Bay Tree State Park General Management Plan

North Carolina Department of Natural and Cultural Resources

Division of Parks and Recreation

Coastal Region

February 2017

I. MISSION AND PURPOSE

MISSION:

Conservation: To protect North Carolina's natural diversity through careful selection and stewardship of state parks system lands;
Recreation: To provide and promote outdoor recreation opportunities in the state parks system and throughout the state; and
Education: To encourage appreciation of North Carolina's natural and cultural heritage through diverse educational opportunities; for all citizens of and visitors to the State of North Carolina.

Our purpose: 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.

The North Carolina State Parks System exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features, and recreational resources of statewide significance; to provide outdoor recreational opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state's natural heritage.

PARK PURPOSE:

Bay Tree Lake State Park has a long history of public ownership. In 1827, legislation passed that prohibited the lands covered by the waters of any lake within North Carolina from being recorded for private ownership. In 1911, the General Assembly passed legislation declaring that certain lakes containing 500 acres or more were not to be sold but should *"...always be and remain the property of the State of North Carolina for the use and benefit of all the people of the State."* This legislation clearly indicates the public trust nature of the 1,418-acre lake. While the lake and lake bed have been and remain public property, the lake shore above mean high water was privately owned until 1979 when 350 acres were acquired by donation as part of a Federal Land and Water Conservation Fund grant. LWCF regulations require that the 350 acres and lake be retained and used only for public outdoor recreational purposes. (Total of 609 acres.)

Bay Tree Lake's natural and public trust values have been adversely affected by private development. Between 1965 and 1972, the lake was drained, stumps and lake debris were removed, and lakeside property was cleared. White sand was distributed around the lake shore to cover organic material, and a drainage canal was dug around the entire lake to keep swamp water from entering the lake. Homes were constructed along its northern rim. A rim breach returned the lake to its original color.

Bay Tree Lake offers beautiful scenic vistas of its open waters and extensive undeveloped shoreline. The broad expanses of flat, dark water contrast with the dense bay forest. In places, majestic bald cypress draped with Spanish moss line the shore or grow in the shallow water.

Bay Tree Lake State Park's significant biological resources include Longleaf Pine communities classified as Pine/Scrub Oak Sandhill, Wet Pine Flatwoods, and Mesic Pine Flatwoods. There are also well developed examples of Pocosin vegetation. The Longleaf Pine canopy is unusually mature. While somewhat damaged by fire suppression, these communities are highly significant as examples of the more fertile Longleaf Pine communities that are very rare in the region.

Bay Tree Lake is classified as a Carolina Bay. Carolina Bays are found only in the loose, unconsolidated sands that form a cover within the Atlantic Coastal Plain in North Carolina, South Carolina, and Georgia, with the greatest concentration of bays in Bladen County. Carolina Bays are shallow, oval depressions oriented in a southeast-northwest direction. Their origin has long been a matter of speculation and debate. Bay Tree Lake is an example of a water-filled Carolina bay. Only a few bays still contain water. It is shallow, with the deepest point being only 7.1 feet. Its outline is irregular for a Carolina bay; it appears to merge with neighboring bays. Bay Tree Lake's geological values have been lessened by earlier private development activities in and adjoining the lake.

Bay Tree Lake State Park exists so its valuable recreational, scenic, biological, and geological values can be protected and because of its value as a public trust resource. The Division is charged with preserving these values and providing park experiences that promote pride in and understanding of the natural heritage of North Carolina.

II. HISTORY

The first white settlement of the region occurred when Highland Scots claimed land along the Cape Fear River in 1740. Farming, principally concentrated along river plantations, became important economically. Farming became less important economically as turpentine, tar production, and timber harvesting became the region's chief sources of income. By 1860, as the region's merchantable forest resources became increasingly depleted, agriculture underwent a rejuvenation and cotton farming became popular.

Statewide interest in the Carolina bay lakes emerged in the 1820s. During the 1827-1828 legislature, a bill was enacted that made it unlawful for anyone to record for private ownership the lands covered by the waters of any lake within North Carolina. This law followed the limitation of the private recording of unappropriated marsh or swamplands that was enacted during the previous legislature.

