning for recreational uses. Always provide environmental protection information in all interpretive materials. Continually monitor all recreational uses for environmental impacts and implement corrective actions when and where necessary.
- Provide a range of recreational opportunities in a variety of settings to avoid user conflicts as much as possible.
- Display hunting information (days and times) at primary entrances to help all users make choices as to when to visit.

## **Work Plans**

As annual work plans and budgets are developed for AWMA, Recreation Services staff will assist the area manager with developing cost estimates for nature-based recreation related construction and estimates of hours required for tasks such as trail maintenance. Recreation Services staff will design interpretive materials for the areas in consultation with management area staff.

## **Monitoring and Management of Recreation Facilities**

Measurable indicators for monitoring key aspects of the visitor's experience and resources at AWMA are described in Appendix 2. Indicators should be monitored for each zone, and when necessary, management actions taken to ensure that visitor use and resource impacts remain within the established standards.

## References

Florida Fish and Wildlife Conservation Commission. A Conceptual Management Plan for Aucilla Wildlife Management Area (2004-2009).

Florida Fish and Wildlife Conservation Commission. 1999. "A GIS Plan to Protect Fish and Wildlife Resources in the Big Bend Area of Florida." Proceedings of the International Conference on Wildlife Ecology and Transportation. Missoula, Montana.

National Park Service. 1997. The Visitor Experience and Resource Protection (VERP) Framework: A Handbook for Planners and Managers.

## Appendix 1

### Recreation and Wildlife Viewing Facilities Design Guidelines

- **Entrances**  
Should welcome visitors to the area, identify the Commission, describe the range of potential experiences on the area, describe the wildlife viewing experiences by season, time of day or wildlife event.
- **Viewing structures**  
Structures should include wildlife identification or other interpretive information. The structure should be surrounded by and focused on wildlife and habitat, rather than being the focus itself. For towers, each level should focus visitor attention to a different habitat or feature.
- **Trails**  
Trails should be described at the trailhead with length or time required. If the focus is wildlife viewing include best seasons. Interpretive panels or brochure stops should be well-spaced and focused by season and should not exceed ½ to ¾ of a mile.

General considerations in developing facilities:

- Locate viewing facilities on previously disturbed properties wherever possible.
- Preserve a sense of solitude and limit impact on natural resources by concentrating recreation uses in small “developed” zones and along existing road/trail corridors.
- Site facilities and design trails to minimize user conflicts.
- Avoid sensitive areas such as wetlands and route trails to avoid fragmenting habitat.
- Consider physical characteristics and the historical and natural character of the location.
- Adapt parking lots, buildings, and other physical developments to existing topography.
- Retain on-site surface water run-off generated by development.
- Use porous pavements where surface hardening is required.
- Consider sewage disposal needs.
- Use native plants representative of the area for all landscaping.
- Design and build trails and observation structures to avoid disturbing wildlife and to minimize negative impacts such as erosion.
- Use elevated boardwalks in wet areas and swamps and walkovers to protect other sensitive areas.
- Incorporate wildlife viewing ethics into all interpretive materials.
- Incorporate interpretive themes into all brochures, trail guides and other materials produced to support recreation opportunities.

- Install interpretive signs and panels as appropriate at all recreation facilities.
- Route trails to interpret restoration and wildlife management activities.
- Insure interpretation of highly desired species viewable on the area.

### Universal Access

Nature-based recreation facilities and programs must be developed and implemented in compliance with the Americans with Disabilities Act. All facilities in developed zones should be universally accessible. Recreation facilities in semi-primitive or primitive zones should be planned to be accessible to the degree possible except where:

- compliance will cause harm to cultural, historic or religious sites or significant natural features or characteristics
- compliance will substantially alter the nature of the setting or purpose of the facility or portion of the facility
- compliance would require construction methods or materials prohibited by federal, state or local regulations or statutes, or compliance would not be feasible due to terrain or prevailing construction practices.

