

Goose Creek State Park General Management Plan



*North Carolina Department of
Natural and Cultural Resources
Division of Parks and Recreation*

*Coastal Region
May 2023*

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TABLE OF CONTENTS

I.	Mission and Purpose.....	5
II.	History	7
	Significant and Species of Concern..	8
III.	Themes and Inventory.....	11
	Facilities	14
	Trails.....	22
IV.	Planning	27
	Land Protection Plans.....	28
	Projects	30
	Appendix.....	53



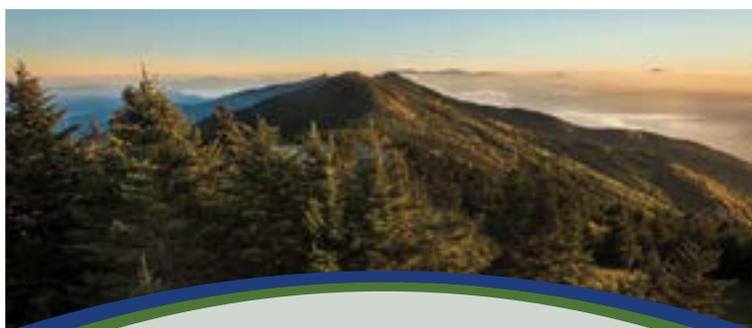
I. MISSION AND PURPOSE

GENERAL MANAGEMENT PLANS:

The 1987 State Parks Act (G.S.143B - 135.40) requires each park to have an individual General Management Plan. As required, these plans seek to identify an individual parks purpose as a unit within the larger parks system and provide an analysis of the parks major resources and facilities. The GMP also identifies current and future needs of the park and prioritizes a list of proposed projects intended to meet those identified needs. These plans are considered living documents, recognizing the various and dynamic factors which influence the planning process. Each park's GMP is scheduled to be revisited every five years, or sooner if needed, to reflect the direction and vision of the State Parks Division.

N.C. STATE PARKS MISSION:

The 1987 State Parks Act also defines the purpose of the state parks system. It establishes that: The State of North Carolina offers unique archaeological, geologic, biologic, scenic and recreational resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.



OUR MISSION

The North Carolina
Division of Parks and Recreation
exists to inspire all
its citizens and visitors through
conservation, recreation and education.

CONSERVATION
To conserve and protect representative
examples of North Carolina's natural beauty,
ecological features, recreational and cultural
resources within the state parks system;

RECREATION
To provide and promote safe, healthy
and enjoyable outdoor recreational
opportunities throughout the state; and

EDUCATION
To provide educational opportunities
that promote stewardship of the state's
natural and cultural heritage.



I. MISSION AND PURPOSE

PARK OVERVIEW:

Goose Creek State Park, is a located along the Pamlico River, tributary of the Roanoke River watershed, located within the eastern section of Beaufort County, North Carolina. The Pamlico River is located on the south section of the park. The park headquarters is positioned at the environmental education center. This park is located 9 miles west of Bath, 34 miles southeast of Greenville, and 50 miles north of New Bern. Goose Creek State Park is located 140 miles north of Wilmington and 118 miles east of Raleigh Durham.

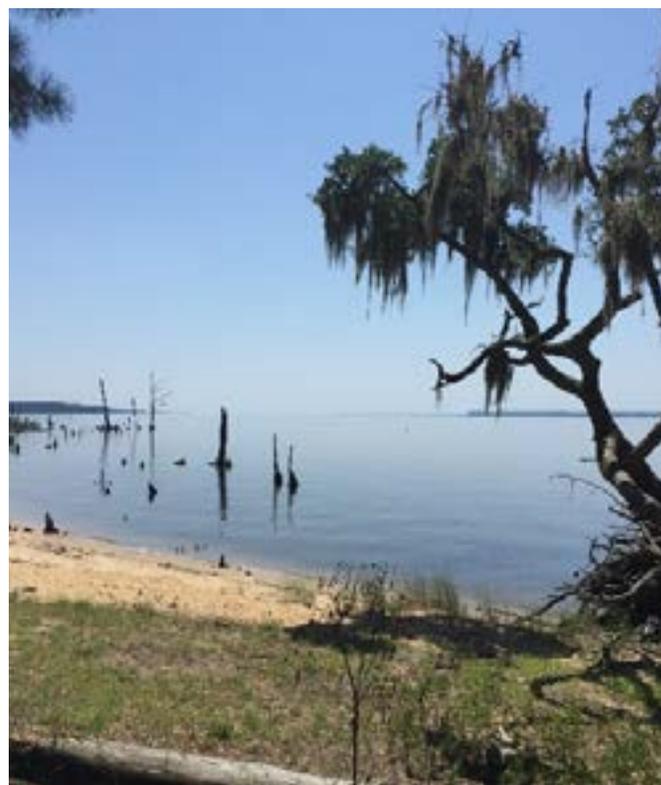
Goose Creek State Park is a regional coastal park, situated along the resource, *Goose Creek*. The park operations manage: 40 % camping, 10% paddle access, 10% recreational boating and 40% day use areas. This park makes an ideal day trip to the coast achievable from the urban areas. The park's estuarine habitats can be explored on foot or by paddling the Pamlico River.



PARK PURPOSE:

Goose Creek State Park was established to protect and interpret the unique and diverse natural communities of the central portion of lower (or outer) coastal plain of North Carolina and to provide public access to the Pamlico River.

Significant biological resources found in the park include the following four exemplary natural community types: tidal freshwater marsh, tidal cypress-gum swamp forest, coastal fringe evergreen forest, and estuarine fringe Loblolly Pine forest. The 375-acre Goose Creek State Park Natural Area, designated in 1980 as a National Natural Landmark, is the significant geological resource. The natural area comprises the longest segment of publicly owned, undeveloped, low-salinity estuarine shoreline in the state and in the Southeast. Development and management goals for the park must include the protection and maintenance of this resource as an example of how geologic, topographic, and hydrologic forces interact to create a pattern of natural communities.



Goose Creek is located along the Pamlico River

I. MISSION AND PURPOSE CONTINUED

Recreational opportunities at Goose Creek State Park should be compatible and protect and conserve the natural and cultural resources of the park for interpretation and education. Recreational activities include: hiking, camping, picnicking, fishing, swimming, boating and paddling. The park provides public access to the waters of Goose Creek and Pamlico River. Environmental education opportunities should focus on wetland processes, functions and discuss how wetlands affect humans and the natural environment. Environmental education should also include water quality, resource management, adaptations, interpretation of tar kilns and resource stewardship.

Significant scenic resources provide opportunities to view broad expanses of the Pamlico River, Goose Creek and associated estuarine marsh, waterfowl, and birds of prey. The variety of birds changes dramatically with the season. Boardwalks through freshwater and brackish-water wetlands, and trails lead visitors to areas with trees draped with Spanish Moss, Cypress swamp, and Live Oak found along the creeks and shoreline. Tall grasses and sedges are found along vistas of the marsh, open water, and shoreline, while loblolly and long leaf pines are found in the upland region.



Goose Creek provides a unique boating and family camping experience

I. MISSION AND PURPOSE CONTINUED



View of Goose Creek along the Pamlico River

II. HISTORY

Before European settlement, the Secotan and Pamlico Native Americans, members of the Tuscarora tribe, occupied the area between Goose Creek and the Town of Bath. The Tuscarora Indians were the dominant tribe during the colonial period, and conflicts arose between the Tuscaroras and settlers along the Pamlico, Neuse and Trent Rivers. Well-known inhabitants of the area included several royal governors, including Governor Charles Eden, and the pirate “Blackbeard.”

In more recent times, subsistence farming, commercial fishing and timber production provided jobs for the economy. Evidence of these activities exist throughout the park. Abandoned fields, once used for farming, have been converted to forest restoration. Remnants of boat piers and loading docks skirt the river. A trackless railroad bed, used for hauling logs and the charred remains of tar kilns, are reminders of the early days of the timber industry.

Like many other state parks, Goose Creek originated due to the initiative of local citizens. At their appeal, the Division of State Parks investigated potential park sites along the Pamlico River and determined that the Goose Creek area was the most suitable. Negotiations for land acquisition began, and a resolution to the governor expressed local support.

Goose Creek State Park opened in September 1974 when 1,208 acres of land was purchased. At the request of local citizens interested in the establishment of a State Park, field investigations were undertaken in the Pamlico River area that resulted in the identification of Goose Creek as a worthy site due to the presence of wetlands, maritime forests, bays, estuaries and pocosins. The landowner, the Weyerhaeuser Company, requested more comprehensive field investigations to identify other alternatives. Further studies strengthened the original findings, and negotiations resumed, with the acquisition of 1,208 acres from Weyerhaeuser on September 25, 1974. Widespread public support for the establishment of the park included the six-county Southern Albemarle Association.



II. SIGNIFICANT AND SPECIES OF CONCERN

NATURAL COMMUNITIES

Community descriptions follow the *Classification of the Natural Communities of North Carolina: Third Approximation* (Mike Schafale and Alan Weakley, 1990).

Tidal Freshwater Marsh—Oligohaline Variant

A low-salinity estuarine shoreline community is found in low, flat areas adjacent to Goose Creek, Flatty Creek, Mallard Creek, and the Pamlico River. This community type is dominated by grasses, sedges, and rushes, especially big cordgrass (*Spartina cynosuroides*), sawgrass (*Cladium mariscus var. jamaicense*), and occasionally black needlerush (*Juncus roemerianus*). There is a high degree of plant and animal diversity with subtle changes in elevation, moisture regime, and salinity.

Estuarine Fringe Loblolly Pine Forest

This community type is found along the margins of estuaries, between the marsh and upland or peat land communities. It is primarily dominated by loblolly pine (*Pinus taeda*), but often includes other tree species and a variety of shrubs. An example is found next to Flatty Creek. At Goose Creek State Park, red cedar (*Juniperus virginiana*) is an unusual component of this and the above community type.

Coastal Fringe Evergreen Forest

This community type occurs on upland, moist, sandy soil adjacent to the river in the southeast portion of the park and in a very small area at Dinah's Landing. Dominant Trees include live oak (*Quercus virginiana*), loblolly pine (*Pinus taeda*), and other oaks. The variant occurring in the park is a northern extension of the prime range of the community type.

Tidal Cypress-Gum Swamp Forest

This swamp forest type is found along the margins of creeks, primarily back away from the Pamlico River. It contains bald cypress (*Taxodium distichum*), swamp tupelo (*Nyssa biflora*), water tupelo (*Nyssa aquatica*), and a variety of other species. Pond cypress (*Taxodium ascendens*) is also present in limited numbers around Mallard Creek.

Coastal Plain Small Stream Swamp Forest—Blackwater Subtype

This swamp forest type is also found along the creeks, farther upstream from the Tidal Cypress-Gum Swamp Forest. The dominant trees are bald cypress (*Taxodium distichum*) and swamp tupelo (*Nyssa biflora*).

Nonriverine Swamp Forest

Poorly drained upland flats away from the streams contain nonriverine swamp forests. This community type features many of the same species as the previous two communities, including bald cypress (*Taxodium distichum*), pond cypress (*Taxodium ascendens*), and swamp tupelo (*Nyssa biflora*). Other common trees in this community are loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), and under story trees such as sweet bay magnolia (*Magnolia virginiana*) and swamp red bay (*Persea palustris*). This community type can be distinguished from riverine and tidal cypress-gum swamps by topographic position (upland flats farther from the river than the previous two communities) and source of water (high groundwater rather than surface water). An example can be found in the Registered North Carolina Natural Heritage Area.

II. SIGNIFICANT AND SPECIES OF CONCERN

NATIONAL NATURAL LANDMARK

The National Park Service designated a 375-acre portion of Goose Creek State Park as a National Natural Landmark. This landmark includes the longest segment of publicly owned, undeveloped, low-salinity estuarine shoreline in North Carolina and probably in the Southeast. Its varied natural communities, including Tidal Freshwater Marsh (brackish marsh), Estuarine Fringe Loblolly Pine Forest (marsh transition), Tidal Cypress-Gum Swamp Forest, and Non-riverine Swamp Forest, reflect shoreline response to slowly rising sea levels.

REGISTERED NORTH CAROLINA NATURAL HERITAGE AREA

The 375-acre National Natural Landmark is also a registered North Carolina Natural Heritage Area. See appendix B.