The General Assembly of 1922 passed legislation that provided that

> *White Lake, Black Lake* [now Bay Tree Lake], *Waccamaw Lake, and any other lake in Bladen, Columbus, or Cumberland counties containing 500 acres or more shall never be sold nor conveyed to any person, firm or corporation, but shall always be and remain the property of the State of North Carolina for the use and benefit of all the people of the State.* (Chapter 8, G.S. 7544)

This legislation confirmed the status of the 1,418-acre Bay Tree Lake as a state-owned, public trust resource. In 1929, the law was amended to include all state-owned lakes having 50 acres or more and to charge the Department of Conservation and Development with administrative responsibility of these

newly established recreational areas.

Settlers in the Bay Lakes region generally led lives of marginal subsistence. Due to an influx of laborers that worked in the naval stores, lumber, and cotton industries, the population increased beyond the soil's capacity to support it. With the decline of the cotton industry and the exhaustion of the tar, pitch, turpentine, and timber industries, a large segment of the population by 1935 found themselves on sub marginal land with no means of moving into an area of greater productivity.

During the Great Depression years of the 1930s, the federal government undertook conservation programs to create jobs. These programs resulted in facilities being constructed at nearby Jones and Singletary lakes as well as the acquisition of 34,544 acres of land in the Bladen Lakes area. No land was acquired for public purposes at Bay Tree Lake, however, and no facilities have been constructed. The state's property interest continued to be limited to the lake itself.

Prior to 1965, little use was made of Bay Tree Lake, mainly because of its inaccessibility. In January, 1965, a private land development group obtained an option to purchase several tracts of land consisting of approximately 14,000 acres completely surrounding Bay Tree Lake. The intent of the group was to develop a private, inland resort based on the 1,400-acre lake. Later that year, the group made an official request for the drainage of Black Lake to officials of the North Carolina Department of Conservation and Development. The proposal was aimed at determining the feasibility of improving the quality of the water and lake bottom for recreational purposes.

Permission to lower the water level of Black Lake by four feet was granted in the fall of 1965, following the recommendations of the Wildlife Resources Commission. In January 1966, the developers requested permission to completely drain the lake and clean out debris. The purpose of the operation was to remove tannic water from the lake and to intercept black water draining into the lake from adjacent swamp land. This was accomplished by cutting a ditch around the complete circumference of the lake. Instead of draining into the lake, swamp waters were diverted below the lake drain.

The plan to improve Black Lake was based largely on the observations of scientists who had studied the bay lake phenomenon and the differences between the lakes. The main difference between the black water lakes and White Lake was that White Lake was the only bay lake draining to the northwest rather than the usual southeasterly pattern. It was observed that as a result of this difference, tannic waters and organic material were not carried across the lake but contained to the northwestern edge, thereby giving White Lake its clear water (State Lakes Master Plan, December 1977).

Permission was granted to allow this project to be done under the supervision of the Division of State Parks and subject to the following conditions:

1. That plans for development of the area will include provisions for public access for full recreational use; and
2. That the water level be restored and constantly maintained at the normal high water mark subject only to natural causes (Twenty-First Biennial Report of the N.C. Department of Conservation & Development, June, 1960).

Drainage of the lake was completed in late February 1966. Over the next five years, the lake remained dry while the developers removed stumps and lake debris and imported large quantities of white sand,

which was distributed around the complete lake shore to cover existing organic material and form a beach area. By the middle of 1970's, the drainage outlet was closed and the lake began refilling.
By early 1972, the lake had nearly reached its original level and remained clear. At a meeting of the Board of Conservation and Development, the name of Black Lake was officially changed to Bay Tree Lake, and the lake developers, Bay Lakes Corporation, announced extensive plans for the resort development. Included in the plans was a residential layout consisting of 3,000 single-family dwelling lots surrounding the lake, and multi-family residential and commercial facilities. Residential areas were shown to have direct access to either one of three golf courses or water frontage along the lake shore or canal system.

A mysterious breach of the lake rim occurred shortly after residential sales began in the 1970's. Tannic waters were allowed to enter the lake, and although the breach was repaired within 24 hours after its occurrence, it had the effect of returning the water to its original condition, the color of tea. This condition remains today.

Pocosin vegetation

Development of the lake shore and adjacent land has occurred on the northern side of the lake. Development includes clearing, residences, and a community center. A network of canals was also been excavated on the northern and eastern shores for drainage and for recreational boat use.

