



Regular Meeting of the Natural Heritage Advisory Committee

February 5, 2026 Agenda

Remote participation: Contact natural.heritage@dncr.nc.gov for Teams meeting link.

In-person meeting location: Nature Research Center Room 4508 (121 West Jones Street), Raleigh NC

Documents to be discussed during the meeting will be accessible online at:

<https://www.ncnhp.org/events>

NHAC Members (remote): Jeff Marcus (chair), Jay Leutze, Kevin Melvin, Lee Leidy, Kim Brown, Jocelyn Wilson, Brian Byfield

Absent: Alan Weakley, Sue Cameron

NHP Staff: Misty Franklin, Scott Pohlman, Michael Schafale, Katherine Culatta

DNCR Staff:

Deputy Secretary Jeff Michael,
Division of Land and Water Stewardship Director Will Summer,
Assistant General Counsel Zoe Hansen Burnet, Jessica Winebrenner
NC Land and Water Fund Stewardship Manager Justin Mercer

Guests: Julian Wilson, NC Plant Conservation Program; Mark Gallo and Christopher Murray, NC Dept. of Transportation; Bill Rice, Rice Planning, Design, & Environmental

10:00 AM Call to Order and Reading of Ethics Reminder – Jeff Marcus, Chair

In accordance with the State Government Ethics Act, it is the duty of every Natural Heritage Advisory Committee member to avoid both conflicts of interest and appearances of conflict. Does any Natural Heritage Advisory Committee member have any known conflict of interest or appearance of conflict with respect to any matters coming before the Natural Heritage Advisory Committee today? If so, please identify the conflict or appearance of conflict and refrain from any undue participation in the particular matter involved.

Land Acknowledgement – Jeff Marcus, Chair

As we gather to discuss wise stewardship of critically important properties in NC, we gratefully acknowledge the Native American peoples who were

the original stewards of these lands. We pay our respect to those past, present, and emerging people who have been custodians of these lands and waters.

Welcome, Introductions, and Logistics: NHAC, DNCR, NHP

- Department of Natural and Cultural Resources Updates
- Division of Land and Water Stewardship Updates: NC Land and Water Fund Executive Director and Division Director Will Summer
- NHP updates, special projects, ongoing priorities: Misty Franklin

01 Review Agenda for Additions and Deletions – All

02 Review Previous Meeting Minutes – All

Dedicated Nature Preserve Overview (Scott)

Management proposals or potential amendments to remove property

03 Eno River Diabase Sill Plant Conservation Preserve (NC Plant Conservation Program)

- NCDOT intersection improvement Snow Hill Rd/Old Oxford Road

New Dedications and amendments to add property:

04 Gull Rock Game Land (NC Wildlife Resources Commission)

05 Sandy Mush Game Land (NC Wildlife Resources Commission)

06 Uwharrie Game Land (NC Wildlife Resources Commission)

07 Goose Creek Game Land (NC Wildlife Resources Commission)

08 Chowan Swamp Game Land (NC Wildlife Resources Commission)

09 Lake Waccamaw State Park (NC Division of Parks and Recreation) – Pending

New Registries

10 Pocosin Lakes National Wildlife Refuge (US Fish and Wildlife Service)

Other Topics

2026 Meeting Dates:

May 18-20 Joint meeting with NC Land and Water Fund Board (Wildacres Retreat Center)

August 27

November 19

Adjourn



Regular Meeting of the Natural Heritage Advisory Committee

November 21, 2025 Minutes

In-person meeting location: Nature Research Center Room 4508 (121 West Jones Street), Raleigh NC

Documents discussed during the meeting were accessible online at:

<https://www.ncnhp.org/events>

NHAC Members (remote): Jeff Marcus (chair), Jay Leutze, Lee Leidy, Kim Brown, Jocelyn Wilson

Absent: Alan Weakley, Susan Cameron, Brian Byfield, Kevin Melvin

NHP Staff: Misty Franklin, Scott Pohlman, Michael Schafale, Katherine Culatta

DNCR Staff: Deputy Secretary Jeff Michael, Division of Land and Water Stewardship Director Will Summer, General Counsel Zoe Hansen Burnet.

1:00 PM Call to Order and Reading of Ethics Reminder – Jeff Marcus, Chair

In accordance with the State Government Ethics Act, it is the duty of every Natural Heritage Advisory Committee member to avoid both conflicts of interest and appearances of conflict. Does any Natural Heritage Advisory Committee member have any known conflict of interest or appearance of conflict with respect to any matters coming before the Natural Heritage Advisory Committee today? If so, please identify the conflict or appearance of conflict and refrain from any undue participation in the particular matter involved.

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Welcome, Introductions, and Logistics: NHAC, DNCR, NHP

- NC Department of Natural and Cultural Resources Updates: NCDNCR Deputy Director Jeff Michael
 - No state budget was passed this year. No updates are expected until at least April when the legislature returns.

- All DNCR sites impacted by Hurricane Helene in September 2024 have now reopened.
 - New initiative: the Atlantic Conservation Coalition is a new multi-state effort to reduce carbon emissions through protection and restoration of habitats. The 5-year initiative will be led by Sara Ward, formerly of USFWS.
- Division of Land and Water Stewardship Updates: NC Land and Water Fund Executive Director and Division Director Will Summer
 - At the funding meeting on 10/01/2025, the NC Land and Water Fund awarded \$36 million.
 - Funded projects will protect 103 natural communities, rare plants, and rare animals.
 - Acquisition projects include game lands, recreational access, historic and culturally significant sites, floodplain restoration, and acreage surrounding military installations.
 - 10 planning grants and 4 innovative stormwater grants were funded.
- Natural Heritage Program Updates: Misty Franklin
 - Andy Walker took a job with state parks, and Katherine Culatta has moved to the Botanist role. NHP will be working to backfill the Northeast Region Biologist role in next few months.
 - NHP will have 7 new positions in western NC through US Forest Service Good Neighbor Agreement. Recruitment for hiring will begin next month, including project manager, data manager, and biologists specializing in ecology, botany, and invertebrate zoology.
 - Staff led by Melanie Flood have begun plant community data collection at Holly Shelter Game Land ahead of a pocosin rewetting project. Plots will later be revisited to assess restoration effects.
 - Jeff Marcus and Jay Leutze have been reappointed to NHAC for terms through 12/31/2029

01 Review Agenda for Additions and Deletions – All: No additions or deletions. Jocelyn will recuse from Weyerhaeuser agenda items. Jeff moves to approve agenda, Lee seconds. Approved unanimously via roll call vote.

02 Review Previous Meeting Minutes – All: No edits or changes. Kim moves to approve; Lee seconds. No discussion. Approved unanimously via roll call vote.

Dedicated Nature Preserve Overview (Scott):

- Dedication is an agreement attached to the land. It cannot be rescinded by the owner. Requires approval of Council of State and Governor. Includes specific management rules.

- Dedicated Nature Preserves often have zones, including Primary Area, Primary (Restoration) Area, Special Management Area, and Buffer Areas, depending on site-specific conditions.
- State dedications require letter of allocation from State Property Office. For other lands, the dedication is recorded with deed.
- For state lands, standard riparian zones are included in Primary areas: 100 feet along all perennial streams; 300 feet along perennial streams with NHP Aquatic Habitat; 200 feet along perennial streams that are tributaries to NHP Aquatic Habitat with federally listed aquatic species.

New Dedications and amendments to add property (Scott):

03 Reedy Creek Nature Preserve (Mecklenburg County) – revision to Feb 2025 NHAC review

- Voluntary dedication with Mecklenburg County.
- When this project was reviewed at the February meeting, one excluded area was identified. Since February, Mecklenburg County staff requested a second area to be excluded.
- An additional 6 acres will be excluded from buffer area. The new exclusion does not overlap any element occurrences.
- Jeff – question before the committee is whether this additional exclusion changes the proposal enough that it does not meet standards for dedication.
- Jeff moves to accept the updated proposal, Jocelyn seconds. No further discussion. Passed unanimously by roll-call vote.

04 Boiling Spring Lakes Preserve (NCDA Plant Conservation Program)

- Brunswick County
- Dedication of land donations received with help from NC Land and Water Fund Donated Mini-grant funding.
- Two small parcels totaling 10 acres fill in gaps in large existing DNP.
- All 10 acres are primary, and contain portions of community element occurrences: High Pocosin (Evergreen Subtype); Pond Pine Woodland (Typic Subtype).
- Jeff moves to accept the proposal, Kim seconds. No further discussion. Passed unanimously by roll-call vote.

05 NCDAC Southern Correctional Hardwood Forest (NC Department of Adult Correction)

- Montgomery County

- Voluntary dedication adjacent to Okeweemee Plant Conservation Preserve DNP.
- Total of 46 acres: 22 acres primary, including Dry-Mesic Oak—Hickory Forest, Piedmont Headwater Stream Forest, and riparian zones; 24 acres buffer, including area immediately adjacent to population of federally listed Schweinitz's sunflower.
- Jay moves to accept the proposal, Lee seconds. No further discussion. Passed unanimously by roll-call vote.

06 Green River Game Land (NC Wildlife Resources Commission)

- Henderson County, Green River Gorge Natural Area
- NCLWF grant acquisition
- Adds 180 acres to Green River Game Land DNP: 86 acres primary and 94 buffer.
- Element occurrences include Montane Oak—Hickory Forest (Acidic Subtype), Rich Cove Forest (Foothills Intermediate Subtype) and sweet white trillium (*Trillium simile*).
- Jocelyn moves to accept the proposal, Jay seconds. No further discussion. Passed unanimously by roll-call vote.

07 Todd Access, South Fork New River (NC Wildlife Resources Commission)

- Ashe County, adjacent to South Fork New River Aquatic Habitat
- NCLWF grant acquisition
- 12 acres primary and 4 acres buffer
- Tract has existing social trail
- Jeff – Has future need for expansion of river access been considered, i.e. could the committee anticipate a future conflict with the dedication to build facilities for river access?
- Scott – WRC is not planning boat trailer access, only kayak. The WRC plan was used to delineate excluded access area.
- Jeff – For committee consideration, where is the line for a project that is worthwhile, considering the investment of staff time in monitoring DNPs? Acreage of this project is relatively small.
- Misty – For context, this tract is close to existing conserved land, though not adjacent. There is potential to fill in and make contiguous over time.
- Will - Dedication has been the default protection method for qualifying LWF acquisitions. Should there be an alternative?

- Scott – NHP staff assess if projects qualify according to dedication standards. There have been cases of turning down voluntary dedication with private landowners when the habitat does not qualify.
- Jay – The grant award and dedication survey process determines when tracts qualify.
- Jay moves to accept the proposal, Lee seconds. No further discussion. Passed unanimously by roll-call vote.

08 Bakers Lake State Natural Area (NC Division of Parks and Recreation)

- Bladen County, acquired by State Parks to be managed as State Natural Area (low-impact recreation)
- NCLWF grant acquisition
- 1,100 acres total: 932 acres primary and the remainder excluded. The primary area includes large Carolina Bay and six natural communities
- Jeff- Why were portions excluded from dedication rather than designated as buffer? Are there plans to build structures?
- Scott- State Parks prefers to exclude rather than designate as buffer. Exclusion does not always indicate plans for infrastructure development, and the Division of Parks and Recreation has made the case that State Parks, State Natural Areas, etc are also dedicated under the Nature and Historic Preserves Act.
- Kim moves to accept the proposal, Jeff seconds. No further discussion. Passed unanimously by roll-call vote.

New Registries

Registered Heritage Area Overview (Scott):

- Registry recognizes an area for its natural heritage resource values.
- Voluntary agreement between landowner and DNCR Secretary to protect and manage the natural area. NHP provides management recommendations.
- Agreement can be rescinded by either party.

Note: Jocelyn Wilson recused from participation and voting for agenda items 09 and 10

09 Prospect Ridge White Cedar Forest (Weyerhaeuser)

- Discussion and voting combined with agenda item 10 below.

- Natural areas were identified in the Brunswick County Natural Areas Inventory.
- The tract containing both natural areas was recently acquired by Weyerhaeuser.
- Prospect Ridge White Cedar Forest includes 78 acres primary in the natural area, and 26 acres buffer to connect to Juniper Creek Game Land to the north. Element occurrences include Peatland Atlantic White Cedar Forest and Wayne's black-throated green warbler (*Setophaga virens waynei*).