## Appendix 2

### Management and Monitoring

#### Recreation Facility Monitoring Protocol Florida Fish and Wildlife Conservation Commission Office of Recreation Services

##### Introduction

In order to better plan and manage recreation opportunities on lands managed by the Florida Fish and Wildlife Conservation Commission (FWC), FWC's Office of Recreation Services has developed a monitoring program for recreation-related facilities and infrastructure. Using both qualitative and semi-quantitative methods this program will encompass trails, signs, wildlife viewing structures and other facilities. Data obtained through this program will help FWC better plan, construct, and maintain facilities to provide the recreation experiences that are meaningful, enjoyable, and safe.

##### Materials

Digital camera  
Tripod  
Kaidan panoramic photo mount  
VRWorx, or other software for creating panoramic photos  
Monitoring forms  
Tape measure  
Compass  
GPS (loaded with waypoints for monitoring points)  
Hand tools for checking structure hardware

##### Monitoring Procedures

##### Photopoints

Photopoints should be recorded with GPS, which can also be used to navigate back to the photopoint location on future monitoring visits. A description of the location should be recorded to ensure maximum accuracy in relocating the photopoint.

##### *Trails*

Trails are monitored with a panoramic photopoint at the trailhead and every mile for trails over 2 miles and every ½ mile for trails 2 miles and less. Additional photopoints may be needed for problem areas encountered on the trail. Photopoints are centered in the trail tread.

Assemble the panoramic photo gear and set the tripod over the photopoint, making sure the panoramic head is level. Standard photopoint height is 60” to the center of the camera lens while mounted on the panoramic mount. This may be modified for some photopoints depending on surrounding vegetation or other considerations, but the new height should be recorded and used each time that photopoint is taken. The easiest way to set the height is to assemble the tripod, panoramic mount, and camera on level ground, adjust the legs to their full length and adjust the center column to achieve the proper lens height. The center column can be marked with a permanent marker, tape, or scored with a small file or engraver and each mark should be labeled with the height and camera model. This will have to be done for each different camera that will be used for photopoints, although it is preferable that the same camera be used for all photopoints.

Cameras should be set to full wide zoom, landscape mode if available, with flash off. All photopoints begin with the detent closest to due north and continue in a clockwise direction. A log should be kept to record the photo numbers and their corresponding photopoint.

After downloading the images they should be processed into a flat panorama (a digital image composed of all of the photos for a particular photopoint). These panoramas along with the component images should be kept in a central location organized by WMA, photopoint Number, and photopoint date.

### ***Use areas***

Use areas have 2 photopoints. One is a panoramic photo taken at the center of the use area which follows the procedure for trail photopoints. The other is a single photo taken from the perimeter of the area. The compass bearing of the photo should be recorded and used for all subsequent photos taken at that photopoint.

### ***Structures***

Structures have a single photopoint. This is a single photo and the compass bearing of the photo should be recorded and used for all subsequent photos taken at that photopoint. If desired, a panoramic photo can be taken to represent the view from the structure (such as the top of a tower).

### **Physical inspections**

- Check for presence or absence (smaller amenities such as fire rings and benches)
- Check for proper location (smaller amenities such as fire rings and benches)
- Inspect for damage (signs and structures)
- Check hardware and tighten or replace if necessary (signs and structures)

Trails should be traversed in their entirety, either on foot for shorter trails or by vehicle for longer trails. Trouble spots (erosion, trail braiding, shortcuts, litter, excess vegetation encroachment, etc.) should be recorded by GPS and noted on the monitoring form.

## **Monitoring Forms and Record Keeping**

Monitoring forms are completed in the field. This can be done electronically using the Recon field computer or manually. If done manually they should be transferred to an electronic version by filling out the form on computer. Completed electronic forms are then placed in the appropriate location on the Project Management Site for that WMA along with any relevant GPS data (converted to Shapefile), photographs, photpoints, and other notes.

Any issues that need attention should be entered into the “Issues” section of the Project Management Site for that WMA which will generate a notification to the project manager (in most cases the Recreation Planner for that area) and Section Coordinator. The project manager is responsible for ensuring the issue is brought to the attention of the appropriate personnel outside of ORS if necessary and ensuring that once resolved the issue entry is closed out.