In 1977, the Division of Parks and Recreation published a State Lakes Master Plan, which recommended development of recreational facilities at state lakes in this region. One of the objectives of the plan was to coordinate the recreational opportunities between lakes so that programs are complimentary. Use and development programs were viewed as being interrelated by proximity and environmental context.

In two transactions that took place in 1979 and 1981, the Division purchased 609 acres of land, its first land acquisition at Bay Tree Lake. The property was included in a federal Land and Water Conservation Fund grant (project number 37-00688). Under federal regulations associated with the LWCF grant program, the land must be retained and used for public outdoor recreation purposes. Bay Tree State Park is located 13 miles away from Singletary Lake State Park.

Bay Tree Lake manages 609 acres as of June 1, 2016,

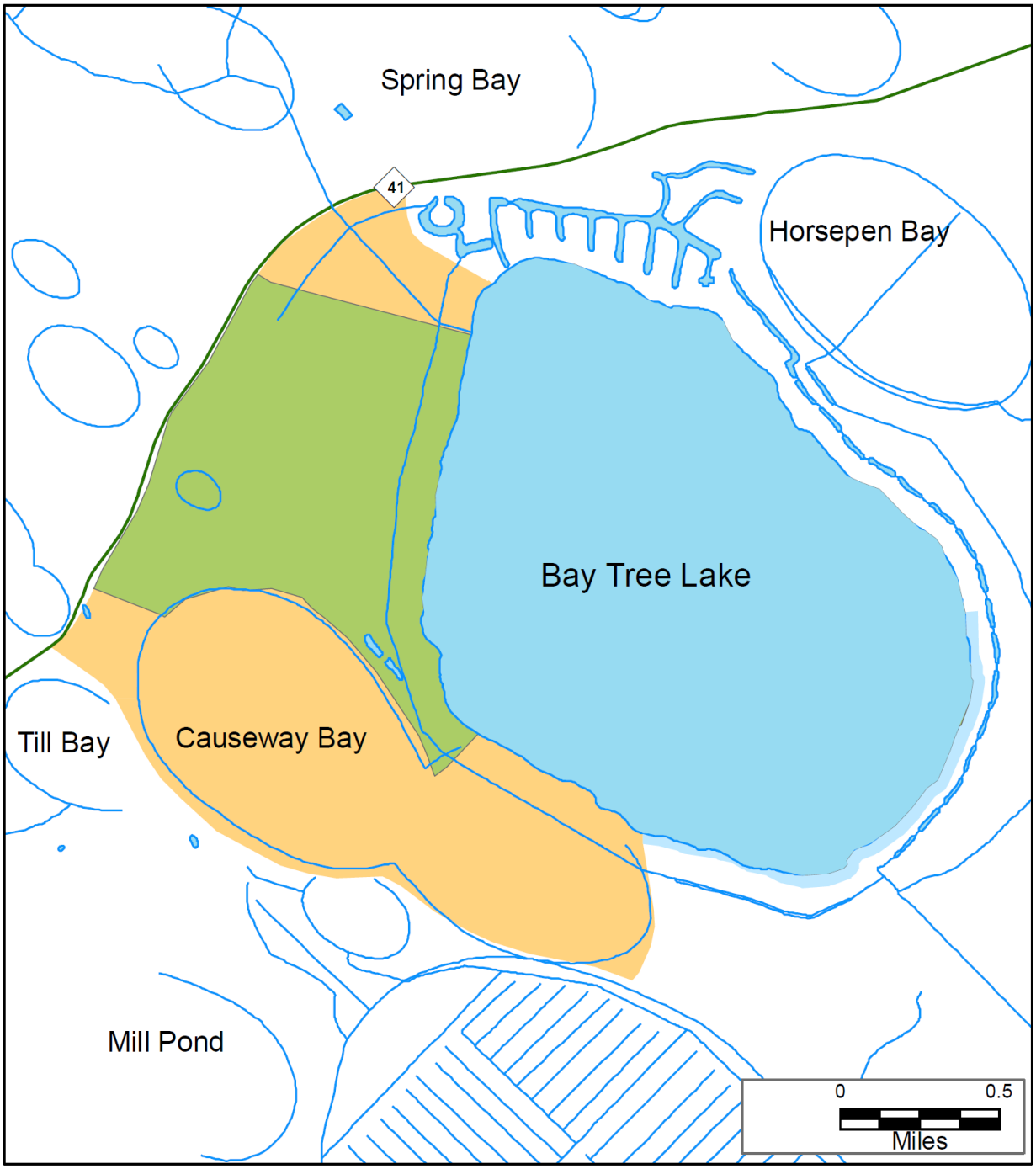
III. THEMES AND INVENTORY

Bay Tree State Area Theme Table

Theme Type	Theme	Baytree Significance	State Parks System Representation
Archeological	Campsite/Activity Area	High	Adequate
Archeological	Recreation	High	Adequate
Biological	Coastal Plain Depression Communities	High	Little
Biological	Dry Longleaf Pine Communities	High	Moderate
Geological	Carolina Bays	High	Adequate
Scenic	Forests	Moderate	Adequate
Scenic	Marshes	High	Moderate
Scenic	Meadows/Grasslands	High	Little
Scenic	Pocosins	High	Moderate
Scenic	Reservoirs/Lakes	High	Adequate
Scenic	Swamps	High	Adequate
Scenic	Scenic Vistas	High	Moderate