10 Middle Swamp (Weyerhaeuser)

- 43 acres registry, all primary.
- Nonriverine Swamp Forest (Mixed Subtype).
- Jeff moves to accept both Weyerhaeuser registry proposals, Lee seconds. No further discussion. Passed unanimously by roll-call vote.

11 South Wilmington Sandhills (City of Wilmington Halyburton Park)

- 51 acres registry, all primary. Includes eight natural communities, three rare plants, and one rare animal.
- Jocelyn moves to accept registry proposal, Jay seconds. No further discussion. Passed unanimously by roll-call vote.

Other Topics

2026 Meeting Dates:

February: Virtual meeting February 5, 2026

May: In-person meeting May 18-20, 2026 at Wildacres in Little Switzerland. May 19- joint field day with NC Land and Water Fund board; May 20- NHAC meet in the morning.

August: Virtual meeting August 27, 2026

November: In-person meeting November 19, 2026 at central location with potential field visit.

Adjournment 2:30

Jocelyn moves to adjourn, Lee seconds. No further discussion. Passed unanimously by roll-call vote.

Eno River Diabase Sill Plant Conservation Preserve
Dedicated Nature Preserve
STIP No. HE-0007D

Add a left turn lane and signals to Snow Hill and Old Oxford Roads intersection,
Durham County

In 2010, qualifying portions of the Harrelson property at Eno River Diabase Sill Plant Conservation Preserve were dedicated under the Nature Preserves Act. The acquisition of the Harrelson property was partially funded by the Natural Heritage Trust Fund (Grant #200409402). The NC Land and Water Fund has since assumed responsibility for former Natural Heritage Trust Fund grants.

Project No. HE-0007D prepares Snow Hill Road and Old Oxford Road to handle increased traffic from development in the area by adding an exclusive left turn lane on Snow Hill Road and signaling the intersection. The Improvements were determined to be needed by the Merck Pharmaceuticals Traffic Impact Assessment (TIA).

The preliminary engineering design for intersection improvement would directly impact the Eno River Diabase Sill Plant Conservation Preserve Dedicated Nature Preserve. The anticipated amendment request includes permanent right-of-way, temporary drainage easement for construction and erosion control, and drainage and utility easement (see table 2 below, and figures 3, 4, 5). These rights-of-way and easement areas overlap the Primary (Restoration) Area of the dedication, and directly impact populations of rare plant species, including prairie blue wild indigo, Earle's blazing-star, and glade wild quinine. Additional information for these species is listed in table 1 below. Additional rare species in the immediate area include smooth coneflower (*Echinacea laevigata*), hoary puccoon (*Lithospermum canescens*), and prairie dock (*Silphium terebinthinaceum*).

Scientific Name	Common Name	Rank	NC Status	US Status
<i>Baptisia aberrans</i>	Prairie Blue Wild Indigo	S2G2	Endangered	
<i>Liatris squarrulosa</i>	Earle's Blazing-star	S2G4	Significantly Rare	
<i>Parthenium auriculatum</i>	Glade Wild Quinine	S3G3	Significantly Rare	

Table 1 Natural Heritage Element Occurrences within proposed project area, Eno River Diabase Sill Preserve NP

Katherine Culatta and Scott Pohlman participated in 9 January 2026 state stakeholder meeting for the proposed project, which also included staff from Plant Conservation Program and NC Land and Water Fund. NCDOT communicated that the project has been narrowed to the extent possible (i.e. avoiding and minimizing impacts) but indicated that some portion of the dedicated area will be impacted, and understood that the dedication would likely have to be amended. NCDOT came to the meeting understanding the NCLWF compensation policy to make the public whole, including 3:1 ratio. NHP and NCLWF staff indicated that their respective boards have communicated preference for land exchange with like habitat. The process for amendment, and associated timeline, was also discussed. In addition to public hearing and public notice, review is needed by DNCR Secretary before the amendment can go to Council of State. NC Land and Water Fund Board and Plant Conservation Program Board will also review the proposal.

There is not yet a written request for amendment to the dedication. Based on the public interest served by improvements to the intersection to safely handle increased traffic, and that the new use of the acres for permanent right-of-way, drainage and utility easements would not be consistent with public purposes served by the dedication, amendment would be required to remove a portion of the dedication. NHP staff determined that the impact would not fall within the authority of staff to approve without Natural Heritage Advisory Committee review, due to the significance of associated element occurrences, and decided to review the proposed project preliminarily with the Natural Heritage Advisory Committee. Currently, NCDOT does not hold funds for construction, but there is a proposed let date of 23 September, 2026 to award contractor. Construction would begin after that, but NCDOT did not foresee construction occurring in 2026.

Estimated area	Proposed Use
0.18 acre	permanent right-of-way
0.28 acre	temporary drainage easement for construction and erosion control
0.15 acre	drainage and utility easement

Table 2 Proposed impacts to the dedicated nature preserve

Potential mitigation measures to achieve net overall conservation benefit may include:

- Temporary relocation of plants, to be held by a qualified organization such as NC Botanical Garden off-site and replanted after the project (would require funding to NCBG, translocation during dormant seasons).
- 3:1 land exchange for nearby parcel with similar habitat along the Eno River (several parcels nearby are currently for sale along Old Oxford Road with river frontage and similar natural communities).
- Remediation of ground to natural conditions, including:
 - natural topography
 - removal of invasive species
 - revegetation with native plants
 - replacement of native soil where possible (if soil needs to be temporarily moved for drainage, hold it on-site in “Buffer” area and then replace where possible / no replacement soil from off-site to fill holes and ditches).
- Understanding that PCP will continue to manage the nature preserve with prescribed fire in the future (after project completion).

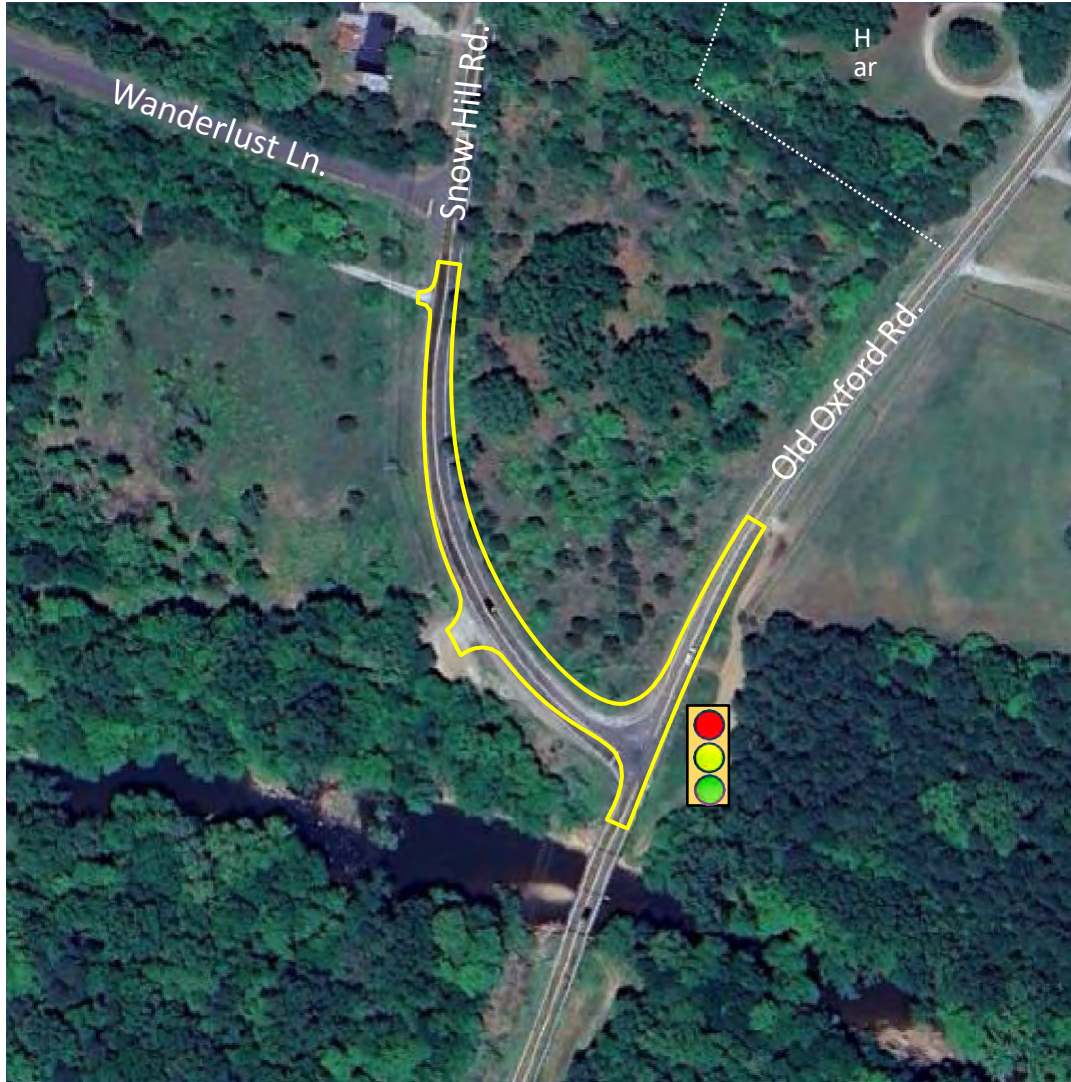


Figure 1 Project location, occurring at Pennys Bend entrance to intersection of Snow Hill Road and Old Oxford Road



Figure 2 Ownership of properties adjacent to proposed project

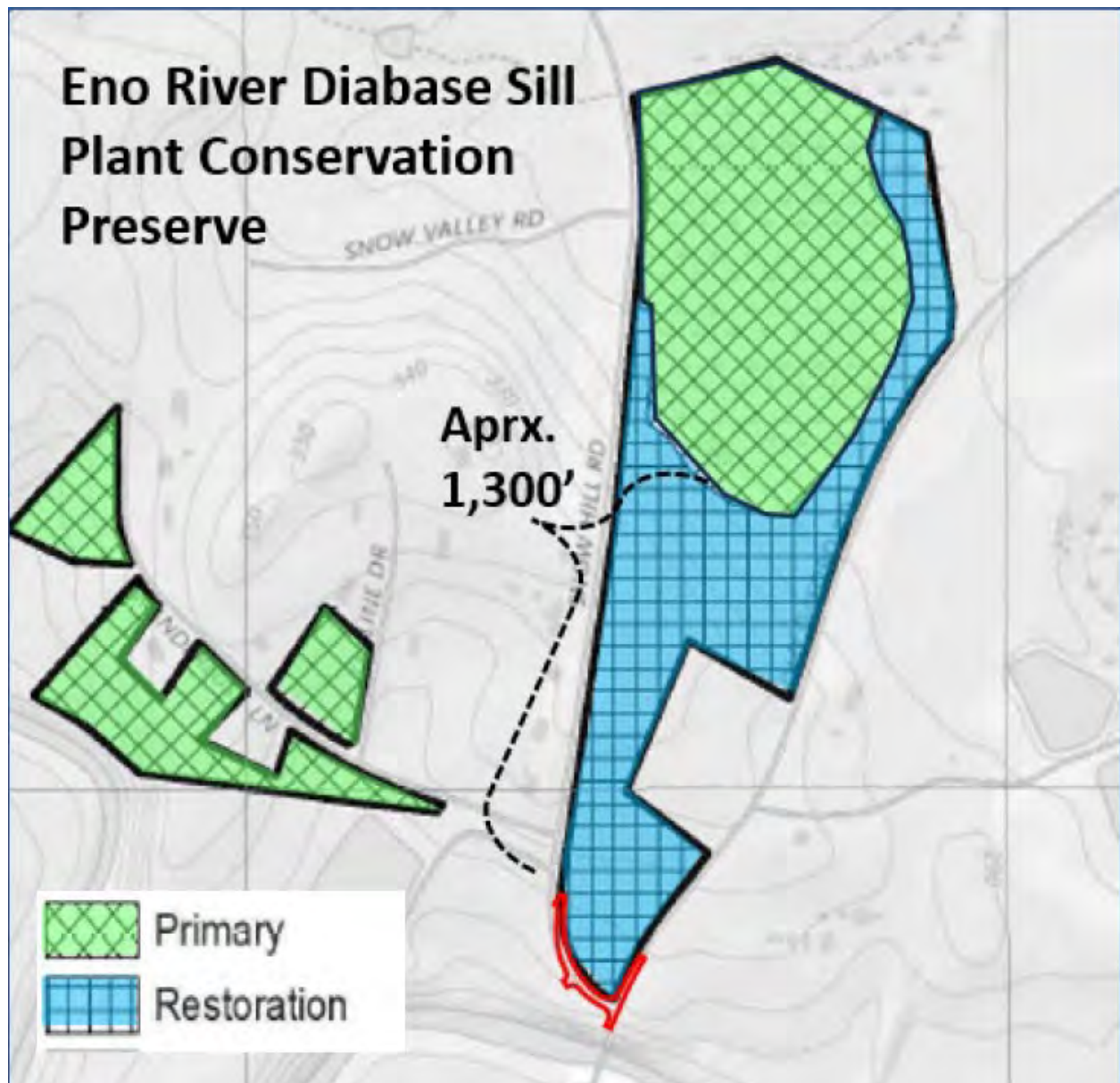


Figure 3 Project location and Eno River Diabase Sill Plant Conservation Preserve dedication zones