## Trail Monitoring Form

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Site: \_\_\_\_\_

---

### LITTER IMPACTS:

- 1 = None
- 2 = Very Little (small, isolated pieces of litter)
- 3 = Some (frequent small pieces or isolated large pieces of litter)
- 4 = Extensive (small areas used for trash dumping or multiple areas of high litter concentration)
- 5 = Very Extensive (large areas used for trash dumping)

**Problem area locations/comments:**

---

### STRUCTURE DAMAGE (signs, boardwalks, bridges, benches, blinds, towers, platforms, etc.):

- 1 = None    2 = Very Little (dirty, crooked, loose bolts, etc.)
- 3 = Some (minor wood repair, graffiti)    4 = Extensive (hazardous damage)
- 5 = Very Extensive (structure is ruined or missing)

*\*FILL OUT A STRUCTURE DAMAGE FORM FOR ANY STRUCTURE THAT RANKS "2" OR HIGHER.\**

**List of trail-related structures with rankings:**

---

### EROSION PROBLEMS

- 1 = Very Little
- 2 = Some: Tree roots or standing water evident
- 3 = Moderate: Exposed roots/rocks but little evidence of widening, some patches of exposed soil.
- 4 = Extensive: Many tree roots exposed, many spots of exposed soil, ruts and/or trail widening.

**Problem area locations/comments:**

---

### CORRIDOR CONDITION

- 1 = Within standards (minimal vegetation encroachment)
- 2 = Exceeds standards (trail needs some mowing/lopping/chain sawing, blowdown obstructions)
- 3 = Unacceptable (trail is generally overgrown and difficult to find)

**If there were problem areas, please describe condition and exact location:**

---

**PHOTOPOINT INFORMATION**

*All photopoints should be taken with a lens height of 60”, the flash set to “off”, and no zoom. All panoramic photopoints start with a photo taken towards north, then continue in a clockwise direction.*

**New photopoints taken (photopoint type, coordinates, location description, lens azimuth, image numbers)**

**Existing photopoints taken (Photopoint Number, image numbers)**

## Use Area Monitoring Form

Observer: \_\_\_\_\_

Date: \_\_\_\_\_

Site: \_\_\_\_\_

---

### LITTER IMPACTS:

1 = None

2 = Very Little (small, isolated pieces of litter)

3 = Some (frequent small pieces or isolated large pieces of litter)

4 = Extensive (small areas used for trash dumping or multiple areas of high litter concentration)

5 = Very Extensive (large areas used for trash dumping)

Comments:

---

### STRUCTURE DAMAGE (shelters, picnic tables, kiosks, trash cans, signs, grills, benches, etc.):

1 = None 2 = Very Little (dirty, crooked, loose bolts, etc.)

3 = Some (minor wood repair, graffiti) 4 = Extensive (hazardous damage)

5 = Very Extensive (structure is ruined)

\*FILL OUT A STRUCTURE DAMAGE FORM FOR ANY STRUCTURE THAT RANKS "2" OR HIGHER.\*

List of use-area structures with rankings:

---

### EROSION PROBLEMS

1 = Very little

2 = Some: tree roots or standing water evident

3 = Moderate: exposed roots/rocks but little evidence of widening, some patches of exposed soil.

4 = Extensive: many tree roots exposed, many spots of exposed soil, ruts and/or trail widening.

Problem area locations/Comments:

---

**PHOTOPOINT INFORMATION**

*All photopoints should be taken with a lens height of 60", the flash set to "off", and no zoom All panoramic photopoints start with a photo taken towards north, then continue in a clockwise direction.*

**New photopoints taken (photopoint type, coordinates, location description, lens azimuth, image numbers)**

**Existing photopoints taken (photopoint Number, image numbers)**

## Structure Damage Reporting Form

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Site: \_\_\_\_\_

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Structure name/type: \_\_\_\_\_

Structure location (written description, coordinates): \_\_\_\_\_

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**Please rate and explain the extent of the damage in the following areas, where...**

- 1=Minimal (no maintenance needed)
- 2=Moderate (maintenance recommended)
- 3=Severe (maintenance imperative)

\*\*\*TAKE CLOSE-UP PHOTOS OF ALL REPORTED DAMAGE\*\*\*

Cleanliness (graffiti, mildew, debris build-up, odor, etc.)