IV. PLANNING

LAND PROTECTION PLAN
BAY TREE LAKE STATE PARK



Bay Tree Lake SP

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January 2017

State Parks Unit

Land Protection Plan

Primary resource protection

Inholding

Scenic protection

Water quality protection

Facilities development

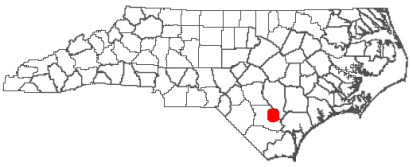
Buffer

Other Conservation Land

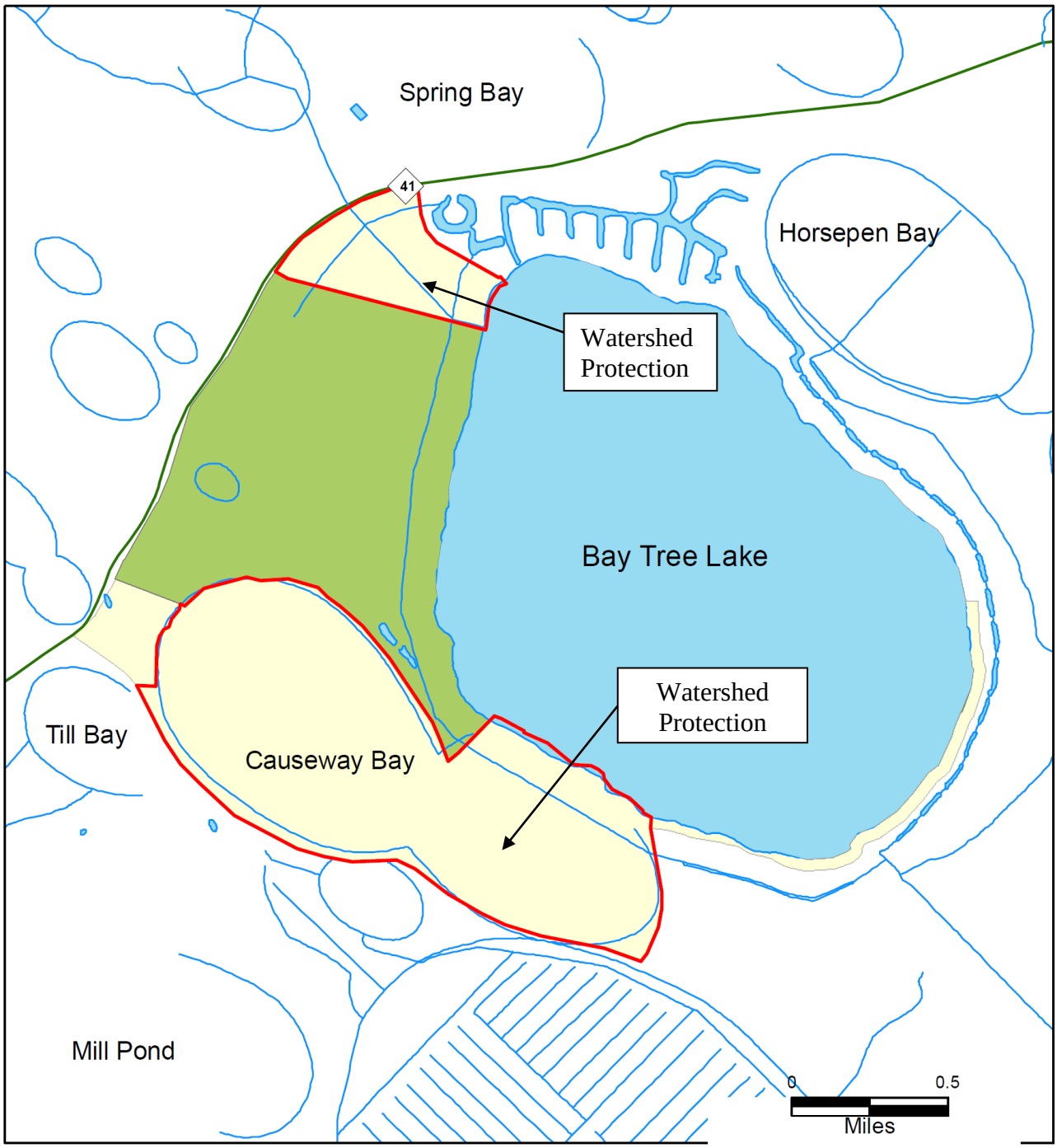
Federal

State

Other



LAND PROTECTION PLAN- CRITICAL ACRES
BAY TREE LAKE STATE PARK



Bay Tree Lake SP

Land Protection Plan
Future Need
Critical need
State Parks Unit
Other Conservation Land
Federal
State
Other

N

January 2017

PROJECT EVALUATION PROGRAM LIST
BAY TREE LAKE STATE PARK

Rank	Project Title	Cost
1	Nature trail	$85,500
2	Barrier installation	$40,000
3	Parking lot trailhead	$72,900
TOTAL		**$198,400**

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

1. Nature Trail:

This project will develop Bay Tree Lake State Park into a trail system. Presently, the park is undeveloped and requires a four-wheel drive vehicle to access the lake because the xeric sand ridge is full of ruts. The area needs to be converted back into a nature area limited access. The scope of work will include a 1.70- mile loop trail (9,117 LF) to be constructed from the trailhead parking lot to lake access. An accessible trail (1,200 Lin. Ft.) will be installed along the shoreline. Cost includes clearing, grubbing, erosion, and sedimentation control permitting and environmental permits.