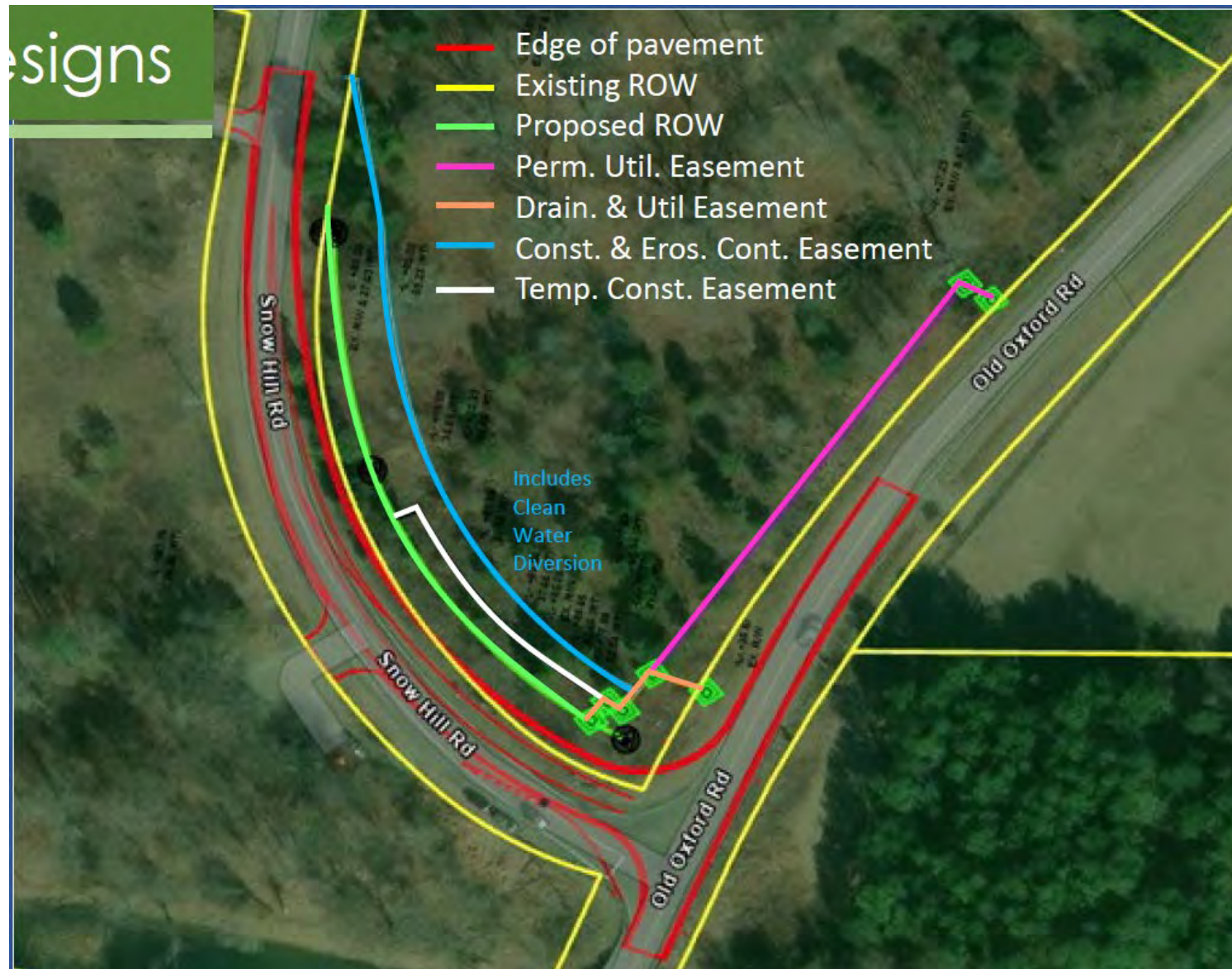


Figure 4 Engineering designs for proposed project

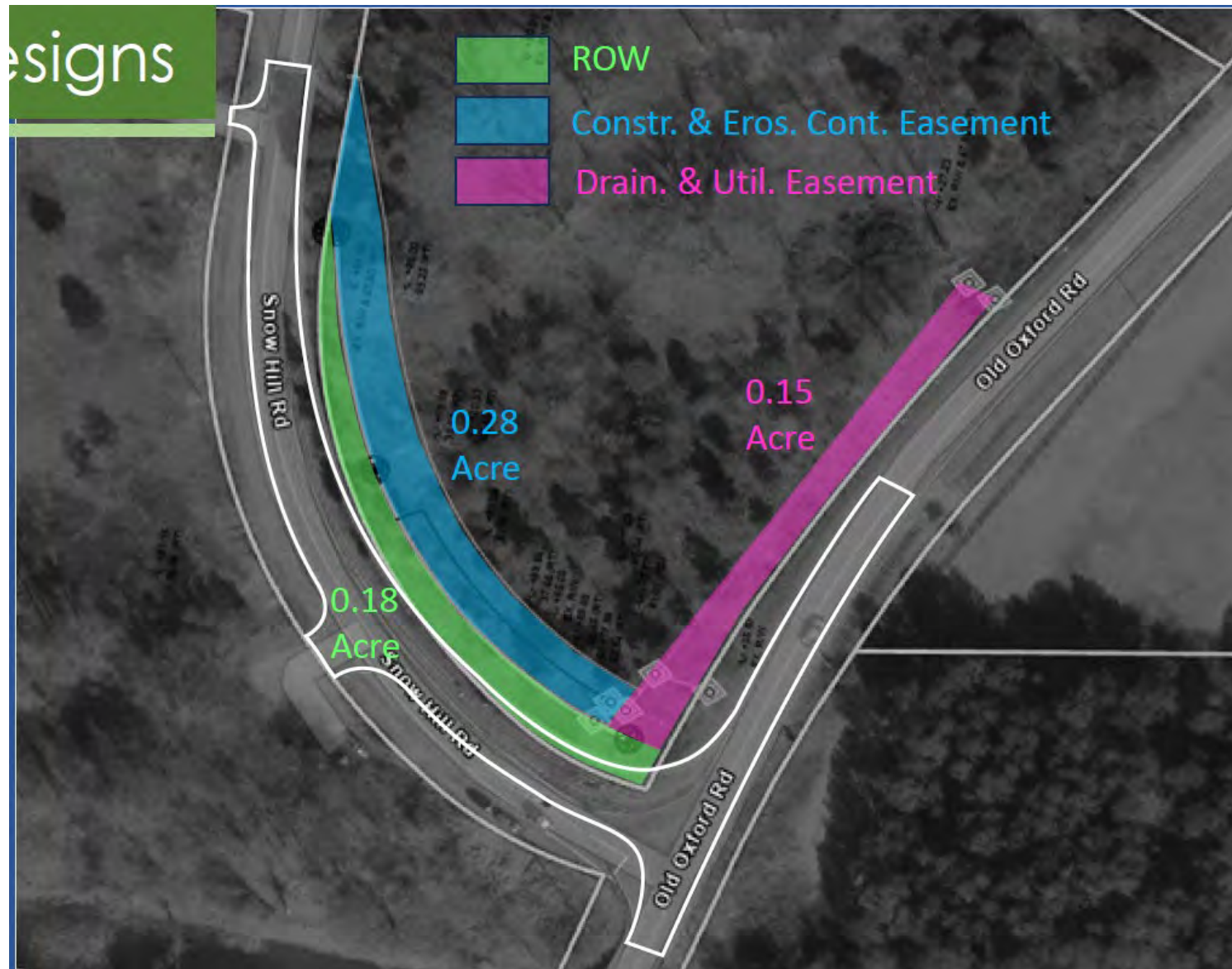


Figure 5 Right-of-way and easements tentatively needed for proposed project

(DATE)

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources
4601 Mail Service Center
Raleigh, North Carolina 27699-4601

Mr. Kyle Briggs, Executive Director
N.C. Wildlife Resources Commission
Mail Service Center 1701
Raleigh, North Carolina 27699-1701

Subject: Letter of Allocation and Dedication as a Nature Preserve of Portions of the **Gull Rock Game Land**, Hyde County

Dear Secretary Cashwell and Mr. Briggs:

Pursuant to Part 42 of Article 2 of Chapter 143B of the North Carolina General Statutes, this letter of allocation is executed for the purpose of amending an existing Dedicated Nature Preserve encumbering State-owned lands. These Articles of Dedication replace those certain Articles of Dedication dated September 24, 2019. The purpose of this amendment is to reflect additions of property to the preserve, add language for pumping water into the preserve, and provide more accurate boundaries.

This real property which is subject to this Dedicated Nature Preserve is currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Gull Rock Game Land** and consists of approximately 10,420 acres located in Hyde County and composed of:

- | | | |
|----|------------------------------------|-------------|
| 1. | Gull Rock Game Land (Primary Area) | 7,308 acres |
| 2. | Gull Rock Game Land (Buffer Area) | 3,112 acres |

all of which are specifically described in Exhibit A and shown on Diagrams B both attached hereto and incorporated herein and referred to hereafter as “Property”. That 2,736-acre area depicted on the diagram attached as **Exhibit C**, attached hereto and incorporated herein by reference, is hereby added to the Dedicated Nature Preserve.. The dedicated lands shall be known collectively as the **Gull Rock Game Land Dedicated Nature Preserve**.

Dedication of the qualified portions of the tract included herein fulfills the terms of grant agreements with the NC Land and Water Fund (former Natural Heritage Trust Fund or Clean Water Management Trust Fund). Grants include 1996A-006, 1999A-006, and 2022-060.

THIS DEDICATION OF THE **GULL ROCK GAME LAND NATURE PRESERVE** IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. **Definitions:** As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes 143B-135.254.
2. **Dedication:** Pursuant to North Carolina General Statutes 143B-135.264, all State-owned lands lying within the above designated area are hereby dedicated as a nature preserve to be known collectively as the **Gull Rock Game Land Nature Preserve** (hereinafter "preserve") for the purposes provided in the North Carolina Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Duration:** Subject to the limitations of NCGS 143B-135.264, this agreement shall be perpetual, in gross, running with the land.
4. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 07 NCAC 13H.0300 and .0400. The Primary Custodian may hereinafter be referred to as "Primary Custodian" or "Custodian".
5. **Primary Classification and Purpose:** The primary classifications and purposes of the preserve will be natural area conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the Preserve is described in Exhibit A.
6. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 7,308 acres, including a restoration area of 18 acres) and a Buffer Area (approximately 3,112 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof.

The Primary Area--composed of the natural area as described above--is deemed by the Secretary of the North Carolina Department of Natural and Cultural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 143B-135.260) and further serves all of the public purposes for a dedicated preserve as stated in G.S. 143B-135.252.

The Buffer Area, which contributes to the management and protection of the Primary Area, consists of less mature, lower quality natural communities and other areas which connect and adjoin the Primary Area..