Structural Integrity (crooked, wobbly, or leaning)

Wood condition (rotten, vandalized)

Hardware (rusted, loose, missing)

Other (please describe)

### WMA Visit Checklist

- Trail maintenance needs
- Sign maintenance needs
- Structure maintenance needs
- Day-use area condition/maintenance needs
- Sufficient ORS publications in field office
- Brochure boxes adequately stocked
- Hunting calendar posted and up-to-date
- Users encountered on area (number, activity, address for future surveys)
- Geocaches inspected
- Manager concerns
- New ideas for area enhancement

## **Appendix 3**

### **Aucilla WMA Sign Plan Draft**

#### Map and Interpretive Panels

Western Sloughs Entrance: medium kiosk with 1 map panel and 1 interpretive panel

Western Sloughs Hammock Trail: 3 panel metal kiosk (1 map and 2 interpretive panels)

Grade 25 (Highway 59): medium kiosk with 1 map panel and 1 interpretive panel.

Grade 17 (Highway 59): small kiosk with 1 map panel and 1 interpretive panel

Aucilla Sink Trail: Trailhead kiosk with interpretive panels

Small Game Unit: small kiosk with 1 map panel and 1 interpretive panel

#### Wayfinding Signs

Western Sloughs: 1 sign at entrance and at first road intersection that would indicate mileage to the end of the tram road.

Western Pines: signs as necessary

Wacissa River: Wayfinding signs/mile markers

## **Appendix 4**

### **Work Plan for Nature-Based Recreation Enhancements**

Based on the prioritization of the goals and objectives listed above, the following list of projects and tasks has been ordered in terms of short and long term completion timeframes.

#### **1. Tasks 2006-07**

- Select visitor contact points for distributing AWMA recreation information
- Plan recreation information to be posted at visitor contact points
- Plan paddling and trail guide
- Develop interpretive trails on selected trams in the forested wetlands of Western Sloughs
- Partner with the U.S. Forest Service and FTA to assess feasibility of pedestrian bridges over Wacissa River and the Slave Canal
- Plan interpretive information that will be posted on trails and facilities

#### **2. Tasks 2007-08**

- Construct kiosks at visitor contact points
- Produce recreation information to be posted at visitor contact points
- Produce paddling and trail guide
- Produce interpretive information that will be posted on trails and facilities

#### **3. Long Term Completion and Ongoing Tasks**

- Plan and construct sinks observation structure on Aucilla Sinks Trail if warranted by future demand and need
- Construct canoe/kayak access at Calico Hill if warranted by future demand and need
- Determine the feasibility of creating a scenic driving route and biking and equestrian trails in the Western Pines area
- Partner with U.S Forest Service and FTA to construct pedestrian bridges over Wacissa River and the Slave Canal.
- Implement a monitoring strategy to assess resource impacts and institute corrective management actions if indicators begin to approach standards
- Collect and evaluate information about visitor use and satisfaction

## Appendix 5

### Proposed Access Plan for Aucilla Wildlife Management Area

#### Introduction & Purpose

The area that is now Aucilla Wildlife Management Area (AWMA) was historically composed of a mosaic of pine flatwoods, hardwood forests, cypress domes and other isolated wetlands containing few roads. Eventually timber companies constructed an extensive system of roads that were used to harvest the areas timber resources and convert many areas to silviculture. Techniques used for road construction consisted primarily of excavating ditches and using the fill to construct an elevated roadbed. This system of roads and ditches has accelerated the drainage of much of the area. Many of these roads are still used by the public to access AWMA for hunting, fishing and other nature based recreation. Area staff, for resource management purposes, also use many of the roads. There are a total of approximately 172 miles of roads and “jeep trails” on the Board of Trustees owned portion of AWMA which totals approximately 43,322 acres.

The purpose of this plan is to provide for adequate public access while considering; the protection and preservation of the area’s cultural and historical resources; restoration of historic hydrologic flow; restoration of historic natural communities; preserving sensitive vegetative communities; facilitating the enforcement of area rules and regulations; and the number of roads that can be logistically maintained by area staff.

#### Public Access Road Definitions

Area staff evaluated the current AWMA road system with input from FWC Division of Law Enforcement (DLE) in an effort to group the roads into the following categories, primary roads; secondary roads; unimproved roads; administrative and closed roads. The level of maintenance that will be provided defines these road categories.