2. Barrier Installation:

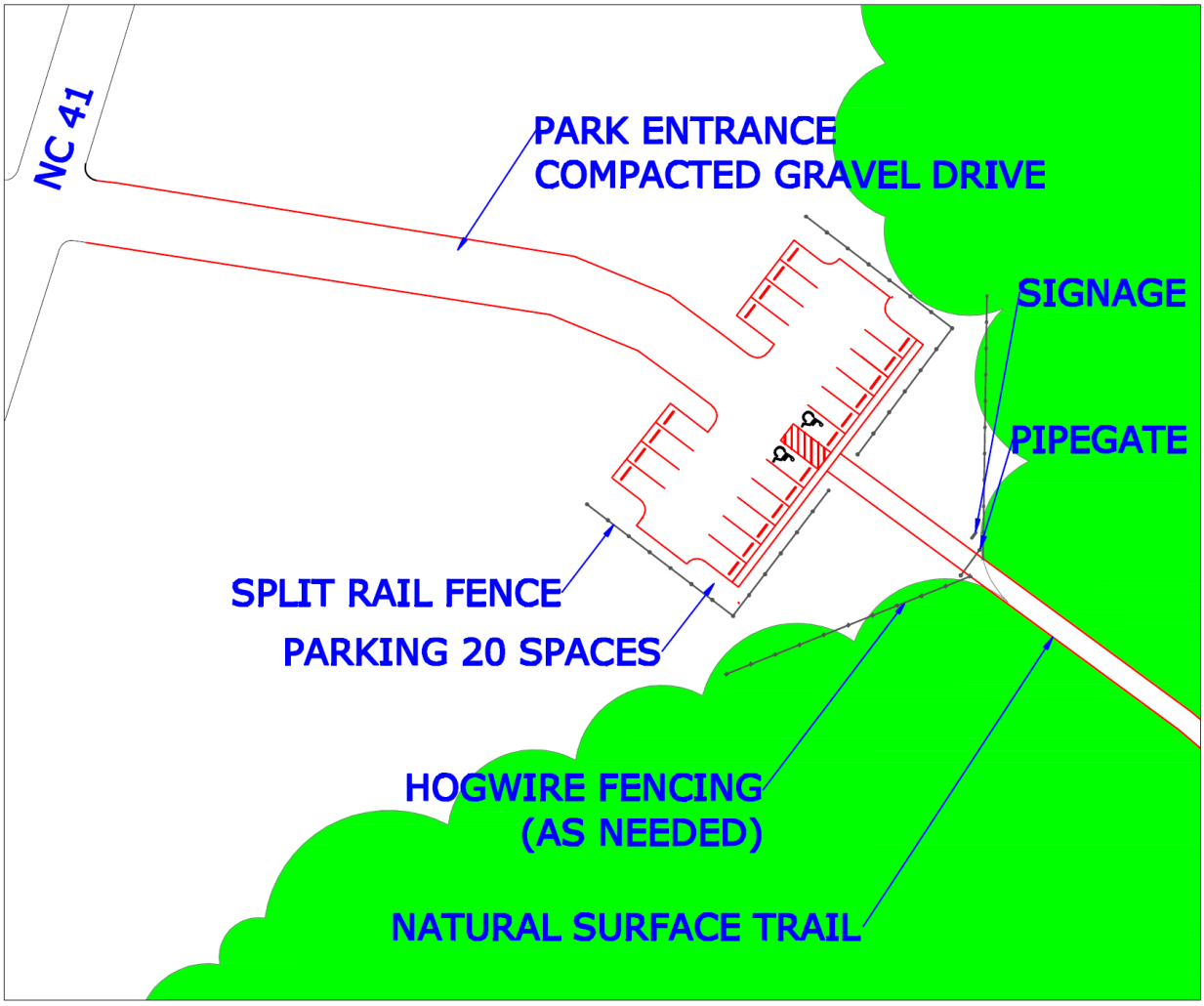
NCDOT guardrails will be installed along NC 41 for approximately 2,200 linear feet along the entrance area due to security issues and protection of sensitive natural resources such: xeric sandhill scrub, as Pocosin and Long Leaf Pine communities. This fire maintained community does not recover without intensive restoration efforts. Sandy soils are unsuitable for heavy traffic.