7. **Rules for Management of the Primary Area(s):**
 - A. **Character of Visitor Activity:** The principal visitor activities in the preserve shall be hunting, fishing, trapping, walking, research, and observation. These activities shall be regulated by the Custodian to prevent significant disturbance of the preserve. These activities may specifically be regulated by the Custodian to protect and conserve the natural values of the preserve.

Activities and uses unrelated to those listed above are prohibited except as otherwise provided in these Articles or unless necessary to carry out the purposes of the preserve.

Prohibited activities include, but are not limited to: construction; commercial activities and development; commercial silviculture; agriculture and grazing; gathering of native species of plants or plant products; the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources, except for research purposes as approved by the Custodian; and those activities specifically restricted in these Articles.

There shall be no fires, except as necessary for ecological management of the preserve or in conjunction with supervised educational activities of the Custodian, or further excepted as herein provided or otherwise expressly permitted.

- B. Consumptive Wildlife Uses: Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. Orientation and Guidance of Visitors: The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may create and maintain signage or kiosks, overlooks, fences, barriers, guardrails, steps and boardwalks (hereinafter referred to as "Trail Accessories") associated with trails to be constructed within the preserve. The location of any Trail Accessories shall be decided in consultation with the North Carolina Natural Heritage Program and shall be for the purpose of ensuring the safe, permitted use of the preserve while protecting the preserve from unwanted or excessive visitor traffic. The Custodian may restrict the access of visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. Roads and Trails: Construction and maintenance of roads within Primary and Buffer Areas of the preserve will be limited to the level necessary to appropriately manage the preserve. New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to use by staff for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. The Custodian may locate, build and maintain trails within the boundary of the preserve in a manner consistent with this dedication and in consultation with the North Carolina Natural Heritage Program.

Existing roads that occur within or which form a boundary of the Primary Area may be maintained by grading of the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.

- E. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.

- F. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge material in, on, or under the preserve. No underground storage tanks may be placed within the Preserve. No surface or ground waters of the Preserve may have pollutants added within the Preserve.
- H. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, artifact removal, or other material, nor any change in topography or surface hydrology of the preserve. Exceptions may be made for permitted archeological research or for ecological restoration to more natural conditions, consistent with the Management Plan, and in consultation with the North Carolina Natural Heritage Program.
- I. Water Level Control: The purpose of water level control shall be to maintain the Preserves' natural water regime. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.

A location for an emergency pumping station for the Hyde Drainage District, discharging onto the Game Land within the preserve Buffer Area, has been requested. The location has previously had significant hydrological alteration, and is shown in Exhibit B Alligator River Segment map. If constructed, the pumping station will be operated according to a written plan ("Plan"). To the extent practicable, efforts will be made to locate the intake for the pumping station so as to avoid known sources of contamination. Wildlife Resources Commission, or their assigns, shall install and maintain sufficient modifications to the roads to allow water added by pumping a more natural and diffuse flow northward and westward where appropriate. The Wildlife Resources Commission, or their assigns, shall be responsible for drafting the Plan and the Plan shall be subject to final approval of the NC Natural Heritage Program before finalizing or modification. The NC Natural Heritage Program or the NC Wildlife Resources Commission may require that pumping schedules be modified or pumping cease if it is determined by either party that such action is necessary because of undue stress to the preserve or to safeguard environmental resource values in the preserve, or based on other criteria as may be deemed appropriate to the NC Natural Heritage Program.

- J. Bringing in Flora and Fauna: No exotic flora and no animals except leashed dogs and cats, hunting dogs as permitted in game lands, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the preserve. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.

- K. Wildfire Control: Wildfires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wildfire does not threaten human life or structures, it may be allowed to burn with minimal control. If wildfire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wildfire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.
- L. Disturbance of Natural Features: The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease or insect infestation that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.
- M. Control of Populations (natural and exotic): Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.
- N. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary, to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wildfire historically suppressed woody vegetation and promoted herbaceous diversity.
- O. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Natural and Cultural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the game lands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 07 NCAC 13H.0300 and .0400. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.

8. **Rules for Management of the Buffer Area(s):** Primary Area rules also apply except that additional forestry and wildlife management activities may be planned and carried out as needed. Construction and maintenance of roads within Buffer Area(s) of the preserve will be limited to the level necessary to appropriately manage the preserve. These activities will be conducted in accordance with policy of the N.C. Wildlife Resources Commission and general management philosophy as outlined in Commission planning documents, in addition to providing for the buffer functions in relation to the Primary Area(s). WRC rules and guidelines require the protection and enhancement of wildlife populations and habitat so that hunting, fishing, trapping and other wildlife recreational opportunities are available to citizens of this State. Forest management is primarily conducted to enhance wildlife habitat.

Buffer functions within the dedicated area may include protecting the primary area(s) from indirect detrimental ecological effects, providing additional area for species and ecological processes that require larger areas, and providing important successional stages and disturbance regimes and other habitat diversity for wildlife. Based on these general objectives, the following buffer functions will be addressed in the management plan.

- 1) Landscape level function of community type and structure. (Buffer Area management may involve timber harvest and other forms of stand manipulation, but will not involve forest canopy type conversion over more than limited areas, other than to restore stands to types suited for the site. Introduction of exotic species known to be invasive in natural communities will be avoided.);
 - 2) Maintenance of habitat connectivity and continuity among Primary Areas;
 - 3) Providing for habitat diversity;
 - 4) Management needs of rare animal and plant species populations occurring within the Buffer Area; and
 - 5) Protection of soil and hydrologic resources and processes within the Primary Area and extending into the Buffer Area. (Naturally vegetated riparian zones will be retained along streams, and watersheds of Primary Areas will be protected from hydrologic alteration.)
9. **Amendment, Modification, and Termination:** The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Natural and Cultural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 143B-135.250-.272 and the North Carolina Administrative Code, Chapter 7, Subchapter 13H.
10. **Nature Preserve Held in Trust:** This Property is held in trust by the State for the benefit of the people of North Carolina for the uses and purposes expressed in the Nature Preserves Act under the terms and authority set forth in N.C. Gen. Stat. 143B-135.262.
11. **Access for Inspection and Right of Entry:** Natural Heritage Program staff, including their successors or assigns, shall have the right, by and through its agents and employees, to enter the Property to inspect the Dedication for compliance with these Articles of Dedication at all reasonable times and with prior notice.

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the **Gull Rock Game Land Nature Preserve** to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of (City Name), North Carolina, on the _____ of _____, (YEAR).

Sincerely,

Gabriel J. Esparza

CONSENTED AND AGREED TO:

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources

Kyle Briggs, Executive Director
Wildlife Resources Commission

EXHIBIT A
GULL ROCK GAME LAND
DEDICATED NATURE PRESERVE
(LONG SHOAL RIVER SEGMENT)

COUNTY: Hyde

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUADS: Engelhard East

SIZE OF AREA: ca. 5,739 acres (Primary area 3,701 acres, Buffer area 2,038 acres)

OWNER/ADMINISTRATOR: State of North Carolina, Wildlife Resources Commission

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. This segment protects part of the Long Shoal River Marshes and Pocosins natural area, on the vast, low-lying flats that border Pamlico Sound. Most of the area is covered by peat, but mineral soils occur in a few areas. The natural area has some 11 miles of shoreline on Pamlico Sound, and is an excellent example of the transition from inland peatland communities to estuarine communities. This area shows examples of natural changes that are occurring in response to rising sea level.

Brackish Marsh, dominated by black needlerush (*Juncus roemerianus*), lines most of the shoreline, forming a broad band especially in the northern part of the site. More inland parts of the marsh are the more salt-tolerant subtypes of Tidal Freshwater Marsh, mostly dominated by sawgrass (*Cladium jamaicense*). There is a broad zone of transitional marsh, where rising sea level is causing the marsh to encroach on the adjacent forest. In places, the transition zone supports scattered pines, especially pond pine (*Pinus serotina*). There is a fairly dense shrub layer of wax-myrtle (*Myrica cerifera*), and a variety of herbs such as royal fern (*Osmunda regalis*).

Further inland are Estuarine Fringe Pine Forest communities, with an open canopy of pond pine and a dense shrub layer of wax-myrtle with varying amounts of pocosin shrubs. Often royal fern, Virginia chain fern (*Woodwardia virginica*), and *Sphagnum* moss are abundant. These communities clearly developed from Pond Pine Woodland communities as water levels became higher.

The most inland parts of the site at the north end are well-developed Pond Pine Woodland communities, dominated by pond pine, with some loblolly bay (*Gordonia lasianthus*). There is a typical dense shrub layer. The Pond Pine Woodland once extended along much of the western side of the site, but has been reduced by historical timber harvest.

About three miles of roads run through the Primary area, with several additional miles in the Buffer area. All of these roads are accompanied by ditches. The combination of ditches connected to the sound and blocking of water flow by road fill have altered natural hydrology in the site, but the area remains ecologically significant.

BOUNDARY JUSTIFICATION: The Primary area is drawn to include the most intact natural communities. Most of the Primary boundary is based on limits of timber harvest, along with the shoreline and property lines. The Buffer area consists of recently harvested forests that, as they regenerate, will protect the Primary area from edge effects and to some degree contribute to natural sheet flow hydrology. Some areas in the Buffer contain abundant cane and may be readily restorable to canebrake.

MANAGEMENT AND USE: The area is used for public hunting and wildlife management.

Prescribed burning is encouraged for all of the communities on the site. Fire will create a more natural vegetation structure in the marsh and the forest communities, as well as a more natural interaction between them.

Two areas of mineral soil occur within the Buffer, one near the middle and the other at the south end. These areas, along with some adjacent shallow organic soils, currently support a successional forest of red maple (*Acer rubrum*), with or without sweetgum (*Liquidambar styraciflua*). Substantial parts have a dense, tall shrub layer dominated by cane (*Arundinaria tecta*) and fairly few pocosin shrubs. At least some of this area was historically dominated by pond pine.

While these cane-rich areas are too altered to be exemplary, they offer an excellent opportunity to restore canebrake communities. Once common in this region, canebrakes have become extremely rare. Details of needed fire regimes are not well known. A fire return interval of 5 years for marshes and 10 years for the forest and canebrake areas is encouraged as a starting point, with adaptive management principles used to modify this based on results.

Restoration of the altered natural hydrology by placing culverts in roads and blocking ditches is encouraged. In particular, the ditches which tie to Pamlico Sound are beginning to provide access to brackish tidal waters into the interior of the site, and this effect can be expected to increase as sea level rises. Blocking of these ditches, or fitting them with control structures that will prevent the influx of tidal waters, is recommended.

One invasive exotic plant species is of concern in this site. Common reed (*Phragmites australis*) is present in small amounts in the Tidal Freshwater Marsh and on road sides. This species represents a serious threat to the marsh community, and may greatly increase in abundance as marshes migrate in response to rising sea level. Control of this species is recommended.

(2005, NC NHP)

EXHIBIT B
GULL ROCK GAME LAND
DEDICATED NATURE PRESERVE
(ALLIGATOR RIVER SEGMENT)

COUNTY: Hyde

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUADS: Fairfield

SIZE OF AREA: ca. 1,946 acres (Primary area 1,053 acres, Buffer area 893 acres)

OWNER/ADMINISTRATOR: State of North Carolina, Wildlife Resources Commission

DESCRIPTION: The Alligator River segment, the Carter-Hyde tract, is a low-lying flat on the south side of the Atlantic Intracoastal Waterway's Pungo River-Alligator River Canal. The canal roughly follows the course of the Alligator River here, but has cut off several meanders, and is accompanied by large spoil areas. All of the tract is wetland and has peat soils or mineral soils with a muck surface. This portion of the Game Land is part of the Upper Alligator River Marshes and Forests natural area. This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202.