NATURAL HERITAGE ELEMENT OCCURRENCES

Natural Heritage Element Occurrences include the federally endangered red wolf (*Canis rufus*), considered critically imperiled globally and at the state level; bald eagle (*Haliaeetus leucocephalus*), threatened at both the state and federal levels; the black throated green warbler (*Dendroica virens waynei*), significantly rare at the state level and a federal species of special concern; and the Carolina pigmy rattlesnake (*Sistrurus miliarius*), a species of special concern in North Carolina. The park has historically harbored breeding colonies of the federally and state endangered red-cockaded woodpecker (*Picoides borealis*), though there are currently no active colonies in the park.

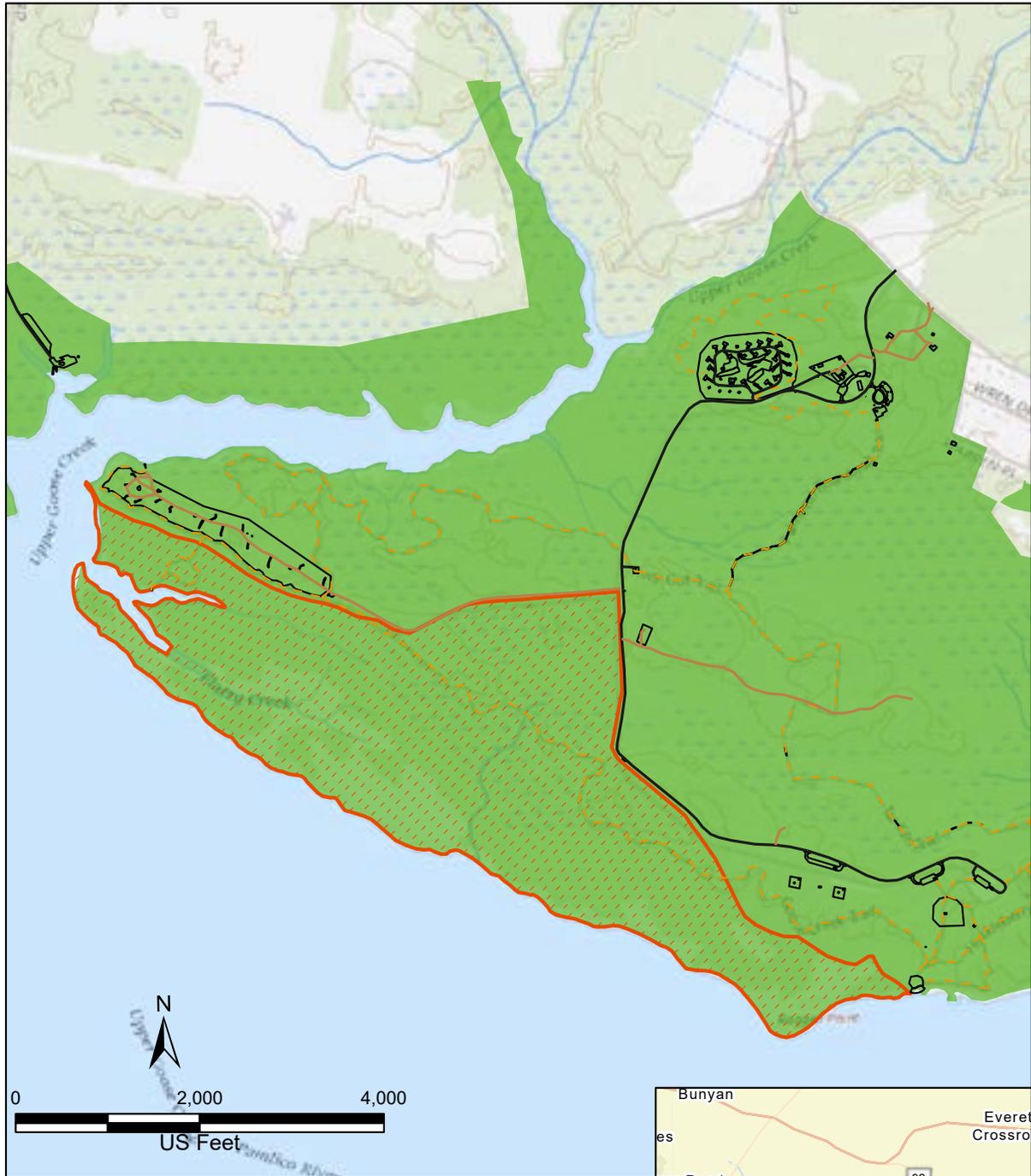
A full list of State and Federally listed species is available in the Appendix section.



Bald eagle is found along the shoreline of Pamlico River. The species is protected under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act. The Red wolf is on the federally endangered list

II. SIGNIFICANT AND SPECIES OF CONCERN

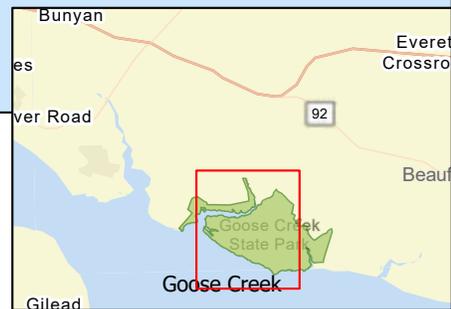
Exhibit B:



Goose Creek State Park

January 2023

- State Park
- Registered Heritage Area
- Road - Paved
- Road - Unpaved
- Trails
- Facilities





III. THEMES AND INVENTORY

THEMES:

The significant archaeological, geologic, scenic, recreational and biological resources of North Carolina should be represented in the State Park system. These resources, as cited in the State Parks Act, are divided into sub-categories called resource “themes”. There have been 108 themes identified that should be protected to preserve representative examples of unique resources. For this General Management Plan, only themes that are of moderate to high significance to *Goose Creek State Park* are shown.

GOOSE CREEK STATE PARK AREA THEME TABLE

THEME TYPE	THEME	GOOSE CREEK STATE PARK SIGNIFICANCE	STATE PARKS SYSTEM REPRESENTATION
Archaeological/Historic	Cemetery	High	Adequate
Archaeological/Historic	Rural -Domestic	High	Adequate
Archaeological/Prehistoric	Transportation	High	Adequate
Archaeological/Prehistoric	Campsite/Activity Area	High	Adequate
Archaeological/Prehistoric	Campsite/Activity Area	High	Adequate
Biological	Freshwater Tidal Wetlands	High	Moderate
Biological	Maritime Forests	High	Moderate
Biological	Maritime Wetland Forests	High	Moderate
Geological	Estuaries	High	Adequate
Scenic	Bays/ Estuaries	High	Little
Scenic	Forests	High	Moderate
Scenic	Islands	High	Little
Scenic	Marshes	High	Moderate
Scenic	Meadows/Grasslands	High	Little
Scenic	Pocosins	High	Moderate
Scenic	Rivers	High	Little
Scenic	Scenic Vistas	High	Moderate
Scenic	Swamps	High	Adequate
*See the System wide Plan for references to Theme and Inventory terms. Themes have both actual and “potential” future needs to be at a park.			

III. THEMES AND INVENTORY (CONTINUED)



Example of a gum swamp



Scenic view of estuary



Inventory:

Goose Creek State Park is a linear park, that currently has three main nodes: Environmental Education Center (or the headquarters), Swim Beach Access, and Family Campground. Satellite access areas include Dinah's Landing. The Day Use areas provide passive recreation activities, such as hiking trails and overlooks. The visitation was 188,764 in 2021, and is split 10%, 20%, 30% and 40% between access Educational Center, family campground, trails and swim beach access/ Dinah Landing, based on an upgraded counter system, respectively.

Ensuring our facilities are of adequate size and numbers, and that they are good operable condition helps us to provide quality visitor experiences. The following section is an inventory of the park facilities and trails.

Due to the proximity to the coastal region, if this park is developed with more facilities, this could become a destination place. The park is located 10 miles west of Bath with extensive hiking, RV camping, primitive group camping and camper cabins.

Facility Inventory:

Goose Creek State Park was established in 1974 and much of the infrastructure was built in the 1980's with limited funding. Due to the age of much of the infrastructure and heavy visitor use, numerous facilities and infrastructure systems are showing their age. The inventory chart explains the park staffs perceived condition of the structures. *See Exhibit A.*

Ensuring our facilities are adequate for current and future visitation, and that they are in good operable condition helps us to provide quality visitor experiences. The following section inventories the park's facilities and trails.

Trails Inventory:

Goose Creek State Park provides hiking trails for a variety of challenges including: 9.50 miles of hiking trails.

However, due to extensive use by visitors, flooding, hurricanes, soil conditions, age, and unsustainable design, many of the trails need significant repairs.

Paddle Trails:

Non motorized vessels or canoe users can access the Pamlico River from the primitive campground.

Motorized boats access Dinah's Landing located on the north west corner of the park.



FACILITY INVENTORY - EXHIBIT A

NC STATE PARKS - FACILITY INVENTORY SPREADSHEET					
State Park Unit(Alpha Code):		GOCR	Park Area(If Applicable):		Goose Creek State Park
				Date(MM/YY):	March-2023
Public Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)	
Environmental Educational Bldg	BLDG	1	Fair	Replace windows, siding, interior paint, exterior paint, and install composite siding.	
Restrooms	BLDG	2	Poor	Needs to be replaced and raised above finished grade elevation due to projected sea level rising.	
Showerhouse-Family Camp-ground	BLDG	1	Good	Major moisture issues due. Needs Air conditioning or dehumidifier unit.	
Picnic Shelter	BLDG	2	Fair	Shelter needs a new roof	
Vault Toilet- Boat Ramp	BLDG	1	Poor	Scheduled for replacement in 2023 with prefabricated vault toilet	
Interpretive bldg	BLDG	1	Good		
Swim Beach	SITE	1	Fair	Swim beach has erosion due to motorized boats and wind along Pamlico River. On going sand replacement	
Staff Buildings	Unit	Total #	Condition	Repairs needed (If Applicable)	
Ranger Residence	BLDG	1	Fair		
Supt Residence	BLDG	1	Fair	Needs Windows/Floor	
Ranger Residence	BLDG	1	Fair		
Vehicle Storage Bldg	BLDG	1	Fair	Roof scheduled to be replaced in 2022-Major Maintenance funding	
Maintenance Building	BLDG	1	Fair	Needs internet extension from the Env. Educ. Center (EEC) and siding repairs	
Storage Building	BLDG	1	Good		
Storage Building	BLDG	2	Poor	Roof to be replaced with maintenance funding	
Primitive Campsites- ADA	SITE	1	Good	Campground Road, 14 well-spaced campsites can each accommodate two tents and each provide a fire ring, grill, picnic table and lantern hook. Parking for two vehicles is located at each site. One site is wheelchair accessible. Water spigots and composting toilets are located nearby.	
Pier at Primitive campground	RAMP	1	Fair	Replaced in 2015. Needs inspection	



FACILITY INVENTORY - EXHIBIT A - CONTINUED

Staff Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)
Boat ramp at Dinah's Landing	RAMP	2	Good	Holds 3 boats; posts need inspection
Vault toilet or non flush toilet	BLDG	2	Poor	Scheduled for replacement with prefabricated vault toilets
Non Flush- toilet	BLDG	1	Poor	Building is raised approx. 10 ft above finished grade. Condition of ramp/stairs structure. Scheduled for replacement.
Firewood storage	BLDG	1	Fair	
Picnic Area	SITE	1	Fair	
Other Facilities	Unit	Total #	Condition	Repairs needed(If Applicable)
Dumpster	DUMP-STER	1	Good	Leased, under contract.
Septic Field- Environmental Education Center	SITE	1	Fair	
Septic Field - Maintenance	SITE	1	Fair	
Septic Field - Swim beach Restroom	SITE	1	Fair	
Septic Field - restroom	SITE	1	Fair	
Septic Field Shower house	SITE	1	Good	
Waterline - municipal	SITE	1	Good	Water line is managed by City of Washington. Some RV sites have low water pressure.
Cemetery	SITE	1	Good	
Electrical- campground	SITE	1	Good	50 amp
Electrical system - day use area	SITE	1	Fair	
Electrical system- Educ. bldg.	SITE	1	Fair	
Phone- Env. Educ. Center and Maintenance	SITE	1 system	Fair	Need to extend the phone line from Environmental Education center to maintenance bldg.
Internet- Environmental Education Center	SITE	1	Good	19 MB broadband system was upgraded in 2022.