Rare Xeric sandhill scrub habitat

3. **Parking lot trailhead**

Scope of work includes: a gravel parking lot for 20 parking spaces, fine grading, fencing, concrete wheel stops, split rail fencing, hogwire fencing. informational signage, pipe gate. The parking lot area will allow visitors to park at the trailhead and walk down to the unique bay lake.

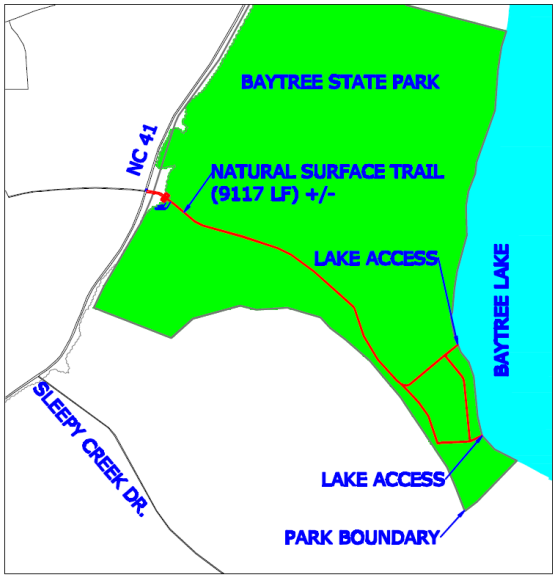
PROJECT #3: PARKING LOT AT ENTRANCE
BAY TREE STATE PARK