The northern part of this segment is Tidal Freshwater Marsh, which is subject to wind tides and has low salt content (oligohaline) waters. Several subtypes of the natural community are present, in a complex mosaic of patches that sometimes are distinct and sometimes grade into each other. Three subtypes are dominated by sawgrass (*Cladium jamaicense*), threesquare (*Schoenoplectus pungens*), or cattail (*Typha glauca* or *Typha domingensis*). The Shrub Subtype occurs on the inland edge of the marsh, where snags, fallen logs, and a few live individuals of trees of a former wetland forest are present. Wax-myrtle (*Morella cerifera*) is abundant. Herbs are abundant and dense, and include sawgrass and a number of species shared with the other subtypes. The Estuarine Shoreline Lawn Subtype may also be present, along some of the natural river channel segments. All of the marsh zones are shifting inland in response to rising sea level. They may have been further changed in response to increased levels of salt brought in by the Pungo River-Alligator River Canal. Carolina glasswort (*Liliaopsis carolinensis*) has been found along the margins of the river.

The inland parts of the preserve are a mosaic of wetland forests and woodlands. Of particular note is a Pond Pine Woodland (Canebrake Subtype). This rare community has an open canopy of pond pine (*Pinus serotina*) and a dense shrub layer dominated by switchcane (*Arundinaria tecta*). The southern edge of the complex is Nonriverine Swamp Forest, dominated by swamp black gum (*Nyssa biflora*) and red maple (*Acer rubrum*). Other parts of the mosaic, not well explored, appear to include Tidal Swamp, dominated by swamp black gum with an abundance of pines. Also

present is a small Peatland Atlantic White Cedar Forest community dominated by Atlantic white cedar (*Chamaecyparis thyoides*). Some areas of Estuarine Fringe Pine Forest and of Pond Pine Woodland (Typic Subtype) are also present. These forests vary in maturity, but those in the Primary area are at least fairly mature over most of their extent. Those in the Buffer are young, and some of the Nonriverine Swamp Forest has been altered by artificially increased wetness.

About 3 miles of roads run through the Buffer area or on the edge of the Primary area. All are accompanied by ditches. The filled road beds and ditches alter natural hydrology, making part of the Buffer area unnaturally wet and causing stress and tree mortality in the swamp forests.

BOUNDARY JUSTIFICATION: The Primary area is drawn to include the most intact natural communities. Most of the Primary boundary, where not determined by property lines, is based on apparent changes in forest maturity visible in aerial photographs, presumed to result from historic timber management in more accessible areas. Small areas are excluded from the dedication where they are affected by adjacent canals and spoil, on the west, north, and east sides.

MANAGEMENT AND USE: The area is used for public hunting and wildlife management.

Prescribed burning is encouraged for the canebrake community, and might also be beneficial to the marsh communities. Most other communities are expected not to be flammable, but fire is unlikely to be harmful to any of them.

Restoration of the altered natural hydrology by placing culverts in roads and blocking ditches may be beneficial. The hydrology in this segment is complex, with influences from adjacent tidewater canals, artificially increased intrusion of salt, impoundment by road beds, and blocking of natural flow from the south by a levee. Any hydrologic restoration will need substantial prior study.

One invasive exotic plant species is of concern in this site. Common reed (*Phragmites australis*) is present in large amounts along the Intracoastal Waterway in the Tidal Freshwater Marsh and on spoil. This species represents a serious threat to the marsh community, and may greatly increase in abundance as marshes migrate in response to rising sea level. Control of this species is recommended.

The effects of discharge from Hyde County emergency pumping should be monitored. If significant negative impacts are observed and/or effects extend into Primary Area or onto neighboring properties, efforts should be made to modify pumping regime. Proposals for managing sheet flow within the dedicated area should involve consultation with the NC Natural Heritage Program.

(August 2016, NC NHP)

EXHIBIT C
GULL ROCK GAME LAND
DEDICATED NATURE PRESERVE
(SPENCER BAY SEGMENT)

COUNTY: Hyde

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUADS: Scranton

SIZE OF AREA: ca. 2,736 acres (Primary Area 2,554 acres, including 18 acres restoration; Buffer Area 182 acres)

OWNER/ADMINISTRATOR: State of North Carolina, Wildlife Resources Commission

DESCRIPTION: The Spencer Bay segment is composed of three tracts bordering Pamlico Sound on either side of Spencer Bay, between Rose Bay and the mouth of the Pungo River. The tracts are part of Swanquarter/Gull Rock Wetlands Natural Area, and eastern tracts are directly across Rose Bay from Swanquarter National Wildlife Refuge. The majority of the tracts are wetlands and include examples of natural changes that are occurring in response to rising sea level.

This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The majority of this segment is Brackish Marsh, dominated by black needlerush (*Juncus roemerianus*) with patches of saltmeadow cordgrass (*Spartina patens*). A narrow band of smooth cordgrass (*Spartina alternifolia*) is often present immediately along the shoreline. Marsh zones are shifting inland in response to rising sea level.

Marsh Hammock occurs in patches surrounded by marsh, representing remnants of a former forest community that transitioned to marsh as water levels became higher. Parts of this transitional zone are dominated by invasive common reed (*Phragmites australis*). Marsh Hammock canopy is dominated by loblolly pine (*Pinus taeda*), with live oak (*Quercus virginiana*) water oak (*Quercus nigra*) frequent in the subcanopy. Common waxmyrtle (*Morella cerifera*), southern red cedar (*Juniperus silicicola*), groundsel-tree (*Baccharis halimifolia*), and (*Sabal minor*) dominate the shrub layer. The herb layer is partially shared with the surrounding marsh but also includes upland species.

About two miles of unpaved road runs through the Buffer and Primary area on the western tract, leading to a hunting cabin at the southwest corner of a large impoundment. The impoundment, along with ditches that line the road, have altered the natural hydrology on the western tract. The eastern tracts have no roadways or hydrological alterations.

BOUNDARY JUSTIFICATION: The Primary Area is drawn to include intact natural communities and 100 ft riparian zones. A 100-foot riparian zone along the canal paralleling the road to the impoundment is designated as Primary (Restoration). Areas on the eastern peninsulas that are

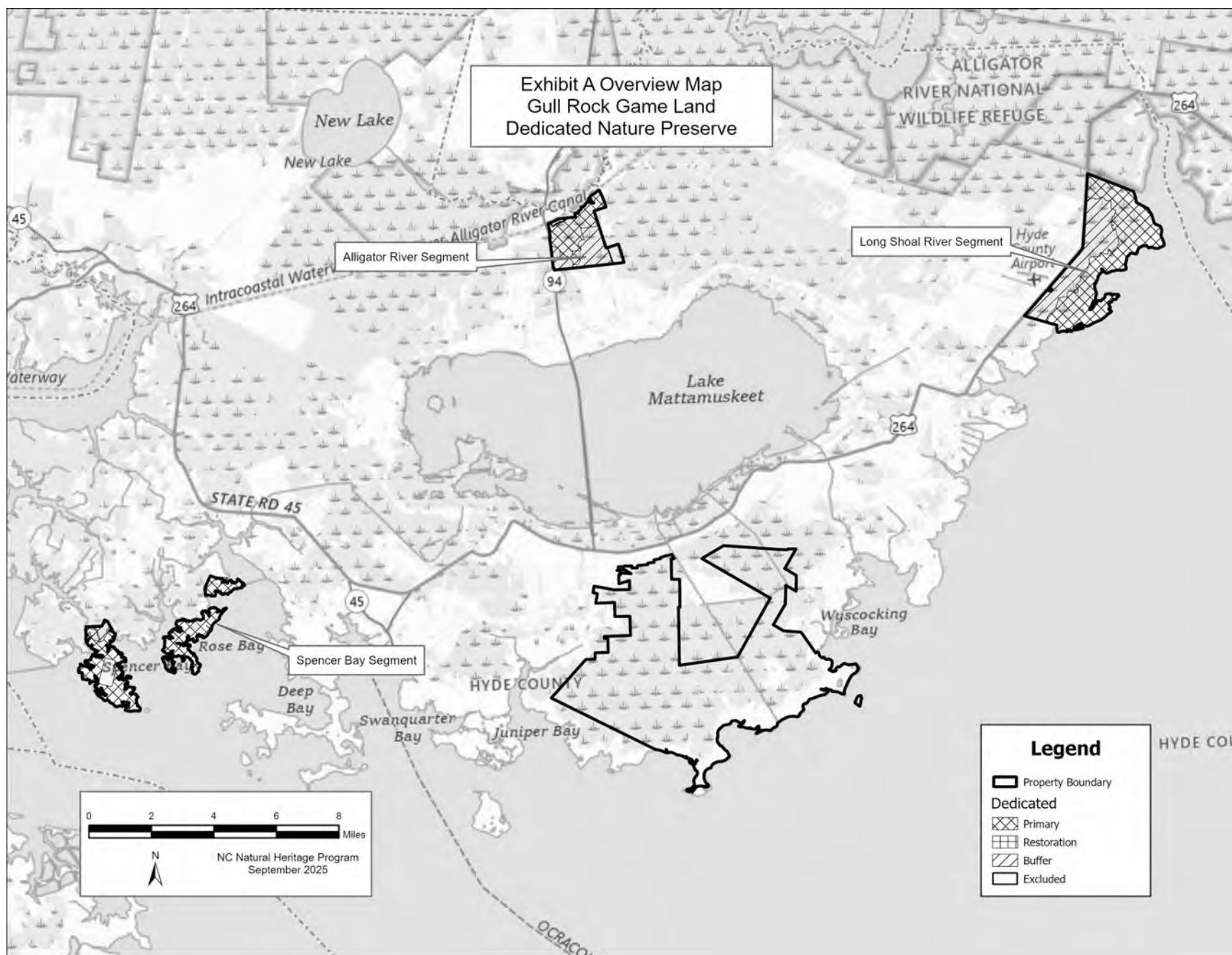
currently transitional from forest to marsh are included in the Primary Area. Buffer Area on the north side of the western tract includes altered uplands, mostly occupied by pine plantation. This area is likely to become wetter and ultimately transition to marsh communities as sea level rise continues. The large impoundment and area immediately surrounding the hunting cabin are excluded from the dedication.

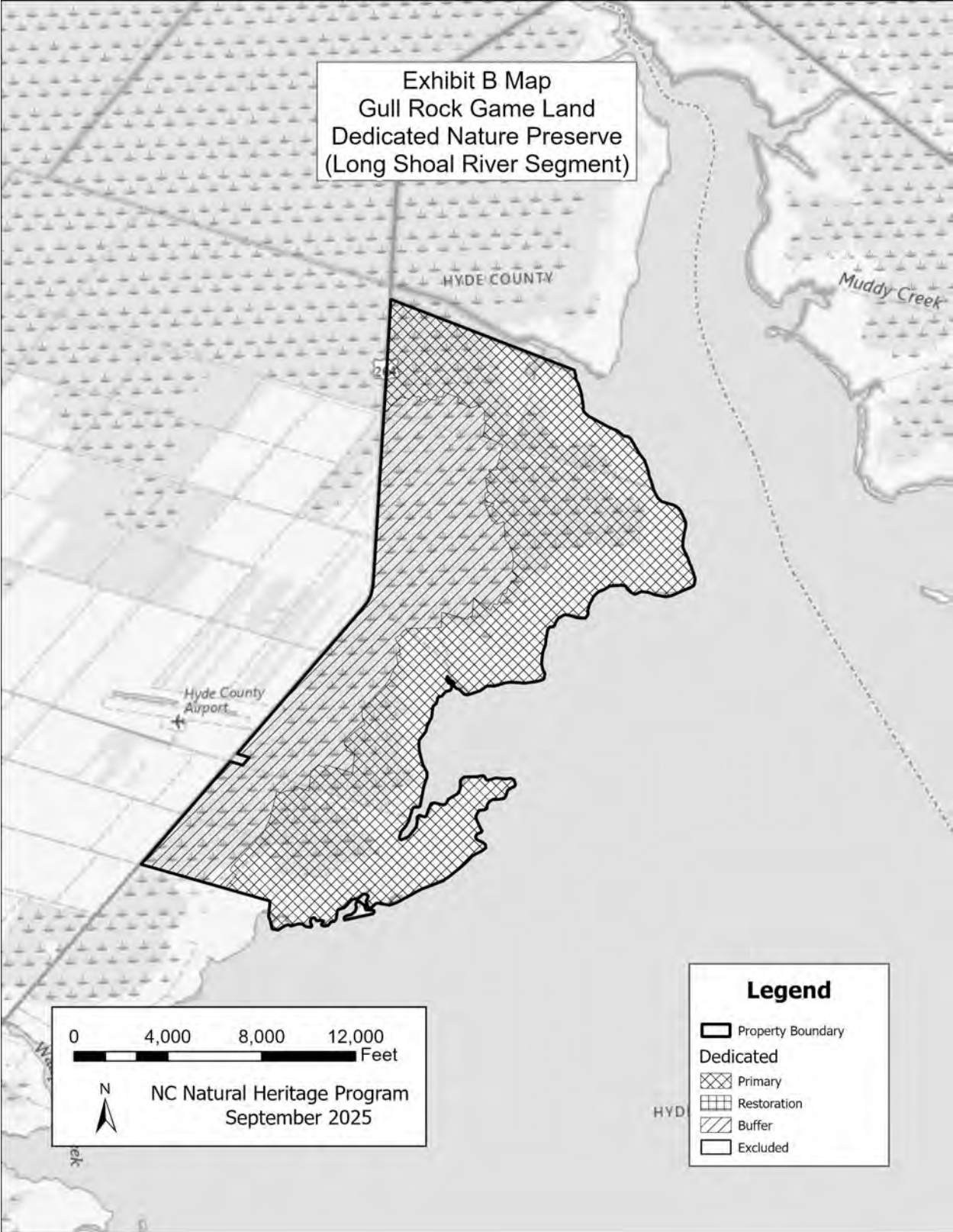
MANAGEMENT AND USE: The area is used for public hunting and wildlife management.