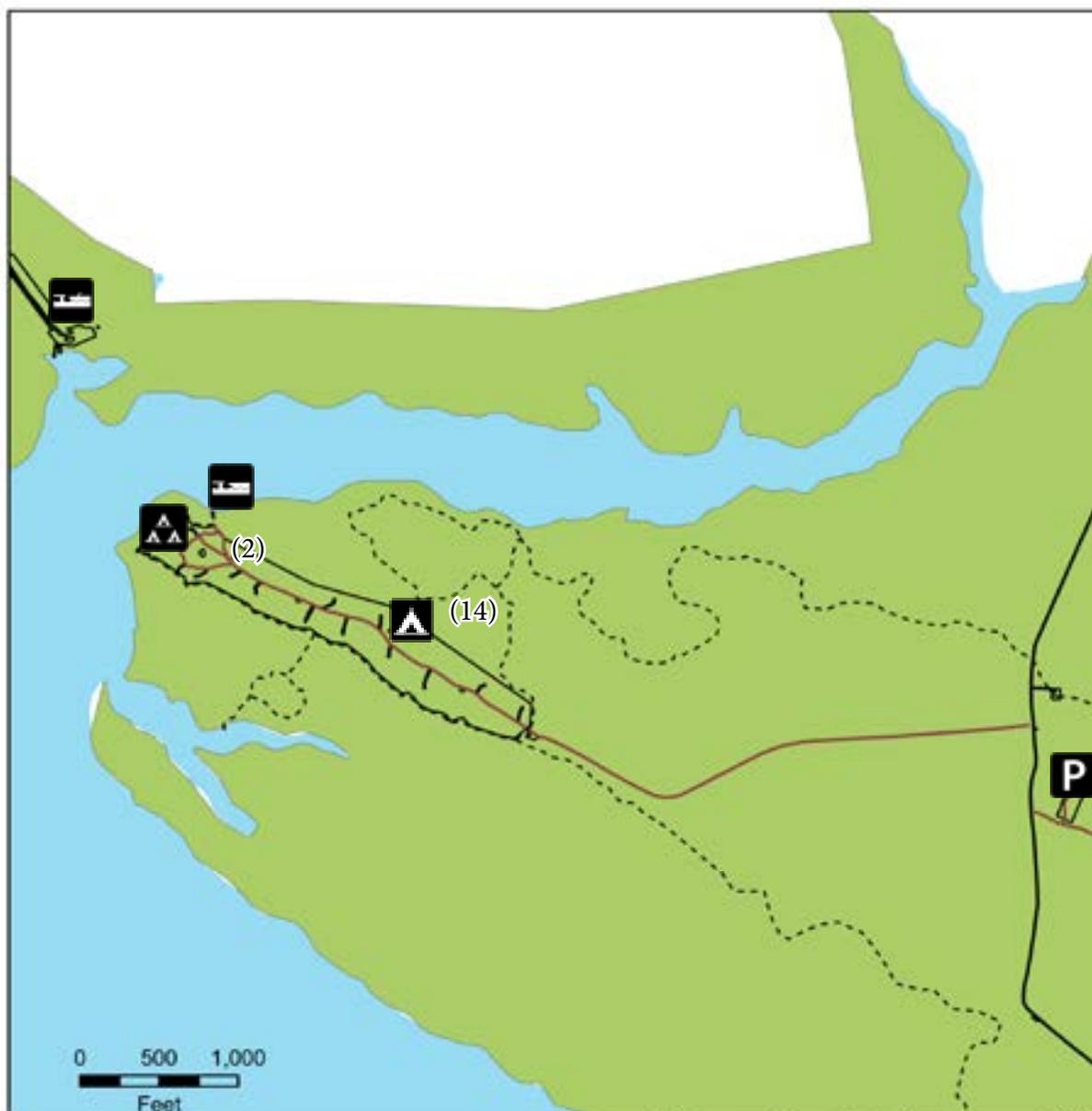
FACILITY INVENTORY - EXHIBIT A

Other Facilities	Unit	Total #	Condition	Repairs needed(If Applicable)
Day Use parking lot upper- Swim Beach	SITE		Good	Gravel condition, erosion , drainage issues, wheel stops, located in a floodplain
Trails- Palmetto Trail Boardwalk	SITE	4,430 Lin Ft	Fair	Needs to be replaced due to age and storm damage
Day Use parking lot- lower- Tar Kiln trail head	SITE		Fair	
Environmental Educ. Bldg parking lot	SITE		Good	
Campground road trail head	SITE		Fair	Located in a 100 year floodplain
Parking- Maintenance - staff	SITE	1	Fair	
Public parking on west side of maintenance area	SITE	1	Fair	
Primitive campground parking lot	SITE	1	Poor	Needs wheel stops to mark spaces, located in a floodplain
Dinahs landing - Boat Ramp parking lot	SITE	1	Fair	Needs designated parking spaces; wheel stops.
Roads	SITE	14,400 Lin ft	Poor	NCDOT will be performing minor repairs for root damage/deterioration. The projected lifespan is an additional 10 years.
Roads- Gravel	SITE	7,170 Lin ft	Fair	Recurring Maintenance and campground access driveway is located in a floodplain

ADDITIONAL NOTES:

Goose Creek State Park was established in 1974, The facilities need repairs due to age, soil conditions, sea level rising and extreme weather events.

FACILITY INVENTORY -CAMPGROUND



Goose Creek State Park Facility Inventory

May 2023
December 2016

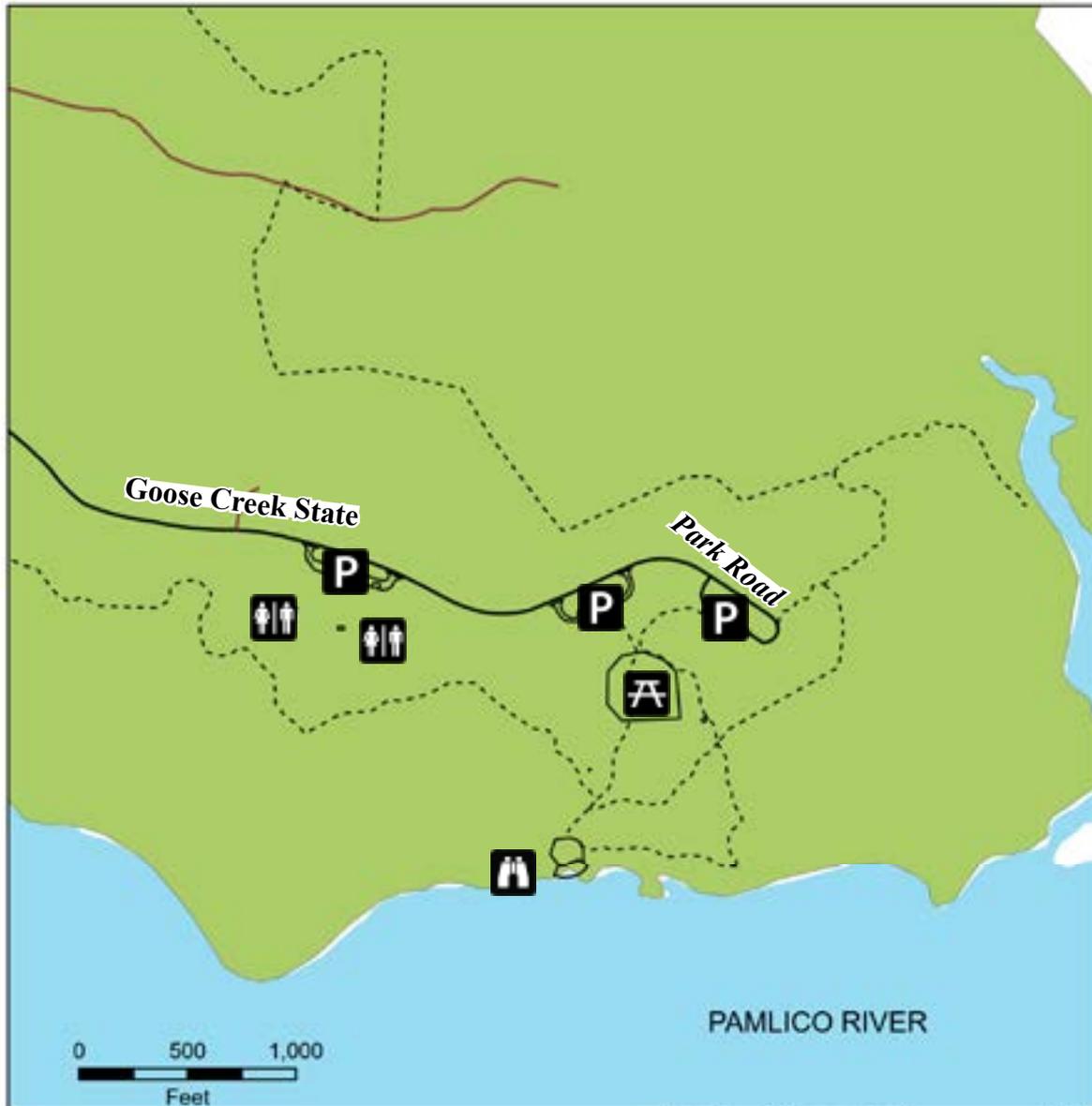


- Existing Trail
- Layer**
- Road - Paved
- Road - Unpaved
- Existing Facilities
- P** State Parks Unit Parking
- ▲** Primitive camping
- 🚣** Canoe launch



Context map

FACILITY INVENTORY - PICNIC AND SWIMMING AREA



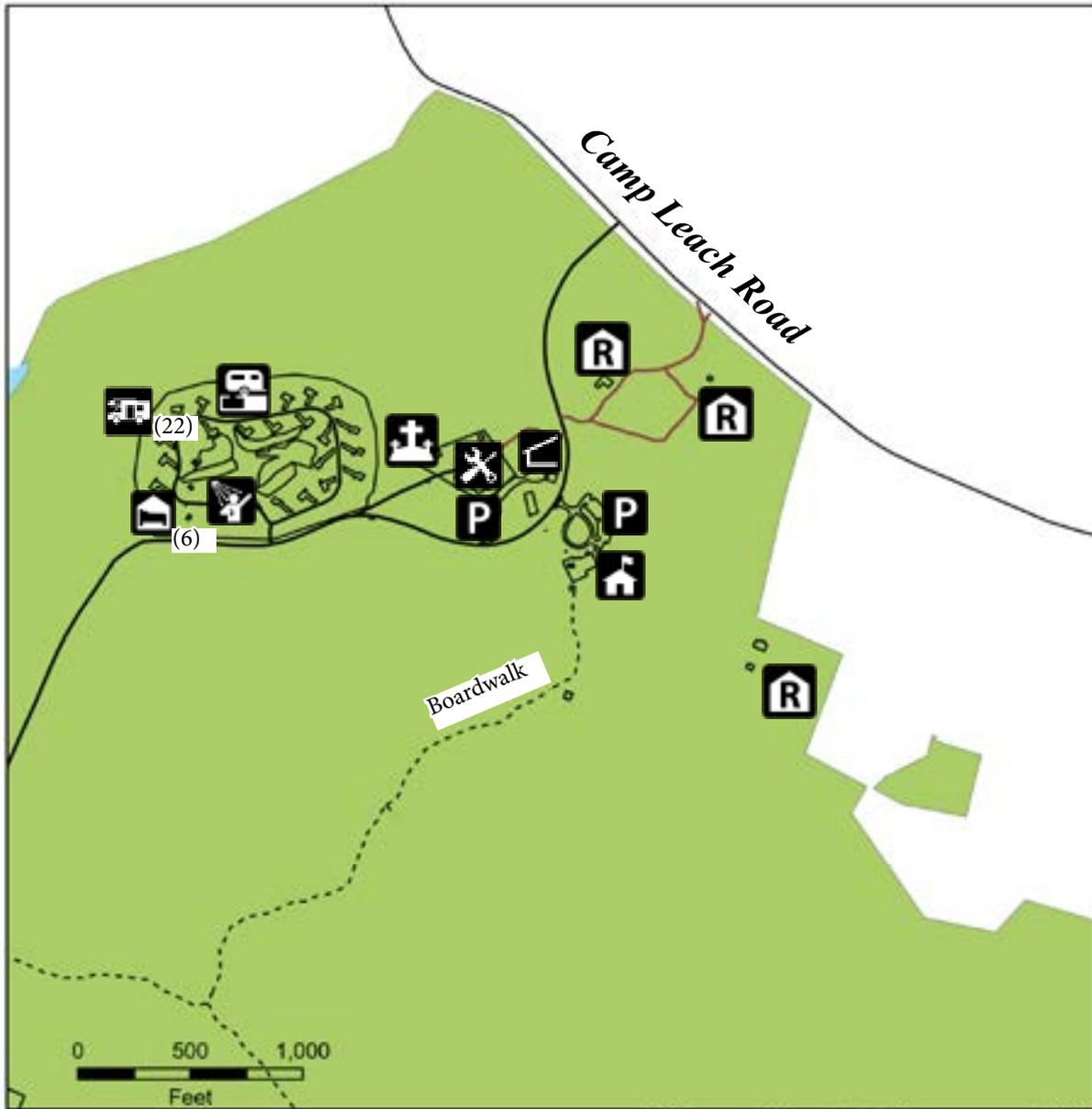
Goose Creek State Park
 Facility Inventory
 Picnic & Swimming Area
 April 2023



- Existing Trail
- Layer**
- Road - Paved
- Road - Unpaved
- Existing Facilities
- State Parks Unit
- P** Parking
- ♂ ♀** Restroom
- A** Picnic Shelter



FACILITY INVENTORY - PARK ENTRANCE/ ENVIRONMENTAL EDUCATION CENTER



Goose Creek State Park
 Facility Inventory
 Park Entrance/ Environmental Educ. Center
 April 2023



Park Residence

- Existing Trail
- Layer**
- Road - Paved
- Road - Unpaved
- Existing Facilities
- State Parks Unit
- Parking
- Environmental Education Center
- Maintenance Area
- Camper Cabin



Context map

FACILITY INVENTORY (CONTINUED)



Picnic shelter near Environmental Education Building



The footings of the boat launch at Dinah's Landing needs a structural assessment performed due to excessive use, current and age.