##### Primary Roads – 9 miles

Area staff has proposed nine miles of primary roads. These roads access areas that are heavily utilized by the public, sometimes by passenger car. Therefore these will be all weather roads capable of accommodating conventional two-wheel drive vehicles. Hardened low water crossings (HLWC) should not be used with this road category, as they are not compatible with low clearance vehicles. However, culverts and ditch plugs will be utilized in an effort to improve the travel way and restore natural flow patterns. Many sections of this category are “canopy” roads. As such, the frequency of maintenance may need to be reevaluated and adjusted as necessary to maintain roads to the desired condition.

##### Specifications:

- 35-50 ft. clearing limit
- 10-14 ft. travel way

- Road surface will be above natural grade
- Install culverts, ditch plugs and bridges where needed
- Constructed with a continuously capped road surface using materials such as lime rock
- Road will be mowed ditch-to-ditch biannually

Secondary Roads – 55 miles

Area staff has proposed an interconnecting network of 55 miles of secondary roads that will serve as the backbone for both public access and administrative purposes. These roads will be able to accommodate general recreational use and access almost all sections of AWMA. Road conditions will permit two-wheel drive traffic in most cases, though four-wheel drive may be necessary during or shortly after inclement weather.

Specifications:

- 35-50 ft. clearing limit
- 8-14 ft. travel way
- Road surface will primarily be above natural grade though some sections may be at natural grade
- Install HLWCs, ditch plugs, bridges or culverts as needed
- Road will be constructed with predominate native materials
- Sections of travel way may be capped by materials such as lime rock
- Travel way will be mowed annually
- Road margins to ditch will be mowed biennially

Unimproved Roads – 32 miles

Area staff has proposed 32 miles of unimproved roads that connect to and supplement the primary and secondary road system. These roads will be open to public use, however, four-wheel drive vehicles are recommended. Road surface may or may not be above natural grade. Ditch plugs, HLWCs or culverts will be installed as needed to improve the travel way and restore natural flow patterns. Minimal maintenance, for safety, will be performed on these roads as needed.

Administrative Roads / Closed Roads – 76 miles

These two categories of roads are both closed to public vehicular access. Administrative roads (~ 25 miles) will be used strictly for management of the AWMA by area staff to conduct animal surveys, burning, logging, etc. These roads will be maintained as needed to provide a safe roadway. Closed roads (~ 51 miles) are not needed for public vehicular access or administrative purposes and will be removed from the current system altogether. A few connecting roads were included in this category to allow for some larger hunting blocks, however the majority of the roads in this category consist of short spur roads that were created to access timber resources in wetland areas or by the public driving off road. These roads are mostly at or below grade. Approximately 50 miles of

road in this category are less than 1 mile in length and approximately 30 miles of road in this category are less than ½ mile in length. The existence of many of these roads has negatively impacted AWMA, as they facilitate the looting of archaeological resources; cause significant soil disturbance and alter the drainage in sensitive wetland habitats via rutting. Additionally, people are cutting trees in an effort to route wetland roads around rutted out areas. This has led to severe rutting caused by numerous braided travel ways as well as artificial canopy gaps in closed canopy forests. While these roads will be closed to public vehicular access, foot traffic is welcome on all administrative and closed roads.

### Designated Access Points – 6

Area staff has proposed a seasonal approach to access in an effort to balance the needs of the public with the ability of DLE to enforce the area rules and regulations. Because AWMA is a dog hunt area, it is proposed that most area entrances via primary, secondary and unimproved roads be accessible to the public during general gun season. Outside of the general gun season it is proposed that only select ingress/egress points remain open to the public to facilitate patrol by DLE. These proposed ingress/egress points are located at:

- Grade 17 and State Highway 59 on the SW
- Grade 25 and State Highway 59 on the NW
- Off of Thomas City Rd. on the NE
- Goose Pasture Rd. and the Aucilla River on the SE
- Half Mile Rise Rd. and Powell Hammock Rd. on the SE
- Western Sloughs Rd. and U.S. 98 on the S end

While all primary, secondary and unimproved roads will be open to travel year round, the public will only be permitted to enter or exit AWMA through the entrances listed above outside of the general gun season.