Prescribed burning likely will be beneficial to the marsh communities, which are contiguous to uplands which presumably burned naturally. Fire management in the marsh should take into account the needs of wildlife including black rails. The Primary (Restoration) Areas should be managed to restore more natural vegetation while giving priority to protecting water quality in the waterway. Passive restoration is generally appropriate, though silvicultural treatment may be beneficial in some areas where canopy composition is heavily altered. Planted pine stands may be harvested. Additional treatment or planting may be needed to encourage regeneration of site-appropriate trees.

One invasive exotic plant species is of concern in this site. Common reed (*Phragmites australis*) is present at the transitions from upland to marsh and along ditches. This species represents a serious threat to the marsh community, and may greatly increase in abundance as marshes migrate in response to rising sea level. Control of this species is recommended.

(September 2025, NC NHP)





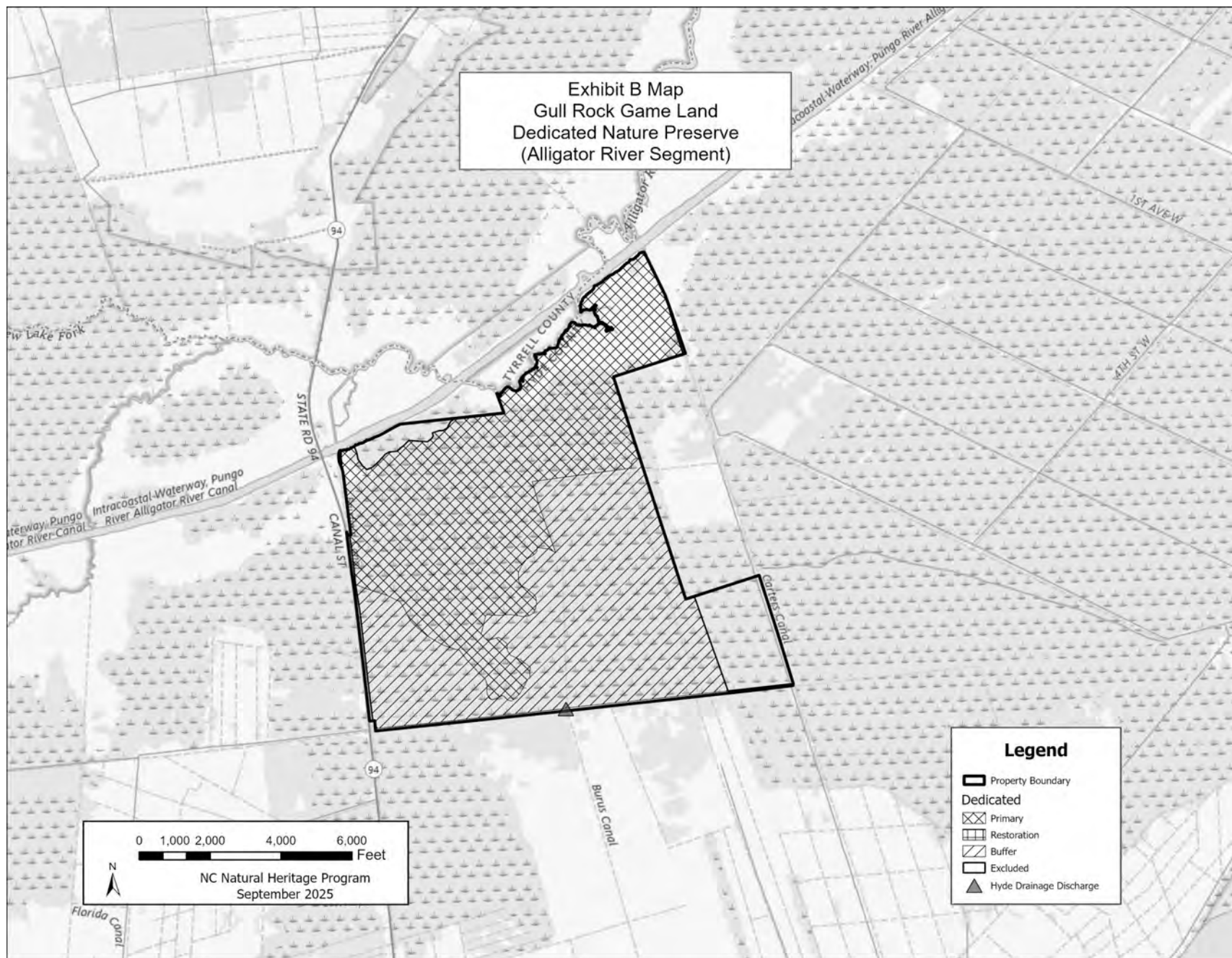
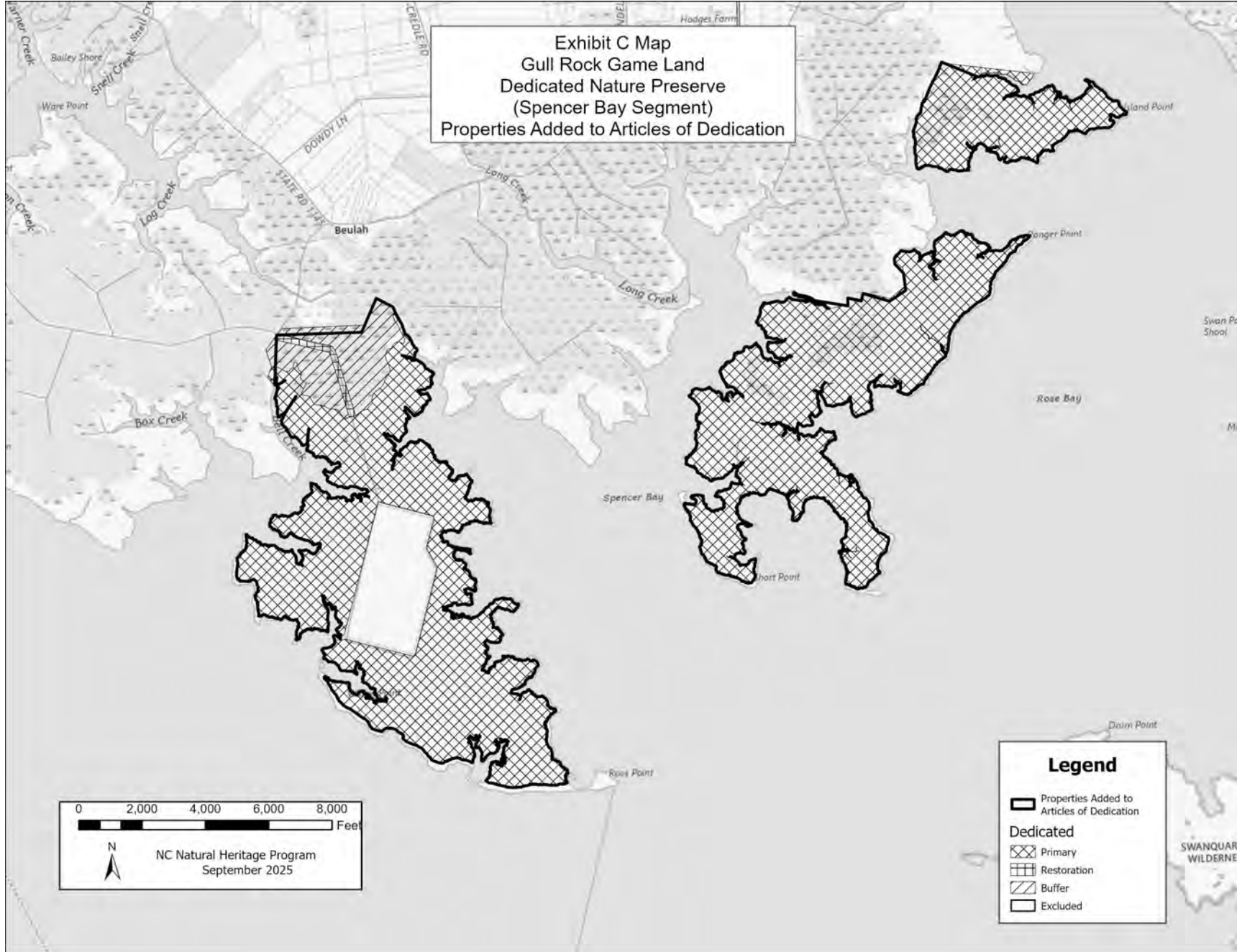
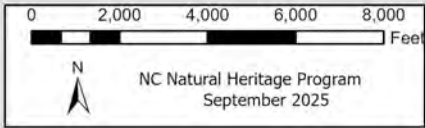


Exhibit C Map
Gull Rock Game Land
Dedicated Nature Preserve
(Spencer Bay Segment)
Properties Added to Articles of Dedication



Gull Rock Game Land
Dedicated Nature Preserve
Burrus Canal

Temporary Construction and Permanent Easement Requests

In 2019, qualifying portions of the Carter Tract at Gull Rock Game Land were dedicated under the Nature Preserves Act. The acquisition of the Carter Tract was partially funded by the Clean Water Management Trust Fund (Grant #1999A-006). At the May 2018 meeting, the Natural Heritage Advisory Committee reviewed and recommended a dedication proposal that included a request from Hyde Drainage District for emergency pumping station and discharge onto the Game Land, including the preserve portion. Language in 2019 dedication below in Figure 1:

- i. Water Level Control: The purpose of water level control shall be to maintain the Preserves' natural water regimes. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology.

A location for an emergency pumping station for the Hyde Drainage District, discharging onto the Game Land within the preserve, has been requested, as shown in Exhibit [A Alligator River Segment map](#). If constructed, the pumping station will be operated according to a written plan, and will be used only in the event of extreme rainfall. The Wildlife Resources Commission shall consult with the NC Natural Heritage Program before approving the plan and in case of any proposed modifications.

Figure 1 Text allowing emergency pumping station within Gull Rock Game Land dedicated area

The dedicated area contains a preexisting canal/dike, and is subject to any existing rights that were in place at the time of the Dedication as evidenced by the inclusion of the following exception to the warranties of title in the deed: "Such rights as the owners of other lands have to drain through and maintain any ditches or canals that bound or cross said lands".

Following the Lake Mattamuskeet Watershed Restoration Plan, the Burrus Canal Project proposes to redirect drainage water from the Lake, pumping it into Burrus Canal

to flow northward, then pumping it over the dike into the portion of Burrus Canal on Gull Rock Game Land, the water would then move by sheet flow north to the Intracoastal Waterway through swamps and marshes on the game land. This represents a significant expansion from the emergency pumping provided for in the dedication, increasing the total amount of water and greatly increasing the number of days water is added to the game land, affecting Primary as well as Buffer areas.