FACILITY INVENTORY (CONTINUED)



Non motorized boat launch at primitive campground provides an amenity for campers



Environmental Education Center was built in 2000 and needs updated base on use, exposure to wind, and age



TRAIL ASSESSMENT

“Often, the most popular and heavily used trails in our parks are the most impacted. A method was developed to take a simple survey of trail popularity and condition in each state park based on observations and information reported by the superintendent. Values were assigned for trail popularity and trail condition with a description provided for each value. Superintendents were requested to fill out the two values for each park trail. This resulted in a final “Trail Score” to determine the priority that should be assigned for maintenance, reroutes or redesign of each trail. The results from the survey generally support that the most popular trails have the most maintenance needs. Using this “Trail Score” to determine the priority of trail projects at a park will allow the Division to improve the visitor experience for the largest number of trail users.”

Status	Description
1	Good condition/some routine trail maintenance required
2	Moderate trail maintenance required
3	Heavy erosion in places and/or unsustainable grades.
4	Trail closed due to erosion, damage, or other reasons. Make comments on closure reason.
Popularity	Description
4	Single most popular trail in the park w/ most visitors hiking this trail
3	Very popular trail with heavy usage in the park
2	Moderate usage by park visitors but other trails in the same park are more popular
1	Very little traffic overall or compared to other trails in the same park



TRAIL ASSESSMENT (CONTINUED)

TRAIL NAME	USE	SUR-FACE	WIDTH	MEA-SURE-TYP	COM-MENT	Blaze	Status	Popularity	Priority Score	Comments
Flatty Creek Trail	Hike		0	3		Orange Triangle	2	2	6	
Goose Creek Trail	Hike		0	3		Blue Triangle	3	3	6	
Huckleberry Trail	Hike		0	3		White Hexagon	1	3	4	
Ivey Gut Trail	Hike		0	3		Red Triangle	3	3	6	
Live Oak Trail	Hike		0	3		Red Hexagon	1	4	5	
Mallard Creek Trail	Hike		0	3		Blue Hexagon	1	3	4	
Palmetto Boardwalk Trail	Hike		0	3	Interpre-tive	N/A	3	4	8	
Tar Kiln Trail	Hike		0	3		Orange Hexagon	1	2	3	

TRAIL INVENTORY

Flatty Creek Trail: This 0.30 easy loop hiking trail loops through an upland forest and incorporates short stretches of boardwalk across wetlands. The trail head is located near the primitive campground.

Goose Creek Trail: This 2.50 mile easy one-way hiking trail runs from the family campground at the mouth of Goose Creek to the Pamlico riverfront.

Huckleberry Trail: This 0.30 mile easy one way hiking trail runs between Live Oak Trail and Mallard Creek Trail.

Ivey Gut Trail: This 1.80 mile easy one way hiking trail runs between the Main Road and Goose Creek.

Live Oak Trail: This 0.50 mile easy loop hiking trail runs between the Main Road and the Pamlico River.

Long Leaf Trail: This 1.30 mile long, easy hiking trail starts loops around the perimeter of the family campground.

Mallard Creek Trail: This 1.0 mile easy one way hiking trail runs from Mallard Creek and Huckleberry Trail.

Palmetto Boardwalk Trail: This 0.50 mile easy one-way hiking trail starts from the Environmental Education Center to the junction of Tar Kiln Trail. A majority of the trail is on boardwalk.

Tar Kiln Trail: This 1.30 mile easy, one way hiking trail is located between Mallard Creek and Palmetto trails. Park users can see the remnants of the long leaf pine naval stores industry of the 1800's and early 1900's.



Mallard Creek Trail provides an overlook for bird watching and observation



Palmetto Boardwalk Trail is the signature or interpretive trail in Goose Creek State Park

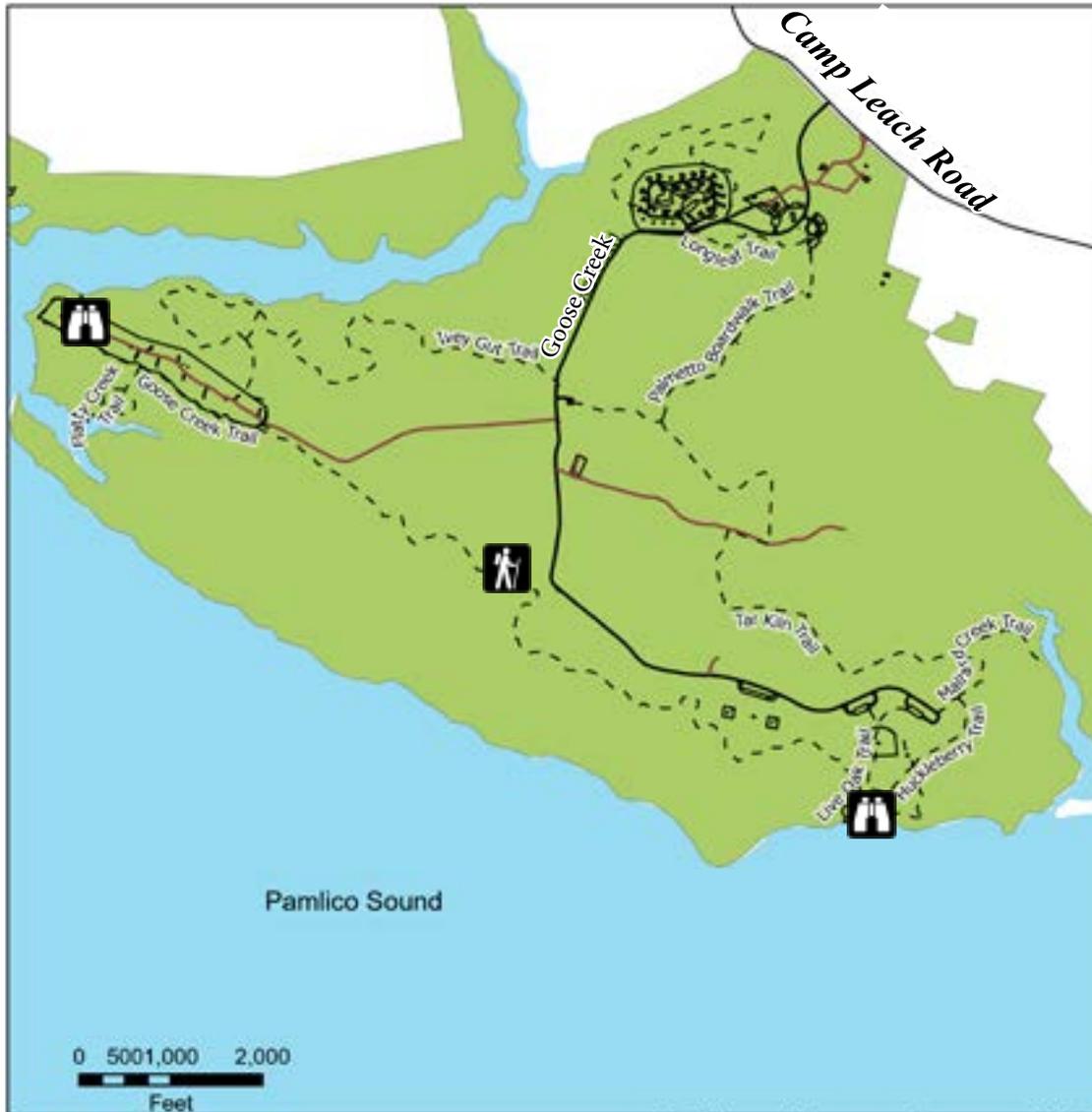
TRAIL INVENTORY (CONTINUED)

TRAIL INVENTORY	HIKING
Flatty Creek Trail	0.30
Goose Creek Trail	2.50
Huckleberry Trail	0.30
Ivey Gut Trail	1.80
Live Oak Trail	0.50
Long Leaf Trail	1.30
Mallard Creek Loop	1.00
Palmetto Boardwalk Trail	0.50
Tar Kiln Trail	1.30
TOTAL HIKING TRAILS (Miles)	9.50



Several trails were built within a sandy long leaf forest

TRAIL INVENTORY



Goose Creek State Park Trail Inventory

April 2023



- Existing Trail
- Layer**
- Road - Paved
- Road - Unpaved
- Existing Facilities
- State Parks Unit

- Observation
- Trail



IV. PLANNING

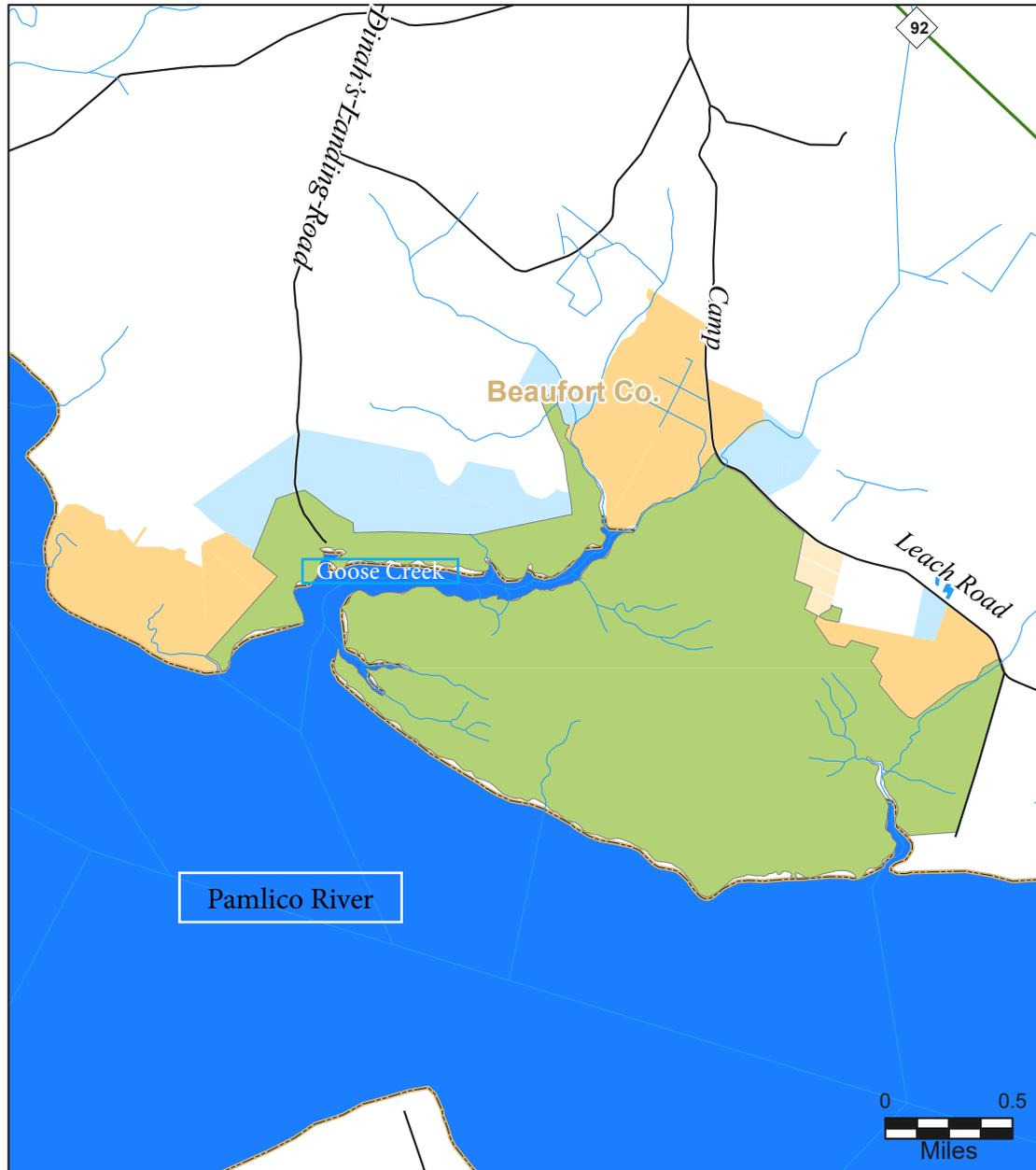


Swim Beach along the Pamlico River

LAND PROTECTION FOR STATE PARKS:

To achieve the highest level of connectivity between park properties already owned by the State of North Carolina, further acquisition of land is expected to take place. Additional land will ensure the maximum protection of natural resources, scenic preservation, outdoor recreation and public access. Each park has several tracts of land that have been distinguished as a future need or a critical need for the park. The following map shows Land Acquisition needs for Goose Creek State Park.