### **Summary**

Primary roads: 9 miles

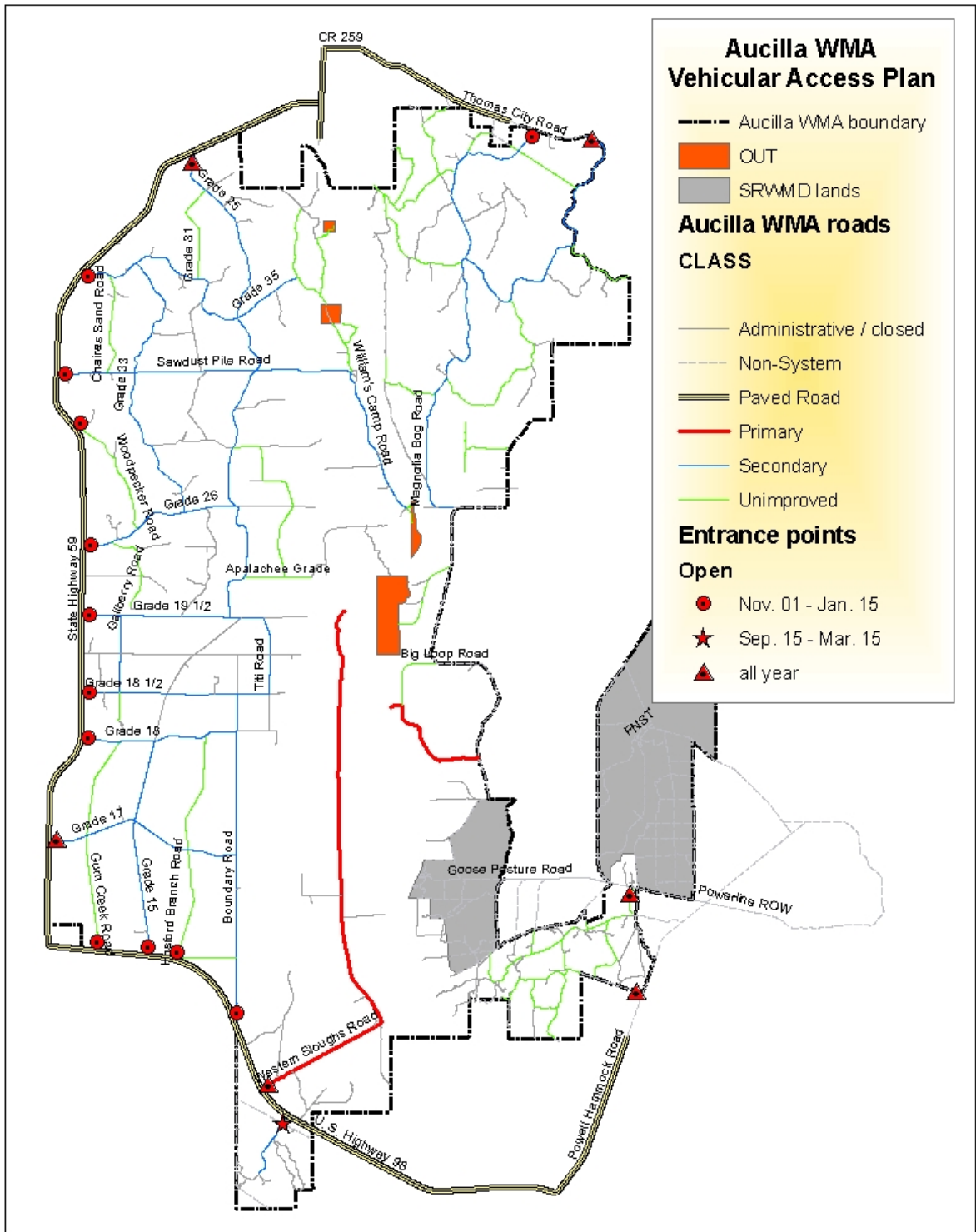
Secondary roads: 55 miles

Unimproved roads: 32 miles

Administrative & closed roads: 76 miles (~ 25 miles service / ~ 51 closed)