The NC Coastal Federation is the lead on the Burrus Canal Project, and they or their consultants provided Figures 2, 3, 4, and 5. The original design planned for excavated side channel sloughs branching from Burrus Canal to drain water westward into the primary area and allow it to move by diffuse overland flow, but NC Wildlife Resources Commission (WRC) and NHP objected to that level of impact. A revised proposal was negotiated that would add structures within the northern road to allow more drainage through it northward, while having less water flow westward. The Northern Canal is labeled in Figure 4. This installation will spread sheet flow more widely through the primary area. NHP staff agree that sheet flow of fresh water northward to the marshes would help mitigate the impact of salt coming in by the Intracoastal Waterway canal. The drainage across the northern road would also reduce impoundment behind it, reducing harm to forests in the buffer area. While this proposal carries risks if there is damage by excess water or excess nutrients from agriculture runoff, it could also improve natural conditions by reducing the influence of salt intrusion.

NHP agreed with the conceptual design, and made some recommendations for the to include triggers for how parties could tell if the pumping is causing damage to the forest in the Primary Dedicated Area, which would call for modifying the pumping regime.

Very recently, WRC received easement requests to implement the project. The NC Coastal Federation is requesting a temporary construction easement on Gull Rock Game Land in Hyde County. The Temporary Construction Easement will allow NC Coastal Federation to execute the construction phase of this project to include dike repair, canal restoration, pump installation, and the installation of a ditch plug and culvert. All of this work would be done in pre-existing altered areas - roads, canal spoil, and areas accessed to initially dig the canals. General provisions in all dedications allow maintenance of pre-existing disturbed areas within their current footprints. Fairfield Drainage District #7 is also requesting a permanent easement to maintain the canals, dikes, and infrastructure, and, additionally, to pump water across Commission property. One reason stated for the request for a new permanent easement is that the pre-existing easement allows for pumping through the existing canal network, but does not permit sheet flow across the entirety of the property. Assurances were made that WRC and NHP will retain the right to cease pumping if sheet flow from pumping is detrimental to the resources and Natural Heritage Primary Area. WRC approved these

easement requests at their December meeting. Such an agreement would be subject to monitoring and evaluation and could be modified.

NHP staff determined that some of the measures would potentially be beneficial, particularly restoring more natural water regime by breaching the dike associated with the Northern Canal. The existing dedication allows pumping for emergency situations - "only in the event of extreme rainfall". Predicated on the maintenance of the installations that make it beneficial and more natural, new language allowing non-emergency pumping would be consistent with dedication, with language that the NC Natural Heritage Program or the NC Wildlife Resources Commission may require that pumping cease if it is determined by either party that such action is necessary to safeguard environmental resource values in the preserve or if pumping additional water becomes inconsistent with the purposes of the dedication. New language is underlined below. Our rule on amending a DNP could be interpreted to include the removal of a right in addition to property from the DNP, and if the DNP is being requested to be amended to allow for modification of hydraulic resources that are not in accordance with a natural water regime, that amendment would require notice for a public meeting.

A location for an emergency pumping station for the Hyde Drainage District, discharging onto the Game Land within the preserve Buffer Area, has been requested. The location has previously had significant hydrological alteration, and is shown in Exhibit B Alligator River Segment map. If constructed, the pumping station will be operated according to a written plan ("Plan") ~~and will be used only in the event of extreme rainfall, such as a named storm.~~ To the extent practicable, efforts will be made to locate the intake for the pumping station so as to avoid known sources of contamination. Wildlife Resources Commission, or their assigns, shall install and maintain sufficient modifications to the roads to allow water added by pumping a more natural and diffuse flow northward and westward where appropriate. The Wildlife Resources Commission, or their assigns, shall be responsible for drafting the Plan and the Plan shall be subject to final approval of the NC Natural Heritage Program before finalizing or modification The NC Natural Heritage Program or the NC Wildlife Resources Commission may require that pumping schedules be modified or pumping cease if it is determined by either party that such action is necessary because of undue stress to the preserve or to safeguard environmental resource values in the preserve, or based on other criteria as may be deemed appropriate to NHP.

Burrus Canal Project

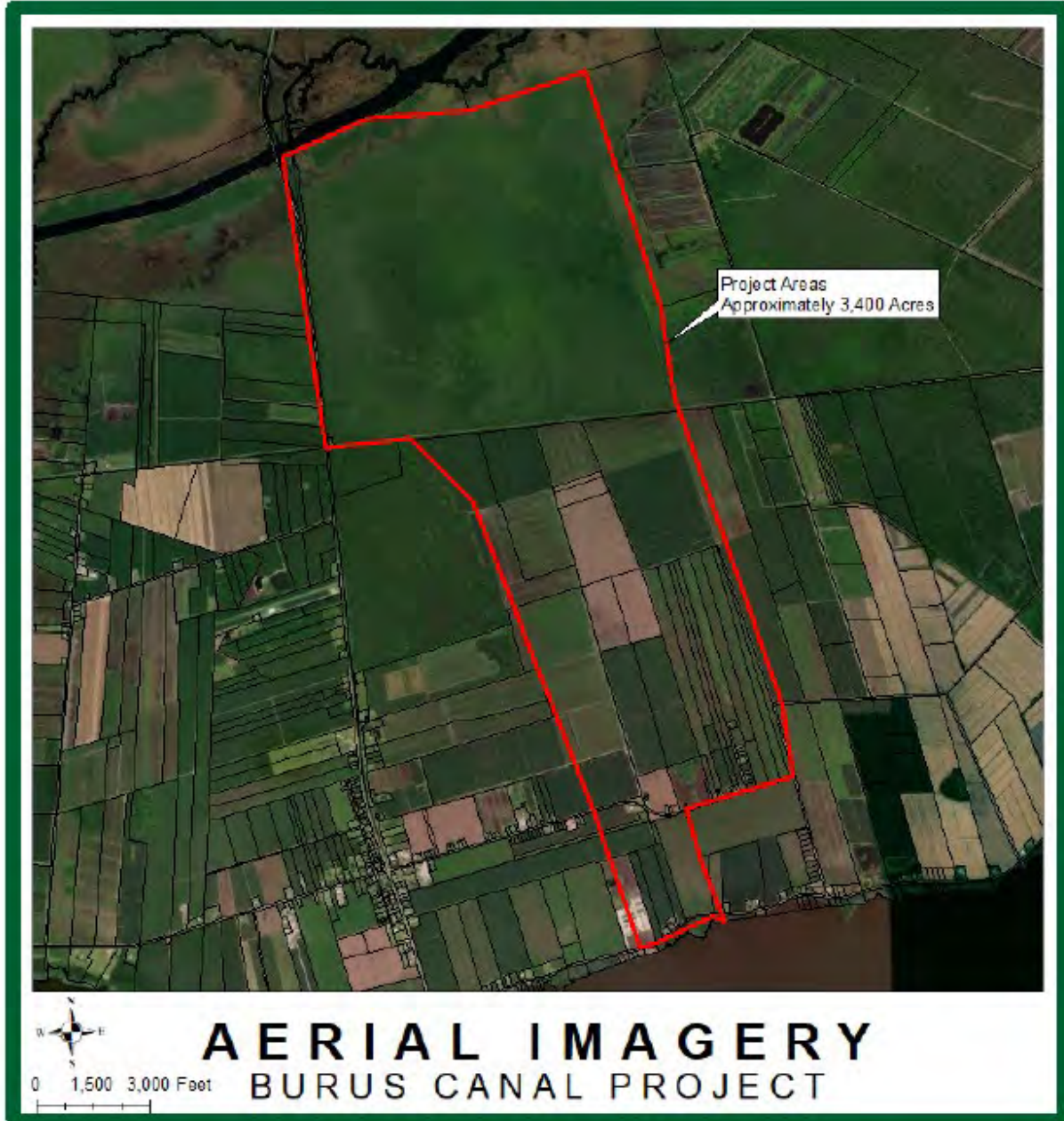


Figure 2 Burrus Canal Project Area

Burrus Canal Project

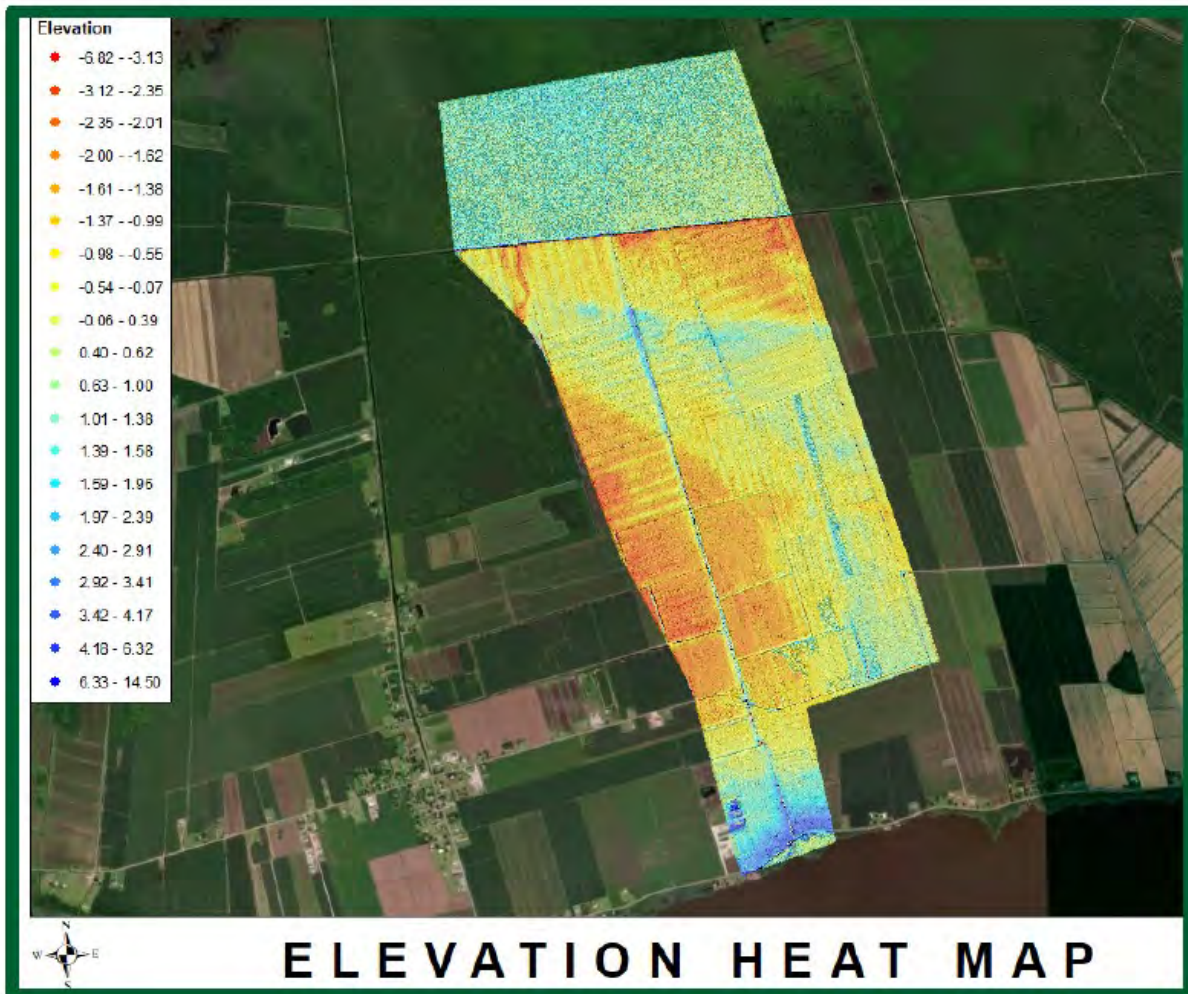
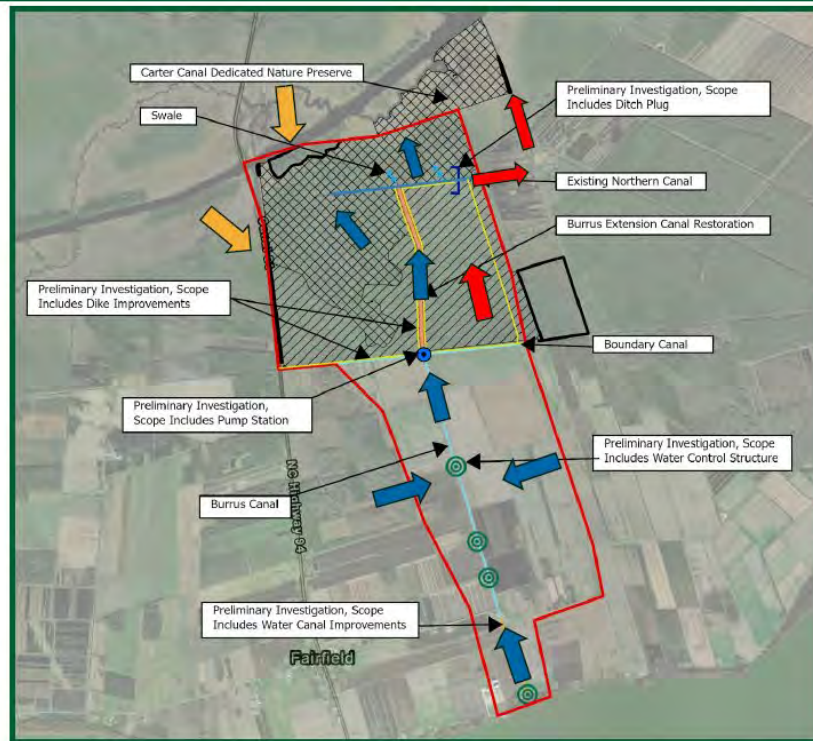