LAND PROTECTION PLAN



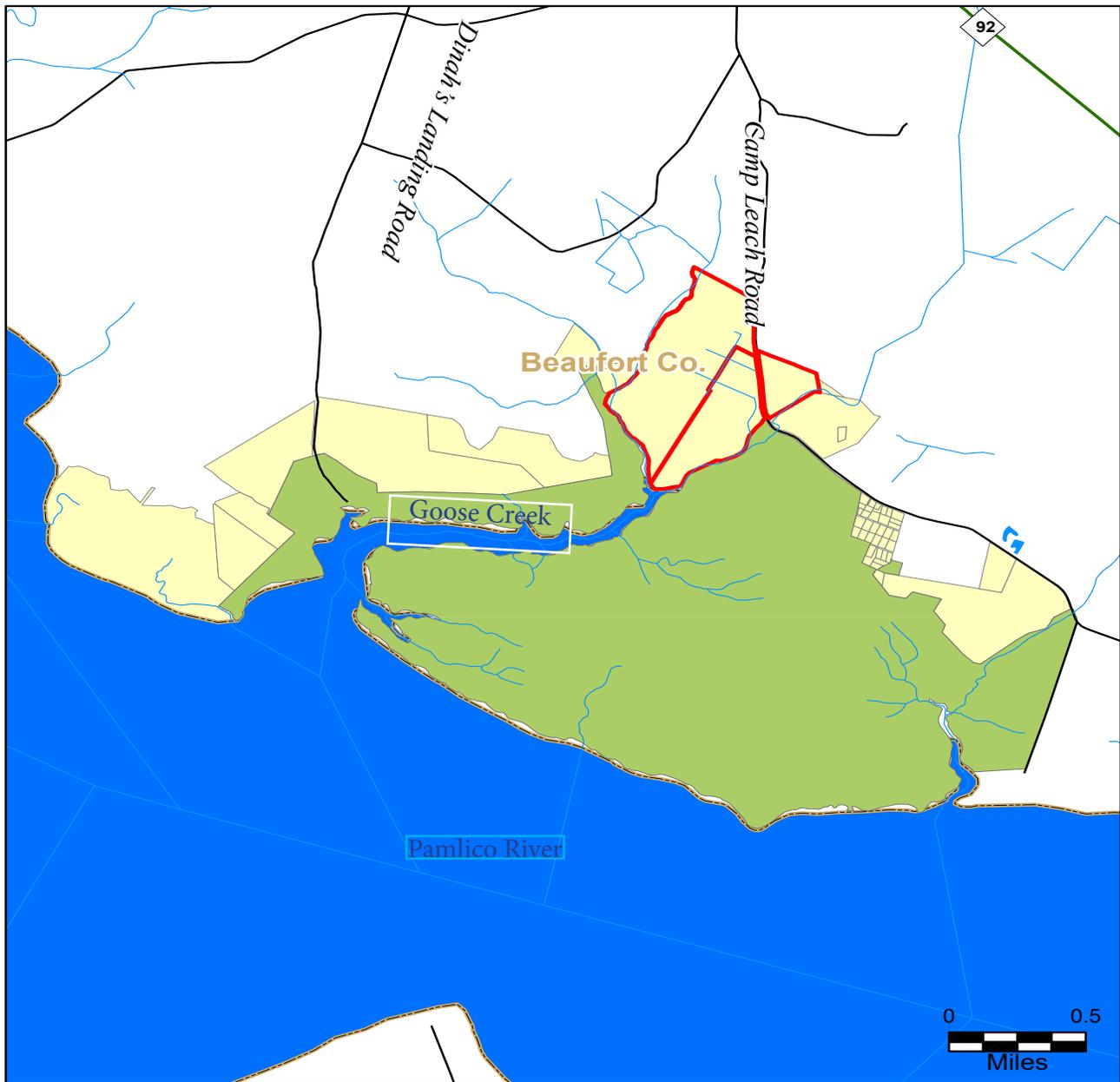
Goose Creek State Park

N
April 2024

- State Parks Unit
Land Protection Plan
Objectives
- Primary resource protection
 - Inholding
 - Scenic protection
 - Water quality protection
 - Facilities development
 - Buffer



LAND PROTECTION PLAN - CRITICAL ACRES



Goose Creek State Park

- State Parks Unit
- Critical Need
- Future Need



N

 April 2024



PROJECT LIST

PROJECT #	PROJECT TITLE	** CONCEPTUAL COST
1	Palmetto Trail Boardwalk Replacement	\$ 2,127,500
2	Environmental Educational Center Renovations	\$ 1,786,800
3	Maintenance Building Improvements	\$ 365,200
4	Miscellaneous Maintenance Projects	\$ 295,500
5	L- Proposed Park Residence	\$ 850,000
6	Proposed Equipment Storage Building	\$ 909,320
7	Proposed Restroom at Swim Beach	\$1,182,800
8	Proposed Water access for RV Campers	\$ 280,900
9	Roadway Improvements	\$ 384,900
10	Trail Improvements - Parkwide	\$ 500,000
11	Proposed Nature Based Play Area	\$ 103,800
12	Proposed Restroom Building at Group Campground	\$1,174,100
	TOTAL	\$ 9,960,820
TOTAL		\$9,960,820

**Planning estimated project cost does not include contingencies, design fee, nor escalation.

GMP PROJECT DESCRIPTIONS

Disclaimer note: Proposed projects must be submitted to the Natural Resources staff for Environmental Review.

1. Palmetto Trail Boardwalk Replacement

Palmetto Loop was severely damaged by Hurricane Matthew and Florence in 2018.

The project scope of work includes: Construction of a side loop extension to intersect with the existing Palmetto Boardwalk Trail.

The trail is a raised boardwalk over wetlands, marsh areas and connects to the Palmetto Loop Trail. The proposed side loop also requires 4,430 Linear Feet of boardwalk with minimum of 8 feet deep pilings. The side loop will branch off to the western section of the main trail just to the rear of the existing screened environmental education classroom and will connect back in at the proposed overlook. This will provide access and a loop system to the boardwalk to alleviate crowding when multiple groups are using the boardwalk for interpretive and educational programming. The Palmetto Trail Boardwalk demonstrates a ghost ecosystem, the intrusion of tidal water with freshwater. Park staff will coordinate with natural resources staff and permitting prior to replacement of boardwalk.



2. Environmental Educational Center Renovations

The Environmental Education Center (EEC), was constructed in 2000, and needs routine maintenance and upgrades. The project lifespan is 40 years. Prior to design and construction, park staff will determine the feasibility of renovation versus new construction methods.

Scope of work includes:

- Remove and Replace all exterior windows;
- Remove and replace all exterior trim and siding with composite siding;
- Paint exterior and interior EEC building;
- Replace water damaged wallpaper or paint;
- Replace carpet (10,700 sq. ft.);
- Replace damaged ceiling tiles in auditorium;
- Remediation of mold in auditorium caused by water intrusion;
- Install insulation in ceiling in auditorium;
- Upgrade fluorescent lighting to LED throughout the building; and
- Replace all exterior door hardware and locks.

GMP PROJECT DESCRIPTIONS

3. Maintenance Building Improvements

Goose Creek State Park has aging infrastructure that needs inspections, repairing or replacement.

Scope of work includes:

- Install a vehicle lift and exhaust system inside existing maintenance building;
- Removal of wood siding; and
- Waterseal and Installation of composite siding;
- Removal of an above ground fuel tanks behind the maintenance area;
- Installation of two (2) separate fuel tanks (minimum 1000 gallon tank) for diesel and unleaded fuel with a counter and fuel indicator system.

Separate diesel and unleaded fuels tank permitting will be reviewed and approved thru CAMA thru NCDEQ.



Existing fuel tanks are over 50 years old and needs to be replaced.



The maintenance building was constructed in 1982. The siding needs to be replaced with sustainable building products.

GMP PROJECT DESCRIPTIONS

4. Miscellaneous Maintenance Projects

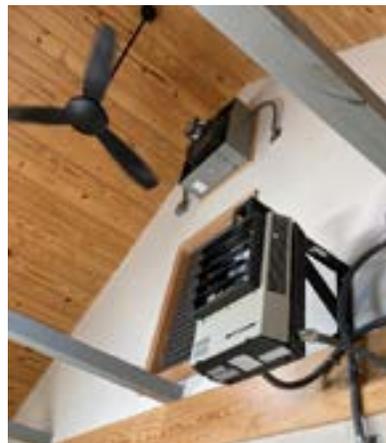
Goose Creek State Park has aging infrastructure that needs inspections, repairing or replacement. On average, the showerhouse electrical bill is \$1,400 per month. The improvements to the air conditioning system will keep the condensation level regulated. Maintenance staff will coordinate with the park Superintendent prior to design and construction.

Scope of work includes:

- Install air conditioning system with dehumidifier unit, or air duct system to campground shower house due to the abundance of moisture concerns;
- Install a wash down station at Swim beach with an automatic shut off value system;
- Install additional wash down stations near the swim beach shelter;
- Inspect footings at Dinah pier and dock at primitive campground due to excessive salt and wind;
- Roof replacement at two (2) swim beach shelter;
- Roof replacement at Flicker Field Shelter, and
- Install booster pump system to municipal waterline to increase water pressure levels to the Family Campground.



Several picnic shelters need roof replaced due to wind damage and age.



Swim beach needs a wash down station, install a ventilation system to reduce condensation in the family campground shower house, and replace roof at day use shelters.

GMP PROJECT DESCRIPTIONS (CONTINUED)

5. L- Proposed Park Residence

In order to provide adequate response time to emergencies and provide customer service at the family campground, park staff needs to be stationed in the western section of the park. This will help retain staff within the Division. Prior to construction, the consultant will evaluate the feasibility and cost analysis of purchasing and installation of a prefabricated structure. The 2,000 Sq. Ft. Residence will include 2 or 3 bedrooms along with a garage or carport.



A coastal style park residence needs to be stationed in the western section of the Goose Creek State Park. The minimum 2,000 square feet structure will include 2 or 3 bedrooms and a garage.

GMP PROJECT DESCRIPTIONS

6. Proposed Equipment Storage Building

Park staff needs adequate space to store and protect valuable equipment.

Scope of work includes:

- Mobilization, site work;
- Proposed equipment storage building -5 bay;
- Lumber storage area;
- Concrete pad;
- Electrical extension from existing maintenance building-(1,000 Lin Ft.);
- Water source - municipal water line;
- Proposed 6' high Chain link fence (min. 1,000 Lin Ft.);



The storage shed building at Weymouth Woods Sandhills Nature Preserve provides secured space for vehicles and equipment.



GMP PROJECT DESCRIPTIONS

7. Proposed Restroom at Swim Beach

The existing bathhouse is over 35 years old and needs to be replaced. Prior to construction, the consultant will evaluate the feasibility and cost analysis of purchasing and installation of a prefabricated structure. Prior to design, the finished floor elevation will be determined based on the flood elevation and projected sea level rise.

Scope of work includes:

- Coordination with environmental permitting staff;
- Demolish restroom;
- Site work and fill dirt;
- Proposed restroom (Minimum 1,200 Square Feet); raised minimum 36 inches above finished grade;
- Concrete sidewalk;
- Electrical upgrades;
- Wash down stations or integrate a unisex shower into new restroom building and
- Privacy fence.