Total: 172 miles

Ingress / egress points: 6



## Appendix 6

### Comments from Aucilla WMA Recreation Stakeholder Meeting Monticello, FL 2/8/2007

Attending: Georgia Ackerman (The Wilderness Way Outfitters), Tom Butler (Apalachee Canoe and Kayak Association), Ken Campbell (Tallahassee Bow Hunters Association), Marvin Collins (Apalachee Audubon Society), Terry Tenold (Florida Trail Association), Gwen Beatty (observing on behalf of ACKC)

Florida Fish and Wildlife Conservation Commission staff: David Copps, David Johnson, Jerrie Lindsey, Billy Sermons, Liz Sparks, Morgan Wilbur

Suwannee River Water Management District: Edwin McCook

#### Amenity Issues:

Suggestion: At the point where the FNST crosses Goose Pasture Rd, the FTA would like to see the development of a trailhead with parking, kiosk interpretive facilities, trail registry, etc. in coordination with FTA for enhancement of the FNST in the Aucilla Sinks section

- *The facilities are included in the draft Recreation Master Plan.*

Suggestion: Encourage organizations to fund kiosks – Audubon has funds for community-based interpretation and may be interested. Rely on interested groups to advertise amenities.

- *FWC Office of Recreation Services will assess feasibility of creating partnerships with other organizations to fund kiosks.*

Suggestion: Develop a camping site on the Wacissa River (near the old railroad bridge) accessible only by river so that canoe-campers would be secure. Site maintenance could be done by access through a secured gate.

- *Camping is currently prohibited except for designated sites along the Florida Trail. Staff has prepared a rule change proposal that, if adopted, would allow camping beginning July 1, 2008, at designated sites and by permit from the Suwannee River Water Management District on District Lands within Aucilla WMA. If the rule change is adopted, FWC will assess feasibility of adding a campsite on the Wacissa.*

Suggestion: Provide FWC/Aucilla WMA material to local outfitters. Coordinate paddling safety maps listing hazards and resources to build public awareness of waterways and promote appropriate use of area.

- *Paddling safety information will be incorporated into area maps, recreation and interpretive information. FWC Office of Recreation Services will make available*

*maps and interpretive products to area vendors and outfitters for distribution to their clients.*

### **Policy & Management Issues:**

Suggestion: Post hunting seasons and dates so that visitors can make informed choices about when to plan visits to the area.

- *FWC will provide hunt calendars at area access points, on website, and in interpretive and recreation materials.*

Suggestion: To minimize adverse interaction between hunters and other recreational users, rules and regulations need to state clearly all activities that are allowed on hunt days.

- *FWC will provide hunt calendars at area access points, on website, and in interpretive and recreation materials.*

Suggestion: Restore non-essential roadways to natural state (or allow re-vegetating). Manage each restoration to minimize disruption of natural wildlife migration patterns.

- *Approximately 51 miles of roads that are not needed for vehicular access or administrative purposes will be removed from the current road system (as stated in Appendix 5 of the Recreation Master Plan – “Proposed Access Plan for Aucilla Wildlife Management Area”).*

Suggestion: Public and private partnerships should be developed to coordinate future river clean-ups.

- *The FWC Office of Recreation Services will assess the feasibility of partnering with other groups and agencies to coordinate river cleanup event(s).*

Concern: Paddlers feel airboat traffic on the Wacissa River poses a safety risk and is perceived as frightening wildlife.

- *All paddling maps and materials will include information about when airboats are most active on the Wacissa River so that paddlers can make informed choices about when to visit. The FWC Office of Recreation Services will work with users and LE to address conflict issues.*

Suggestion: Coordinate nature-based field trips (e.g. Audubon) with FWC wildlife management personnel.

- *FWC Office of Recreation Services will assess the feasibility of coordinating field trips with other agencies and organizations.*

Suggestion: Enforce restriction on Off Highway Vehicles.

- *The use of off-highway vehicles is not allowed on the Aucilla WMA. Detection and enforcement of rule violations will be bolstered through efforts such as the recently developed Vehicle Access Management Plan (Appendix 5 in the Recreation Master Plan).*

Concern: How and where do area visitors report illegal artifact collection?

- *Reporting information for illegal artifact collection will be incorporated in area information developed by the FWC Office of Recreation Services.*