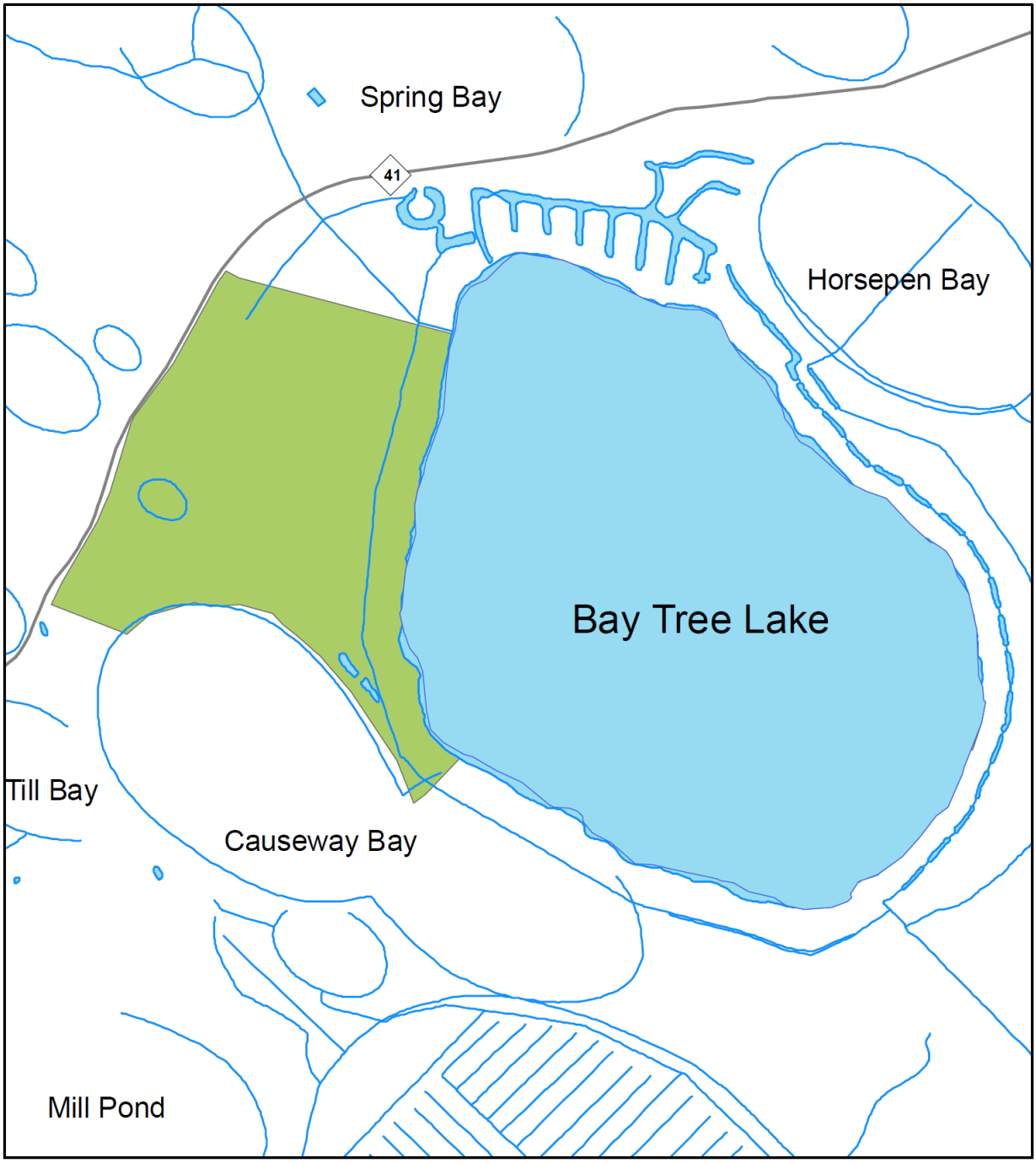
BAYTREE STATE PARK
PROPOSED INTERIM PLAN
JUNE 2011 - SCALE 1":60'

PROPOSED
-GRAVEL ACCESS/ PARKING LOT (20 SPACES)
-NATURAL SURFACE TRAIL TO LAKE
-PIPE GATE/ FENCING
*ONLY FOOT TRAFFIC PAST PIPE GATE

MATERIALS
1. Gravel Access/Parking from NC 41
2.Crusher Run Gravel 4" min depth (53,280 CFT); 90% of Standard Proctor
3. Concrete Wheel Stops (1 per space; 20 total)
4.Split Rail Fencing (220')
5. Pipe Gate/Sinage
6. Hogwire Fencing (200'/as needed at entrance)



PARK MAP
BAY TREE LAKE STATE PARK



Bay Tree Lake State Park
2017 Boundaries
609 Acres

State Parks Unit

0 0.5 1
Miles