GMP PROJECT DESCRIPTIONS

8. Proposed Water access for RV Campers

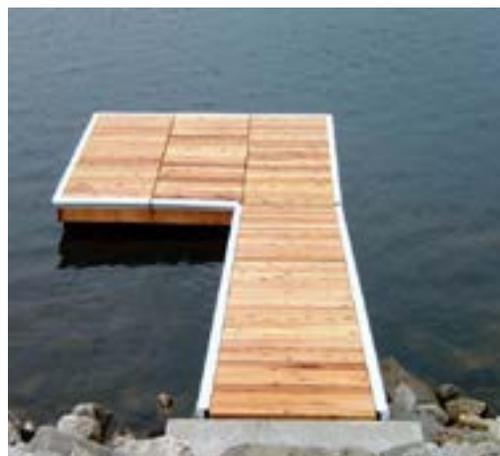
Campers using the family campground have requested additional amenities, including water access for families. This project will be reviewed by CAMA permitting division and environmental permitting staff. Prior to design and construction, natural resources and park staff will field verify the presence of wetland, marsh, or floodplain.

Scope of work includes:

- Floating dock system for non-motorized vessels;
- Trail connection.



Approximate location of the proposed water access along Pamlico River



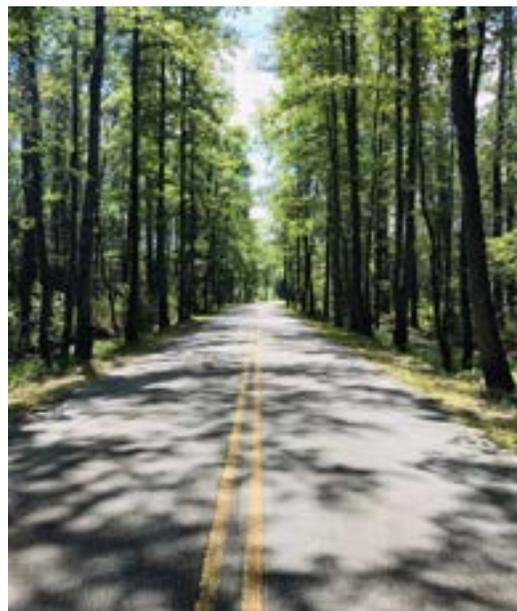
Example of a Proposed floating dock system

9. Roadway Improvements

During 2022, the park capacity increased by 74 %. A 1" overlay, heavy duty is needed for park visitors, staff, maintenance and prescribed burning equipment. Park staff will work with NCDOT to coordinate and prioritize projects. Some areas are in low lying, degrading and located in wet areas.

Scope of work includes:

- Paving the maintenance entrance road (325 linear feet);
- 1" asphalt overlay on park road (14,400 linear feet);
- Dinah's Landing (700 linear Feet); and
- 1" Asphalt overlay on Multi-Use Trail near Swim Beach access (450 Linear Feet).



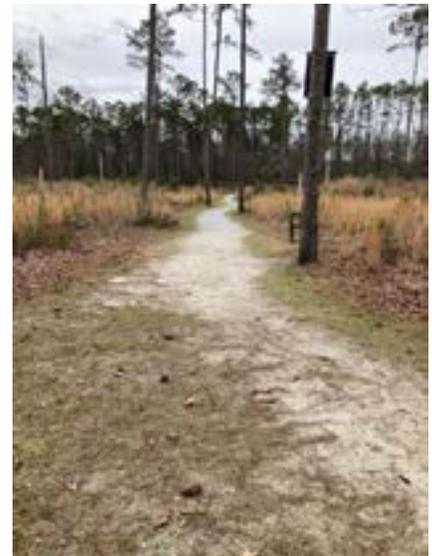
The Goose Creek Park Road needs a 1" asphalt overlay in order to accommodate for heavy duty vehicles.

GMP PROJECT DESCRIPTIONS (CONTINUED)

10. Trail Improvements (Parkwide)

Park staff will work with the Coastal Trails Specialist to design and construct a connector trail from the Palmetto Boardwalk to junction, then a loop back to the Environmental Education Center (1 mile or 5,280 Lin ft). Park staff will coordinate with trail staff to repair and replace boardwalks along the Flatty Creek Trail. Park staff will coordinate with trail and environmental permitting staff for funding, permitting, design and construction.

Prior to design, the cost benefit analysis of timber construction compared to precast concrete boardwalk (5,000 lbs.) will be determined. The finished floor elevation will be determined based on the flood elevation and projected sea level rise.



Connector trail from the visitor center to boardwalk



Sections of the Flatty Creek Trail boardwalk needs to be removed and replaced due to structural damage from several hurricanes

GMP PROJECT DESCRIPTIONS (CONTINUED)

11. Proposed Nature Based Play Area

The nature based play area will provide an activity, such as an eco -backpack, for small children and family camping groups. The location will be close to the existing Flicker Field shelter near the maintenance area.

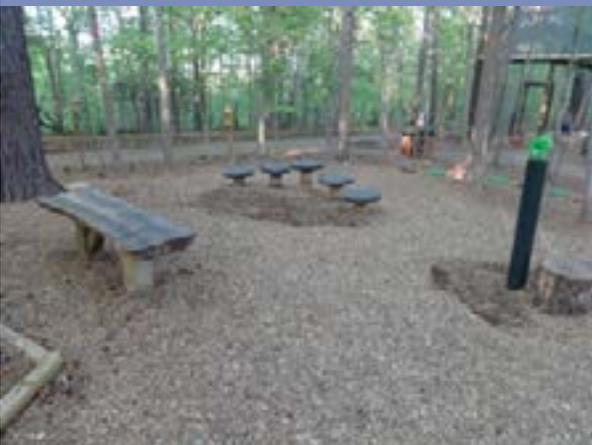
Scope of work includes:

- Lily pads;
- Spin playground structure;
- Log type tunnel;
- 9” deep; Engineered wood fiber playground mulch; and
- Site improvements, such as a interpretive signs, picnic table and a park bench.

The equipment should be similar or equal to Ann Wilkerson, M.D. Nature Preserve, managed by City of Raleigh, or Hemlock Bluffs Nature Preserve in Cary, North Carolina. The fall-zone shall be less than 24” for liability, inspection, and long range maintenance purposes.



Example of nature based play area at Ann Wilkerson, M.D. Nature Preserve managed by City of Raleigh



Example of nature based play area at Hemlock Bluffs Nature Preserve in Cary, North Carolina, includes a lily pad type structures and log type tunnel.

GMP PROJECT DESCRIPTIONS (CONTINUED)

12. Proposed Restroom Building at Group Camping

The toilet building is over 42 years old and past the expected lifespan. The structure is not accessible compliant, needs electrical upgrades and additional stalls. Prior to construction, the consultant will evaluate the feasibility and cost analysis of purchasing and Installation of a prefabricated structure. Prior to design, the finished floor elevation will be determined based on the flood elevation and projected sea level rise.

Scope of work includes:

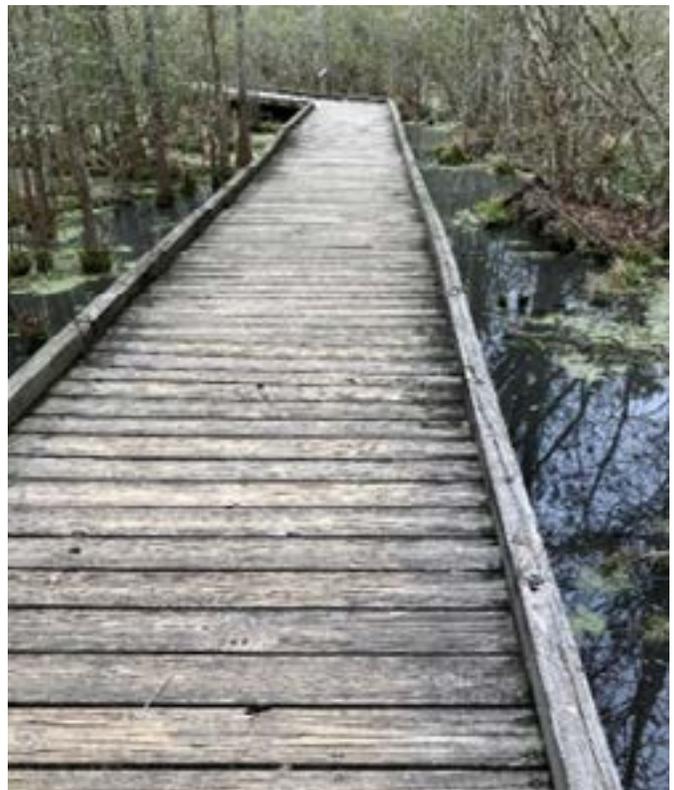
- Site work and fill dirt;
- Demolish restroom;
- Proposed restroom(minimum 1,200 Square feet); raised minimum 18 inches above finished grade;
- Fill material;
- Infrastructure, hook ups and
- Electrical upgrades.



The existing restroom building is past the expected lifespan and needs to be replaced

PROJECT CONCEPT PLANS

GMP PROJECT #1 - PALMETTO TRAIL BOARDWALK REPLACEMENT

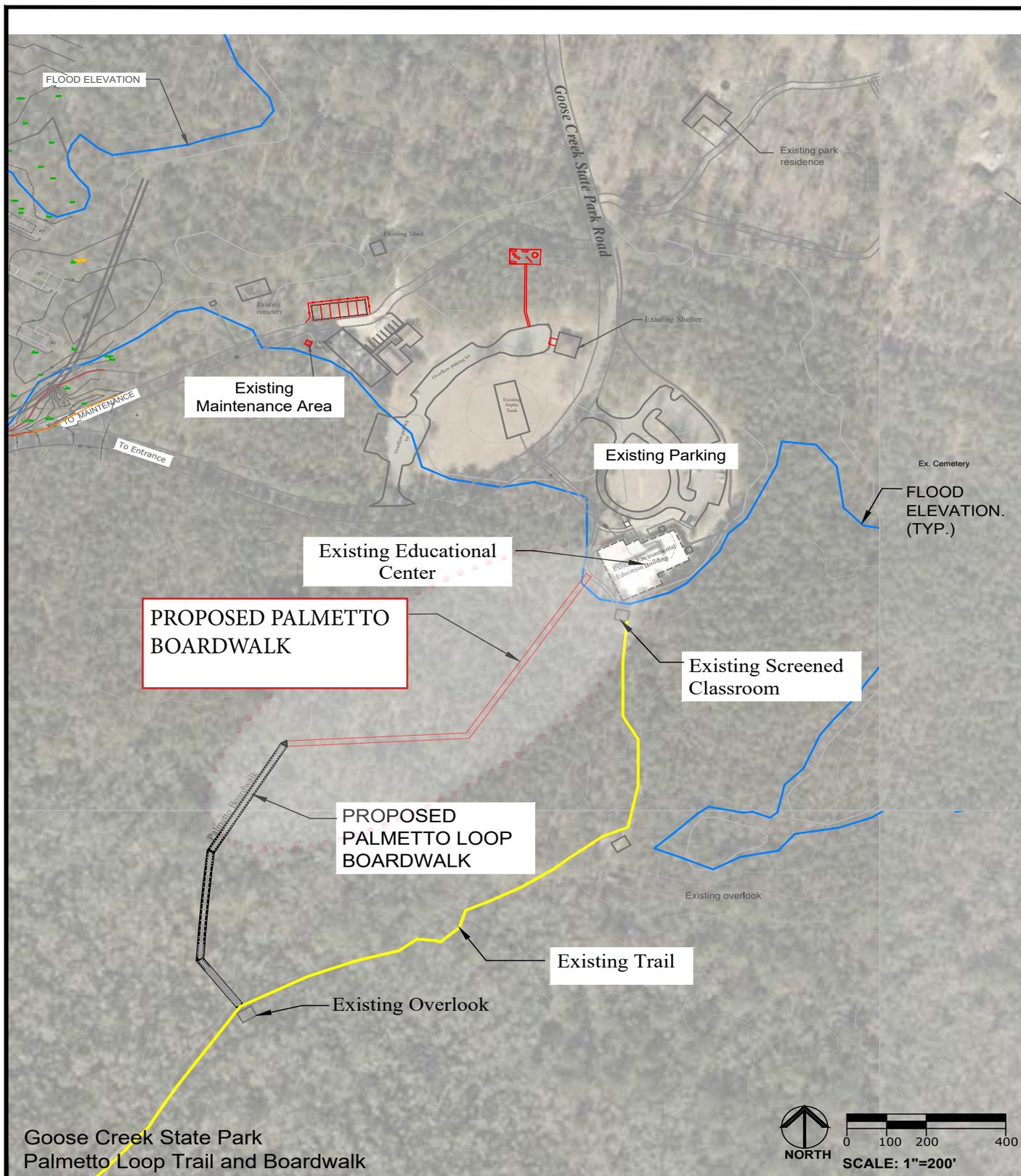


The Palmetto Boardwalk, located on the backside of the Environmental Education Center, needs to be completely replaced due to hurricane damage.



PROJECT CONCEPT PLANS

GMP PROJECT #1 - PALMETTO TRAIL BOARDWALK REPLACEMENT



PROJECT CONCEPT PLANS

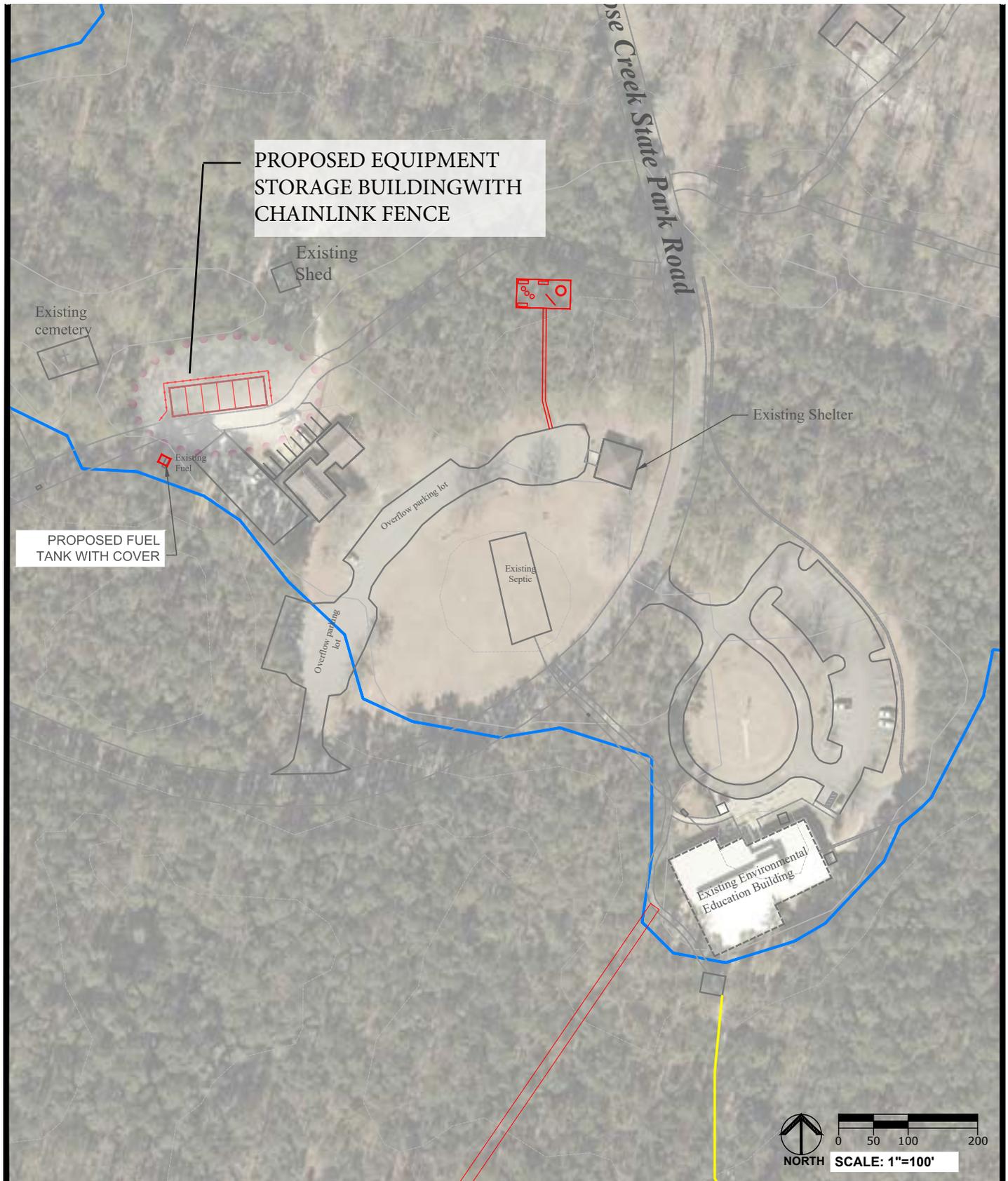
GMP PROJECT # 2: ENVIRONMENTAL EDUCATIONAL CENTER RENOVATIONS



The Environmental Educational Center needs painting, siding repairs, window replacement and clean mold in the auditorium

PROJECT CONCEPT PLANS

GMP PROJECT #6 - PROPOSED EQUIPMENT STORAGE BUILDING



PROJECT CONCEPT PLANS

GMP PROJECT #6 - PROPOSED EQUIPMENT STORAGE BUILDING



The Proposed Equipment storage building will be located on the back side of existing maintenance building. A chain-link fence will be installed for security purposes.

PROJECT CONCEPT PLANS

GMP PROJECT #7: PROPOSED RESTROOM AT SWIM BEACH



The restroom building at the swim beach has exceeded the expected lifespan. The structure will be raised to prevent water damage from to sea level rising and the intensity and frequency of storm events.

PROJECT CONCEPT PLANS

GMP PROJECT #8 - PROPOSED WATER ACCESS FOR RV CAMPERS



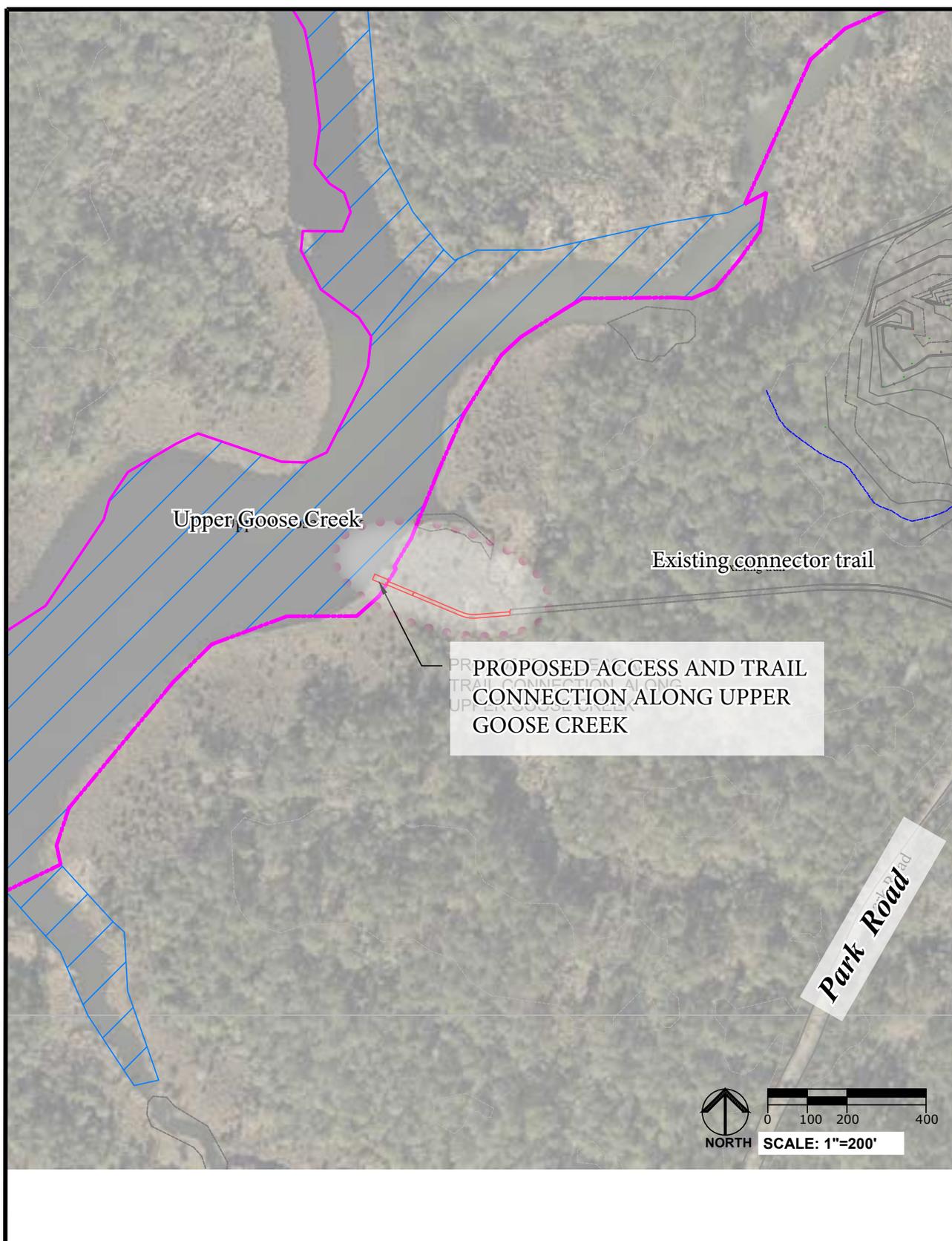
Structure will be similar to the existing non motorized boat launch at primitive campground



Location of proposed water access along existing shoreline

PROJECT CONCEPT PLANS

GMP PROJECT #8 - PROPOSED WATER ACCESS FOR RV CAMPERS



PROJECT CONCEPT PLANS

GMP PROJECT # 9: ROADWAY IMPROVEMENTS



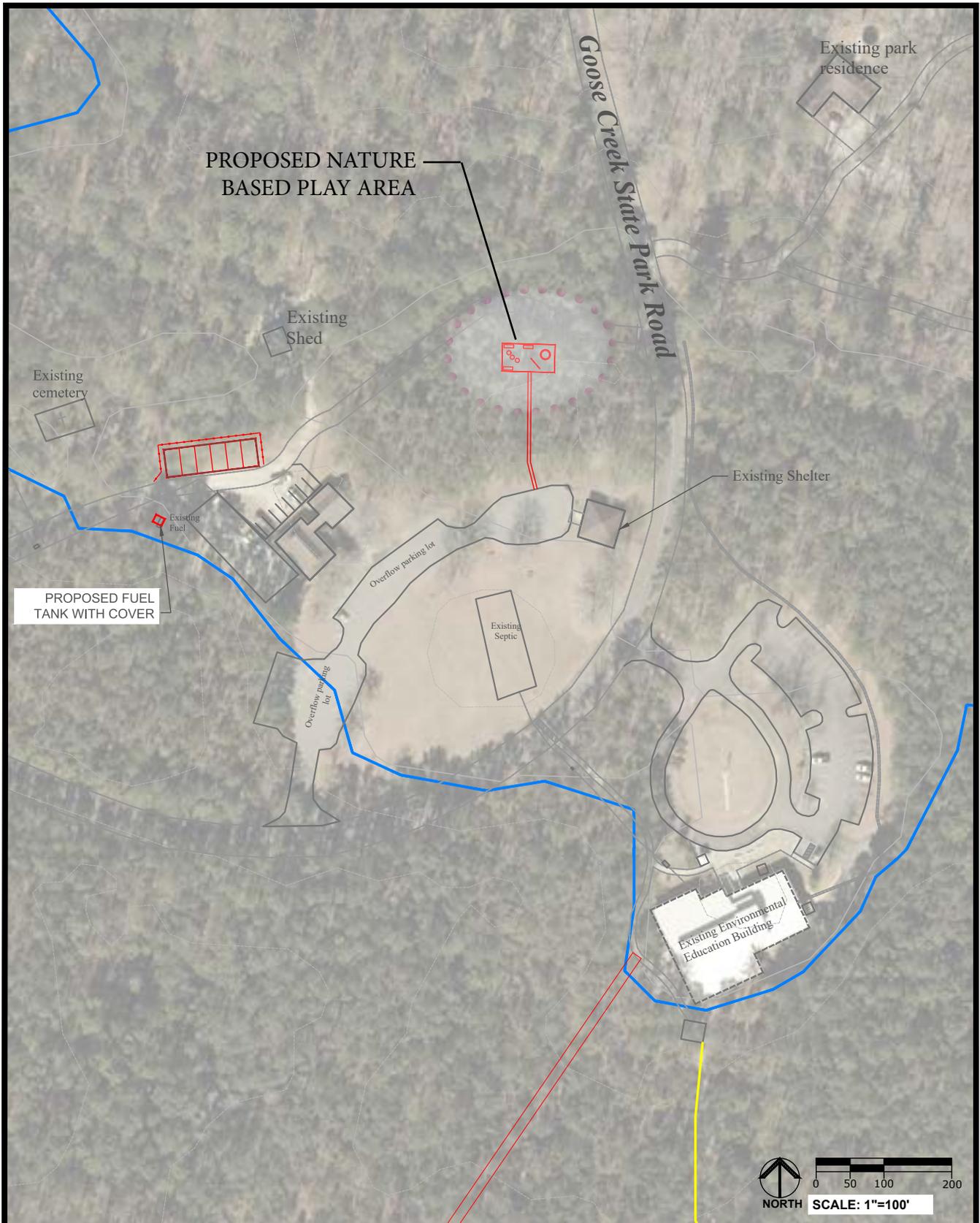
The park managed roads needs an asphalt overlay in order to provide adequate weight for heavy duty equipment, including construction and prescribed burning equipment



Multi use trail needs to a 1" asphalt overlay in order to be accessible compliant

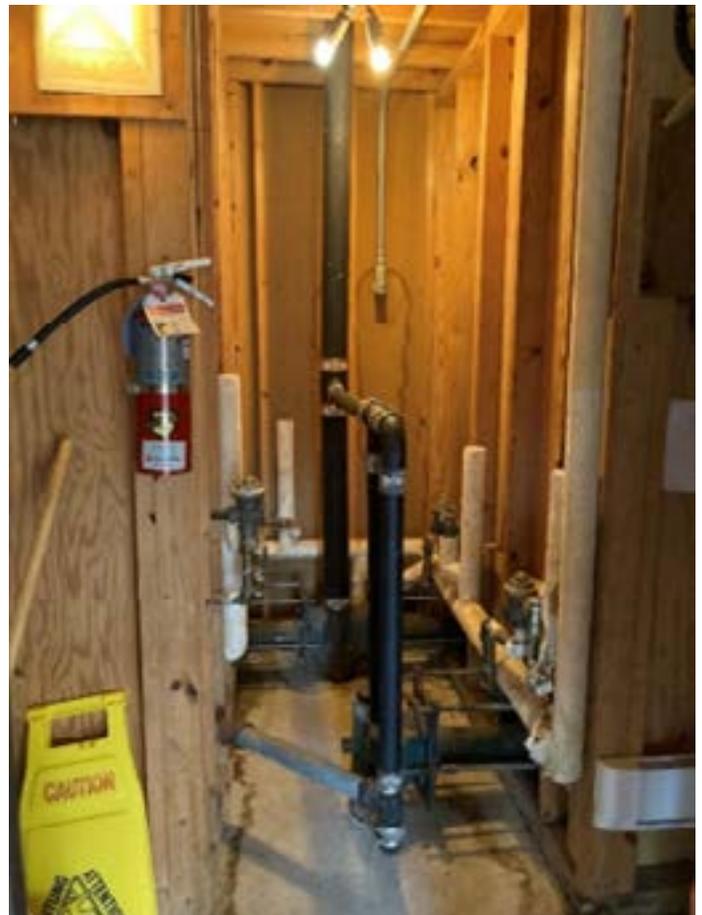
PROJECT CONCEPT PLANS

GMP PROJECT # 11: PROPOSED NATURE BASED PLAY AREA



PROJECT CONCEPT PLANS

GMP PROJECT #12 - PROPOSED RESTROOM BUILDING AT GROUP CAMPGROUND

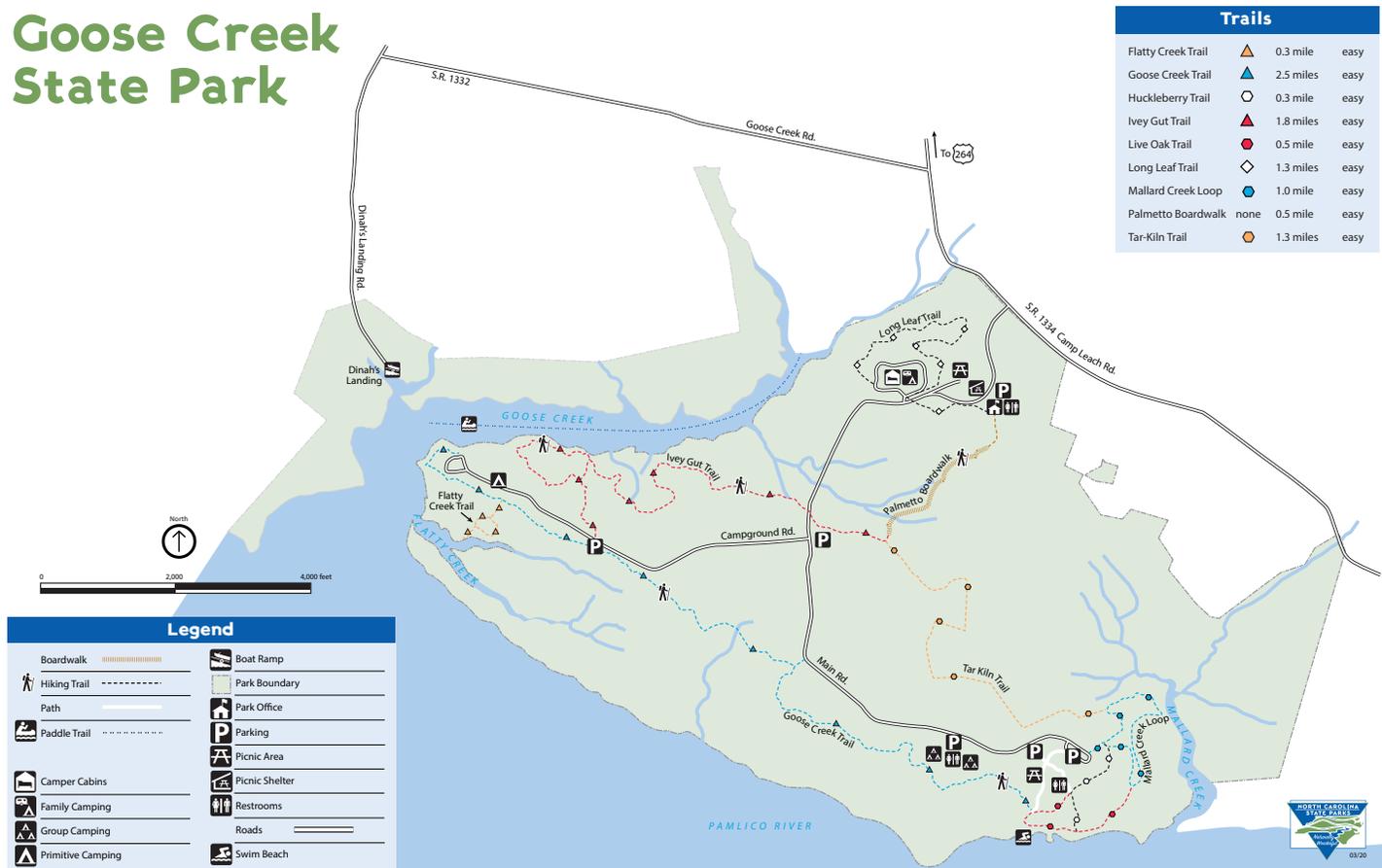


The restroom building at the Group campground has exceeded the expected lifespan. The structure will be raised to prevent water damage caused by relative sea level rising, intensity and frequency of storm events.



PARK MAP

Goose Creek State Park





APPENDIX:

SIGNIFICANT AND SPECIES OF CONCERN



APPENDIX: SIGNIFICANT AND SPECIES OF CONCERN

State and Federally Listed Species

Scientific Name	Common Name	NC Status	USA Status	S Rank	G Rank	Taxonomic Group
Dryobates borealis	Red-cockaded Woodpecker	E	E	S2	G3	BIRD
Acipenser oxyrinchus	Atlantic Sturgeon	E	E	S2	G3T3	FISH
Canis rufus	Red Wolf	T	E, XN	S1	G1Q	MAMMAL
Haliaeetus leucocephalus	Bald Eagle	T	BGPA	S3B,S3N	G5	BIRD
Tyto alba	Barn Owl	SC		S2S3B,S3N	G5	BIRD
Crotalus horridus	Timber Rattlesnake	SC		S3	G4	REPTILE
Sistrurus miliarius	Carolina Pigmy Rattlesnake	SC		S2	G5T4T5	REPTILE

APPENDIX: SIGNIFICANT AND SPECIES OF CONCERN



Watchlist Species

Scientific Name	Common Name	NC Status	USA Status	S Rank	G Rank	Taxonomic Group
Anaxyrus quercicus	Oak Toad	SR		S2	G5	AMPHIBIAN
Enneacanthus obesus	Banded Sunfish	SR		S3	G5	FISH
Coryphaeschna in-gens	Regal Darner	SR		S2?	G5	INSECT
Euphyes dukesi	Dukes' Skipper	SR		S1S2	G3G4	INSECT
Farancia erytrogram-ma	Common Rainbow Snake	SR		S3	G4	REPTILE
Ludwigia alata	Winged Seedbox	SR-P		S2	G3G5	VASCULAR PLANT
Pseudacris brimleyi	Brimley's Chorus Frog	W5		S4	G5	AMPHIBIAN
Anhinga anhinga	Anhinga	W2		S3B	G5	BIRD
Antrostomus carolin-ensis	Chuck-will's-widow	W1				BIRD
Antrostomus vo-ciferus	Eastern Whip-poor-will	W1				BIRD
Chaetura pelagica	Chimney Swift	W1				BIRD
Chordeiles minor	Common Nighthawk	W1				BIRD
Helmitheros vermivo-rum pop. 1	Worm-eating Warbler (Coastal Plain popu-lation)	W5		S3B	G5TNRQ	BIRD
Lophodytes cuculla-tus	Hooded Merganser	W3		S1B,S4N	G5	BIRD
Podilymbus podiceps	Pied-billed Grebe	W2		S3B,S5N	G5	BIRD
Rallus elegans	King Rail	W1,W3		S3B,S3N	G4	BIRD

APPENDIX



SIGNIFICANT AND SPECIES OF CONCERN (CONTINUED)

<i>Rallus limicola</i>	Virginia Rail	W3		S3B,S5N	G5	BIRD
<i>Sitta canadensis</i>	Red-breasted Nuthatch	W2,W5		S3B,S4N	G5	BIRD
<i>Amblyscirtes carolina</i>	Carolina Roadside-skipper	W2		S3S4	G3G4	INSECT
<i>Caripeta aretaria</i>	Southern Pine Looper	W3		S3S4	G4	INSECT
<i>Eupithecia peckorum</i>	Peck's Pug Moth	W3		S3?	G4	INSECT
<i>Sciurus niger</i>	Eastern Fox Squirrel	W2		S3	G5	MAMMAL
<i>Fissidens adianthoides</i>	Maiden Hair Moss	W7		S1	G5	MOSS
<i>Cemophora coccinea</i>	Northern Scarlet Snake	W1,W5		S3	G5	REPTILE
<i>Clemmys guttata</i>	Spotted Turtle	W1		S4	G5	REPTILE
<i>Kinosternon baurii</i>	Striped Mud Turtle	W3		S3S4	G4G5	REPTILE
<i>Rhadinaea flavilata</i>	Pine Woods Snake	W2		S3	G4	REPTILE
<i>Carex hyalinolepis</i>	Shoreline Sedge	W1		S2	G4G5	VASCULAR PLANT
<i>Magnolia grandiflora</i>	Southern Magnolia	W1		S2?	G5	VASCULAR PLANT
<i>Persea borbonia</i>	Red Bay, Upland Red Bay	W7		S2	G5	VASCULAR PLANT



APPENDIX

SIGNIFICANT AND SPECIES OF CONCERN

LEGEND:

<u>Conservation Code</u>	<u>North Carolina Status</u>
SR	Significantly Rare
SR-G	Game Animal
SR-L	Limited (endemic or near endemic to NC and adjacent states)
SR-T	Throughout (Rare throughout its entire range)
SR-D	Disjunct
SR-P	Peripheral
SR-O	Other
W1 (Animals)	Population in Decline
W1 (Plants)	Rare but Relatively Secure
W2 (Animals)	Rare but Relatively Secure
W2 (Plants)	Rare but Questionable Taxonomy
W3 (Animals)	Poorly Known in NC
W3 (Plants)	Rare but Questionable Documentation
W4 (Animals)	Rare but Questionable Documentation
W4 (Plants)	Rare but Possibly Not Native (not included in this document)
W5 (Animals)	Habitat Threatened
W5 (Plants)	Rare because of Severe Decline to Population or Habitat
W6 (Animals)	Rare but Believed Not Native (not included in this document)
W6 (Plants)	Regionally Rare
W7 (Plants)	Poorly Known in NC



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