Figure 3 Elevation heat map for Burrus Canal project area

Burrus Canal Project Design Considerations



Design Considerations:

- Primary & Buffer Areas
- Low Area to the SE
- Salt Water / Salt Intrusion
- Impact and Construction Limits (LOD)
- Desire of All Parties
- Desire to push the water to the North
- Landowner Concerns to SE
- Nutrient Removal

Figure 4

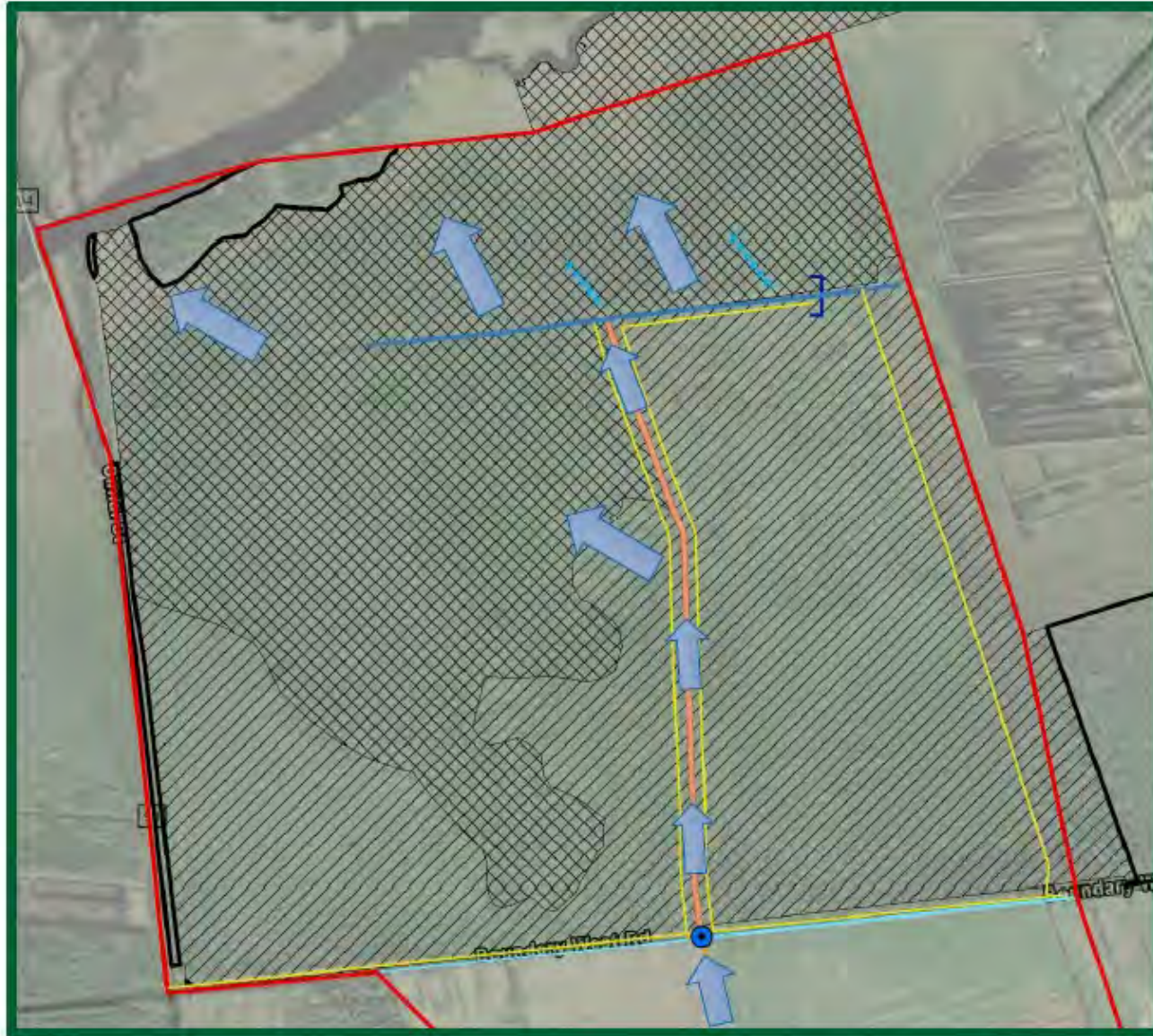


Figure 5 Burrus Canal shown in orange. Cross-hatching is Dedicated Primary Area, single hatching is Buffer Area



Burrus Canal Wetland Restoration and Tailwater Project

North Carolina Coastal Federation
June 2025



Certification

Preliminary Design Review

For


Burrus Canal Wetland Restoration and Tailwater Project

North Carolina Coastal Federation
Hyde County, NC
0T7.134185

June 2025

PROFESSIONAL ENGINEER

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of North Carolina.

Signature: 
Typed or Printed Name: Jonathan Hinkle
Date: 2025.06.17 License Number: 38624



I. Executive Summary

Lake Mattamuskeet experiences water quality and quantity issues due to high water elevations. The high water elevations reduce the amount of sunlight able to reach shallow aquatic vegetation (SAV). The reduction of SAV results in a reduction in habitat for migratory fowl and an increase in toxic algae blooms. The primary goal of this project is to reduce water elevations in Lake Mattamuskeet by redirecting drainage water away from the lake, with the aim of reviving the ecosystem and improving the water quality. This project is part of a larger watershed plan that will work in conjunction with other solutions to help address the water quality concerns for Lake Mattamuskeet.

Solutions were modeled for three different scenarios with varying conditions: normal pumping, active rainfall(design storms), and emergency rainfall. The system will allow the service district to pump lake water northward through Burrus Canal and the extension. The water will flow through the channel and eventually sheet flows across the Gull Rock Gameland wetlands, the nutrients will settle out of the water over time, improving water quality. Additionally, this will improve the potential drainage from the landowners within the Fairfield Drainage District.

The project team met with the Wildlife Resource Commission, North Carolina Coastal Federation, Fairfield Drainage District, Hyde County, Lake Mattamuskeet Restoration Plan Stakeholders, and North Carolina Natural Heritage and conducted field visits. Based on the concerns of stakeholders a list of design considerations was created at the beginning of the design process, including (in no particular order):

- Limit effects to the Primary and Buffer Areas of the Gull Rock Game Land
- Prevent flow to the low area to the southeast tract of Game Land
- Salt water and salt intrusion from Intracoastal Water Way
- Impacts and construction limits
- Desire of all parties
- Desire to push water north and achieve sheet flow
- Landowners' concerns to the southeast
- Nutrient removal

Given the location of the project site there were many site parameters taken into account, for example, tidal influence, infiltration rates based on soils, groundwater table, evapotranspiration, and landuse. During the development of this preliminary analysis, the following assumptions were made:

- Limited Survey information was obtained, other than the original LiDAR and channel survey
- Additional topographic information was obtained from publicly available sources
- Canal geometry based on obtained survey data
- NOAA Atlas 14 rainfall data was utilized for storm event analysis
- USGS was utilized for Hurricane Matthew storm data
- NC Climate Office evapotranspiration and precipitation data was utilized for continuous simulation
- Stormwater requirements effective 2023 for the state were analyzed
- NOAA tide data was utilized for boundary conditions
- U.S. Fish and Wildlife National Wetland Inventory was used for wetland data

- NRCS Web Soil Survey was utilized for soil data

These site parameters were taken into consideration during the design process and applied accordingly. The project area is 6,081 acres, including approximately 2,560 acres of wetlands. The majority of the project area is agriculture land (52.23%) with canals that connect flow to Burrus, Fairfield, and Boundary Canal. The majority of the soils in the project area have a dual hydrologic group with the undrained areas being in Group D. Soils classified in Group D have slower infiltration rates, very slow water transmission rates and a high-water table. Canals in the northern portion of the project area (Fairfield, Burrus Extension, northern canal, and Carters Canal) outlet into the Atlantic Intracoastal Waterway (AIWW) making them tidally influenced. During large storm events, high tide data was applied to the northern boundary as a condition and during normal pumping mean

During preliminary investigations of potential project solutions, ponding water causing a habitat change in certain areas and the potential loss of timber emerged as primary concerns. After a site visit was conducted with stakeholders, there were no longer concerns. The proposed design also was designed for improvements to prevent flow from going across the east tract.

After initial due diligence, site visits and stakeholder meetings, the project team determined that restoration to the existing canals and improvements to existing dikes would be feasible. The team investigated multiple scenarios before settling on the final design. There were four major design alternatives:

- Alternative 1: Included sloughs and tide gates but exceeded easement limits and disturbed sensitive wetlands.
- Alternative 2: Focused on canal restoration and swales but raised concerns about buffer zone impacts.
- Alternative 3: Included canals and dike improvements and expanded project area to include more of the Fairfield District but lacked eastern tract flood relief.
- Alternative 4 (Selected): Included canal restoration, dike improvements for the Burrus Tract and included flood mitigation by adding a culvert to the eastern tract and refining flow paths.

Due to concerns to the eastern tract by stakeholders, the project area expanded to also include the wetland area that has experienced wetland regression in this tract of land. This design proposes only grading within the existing drainage easements and restoration or improvements of existing wetland components. The approximate total construction cost of the proposed project is 5.6 million dollars with a 30% contingency using 2025 construction costs and not including permitting needs. Major costs include the pump station (\$1.75M), dike improvements (\$1.3M), and canal restoration (\$330K). The project will consist of approximately:

- 1 Pump Station
 - o The pump station will be located at the convergence of Burrus Canal and Boundary Canal. The pump station is designed to turn on when water surface elevation is greater than -3.5 ft and outlet into the existing Burrus Canal Extension on Gull Rock Gameland. The pump switches back off once it gets to its normal elevation of -4.0 ft. The pump is designed to have two active 42 IN pumps and two emergency 42 IN pumps.
- 5 Water Control Structures
 - o The water control structures will be located along Burrus Canal to control drawdown and water from entering the neighboring agriculture land adjoining Burrus Canal. The first

water control structure will be located at N Lake Road and will be used to drawdown the lake elevations.

- 1 Ditch Plug
 - o The ditch plug will be located in the existing north canal on Gull Rock Gameland to prevent downstream canals from affecting the wetland.
- 11,000 Linear Feet of Canal Restoration
 - o Burrus Extension and part of Burrus Canal will undergo canal restoration to allow the canals to function more effectively.
- 26,000 Linear Feet of Dike Improvements
 - o The dikes along Boundary Canal, Burrus Extension, the northern canal, and the eastern canal of Gull Rock Gameland will undergo improvements to restore the dikes to their proper geometry and functionality.
- 1 Culvert
 - o A culvert will be installed in the eastern tract connecting excess flow to Carters Canal. The proposed culvert will help alleviate excess water in this area that is causing wetland regression in the eastern tract.
- Clearing
 - o Clearing will happen in this area to allow construction of the other components.
- Reforestation
 - o Reforestation will happen to stabilize exposed soil areas.

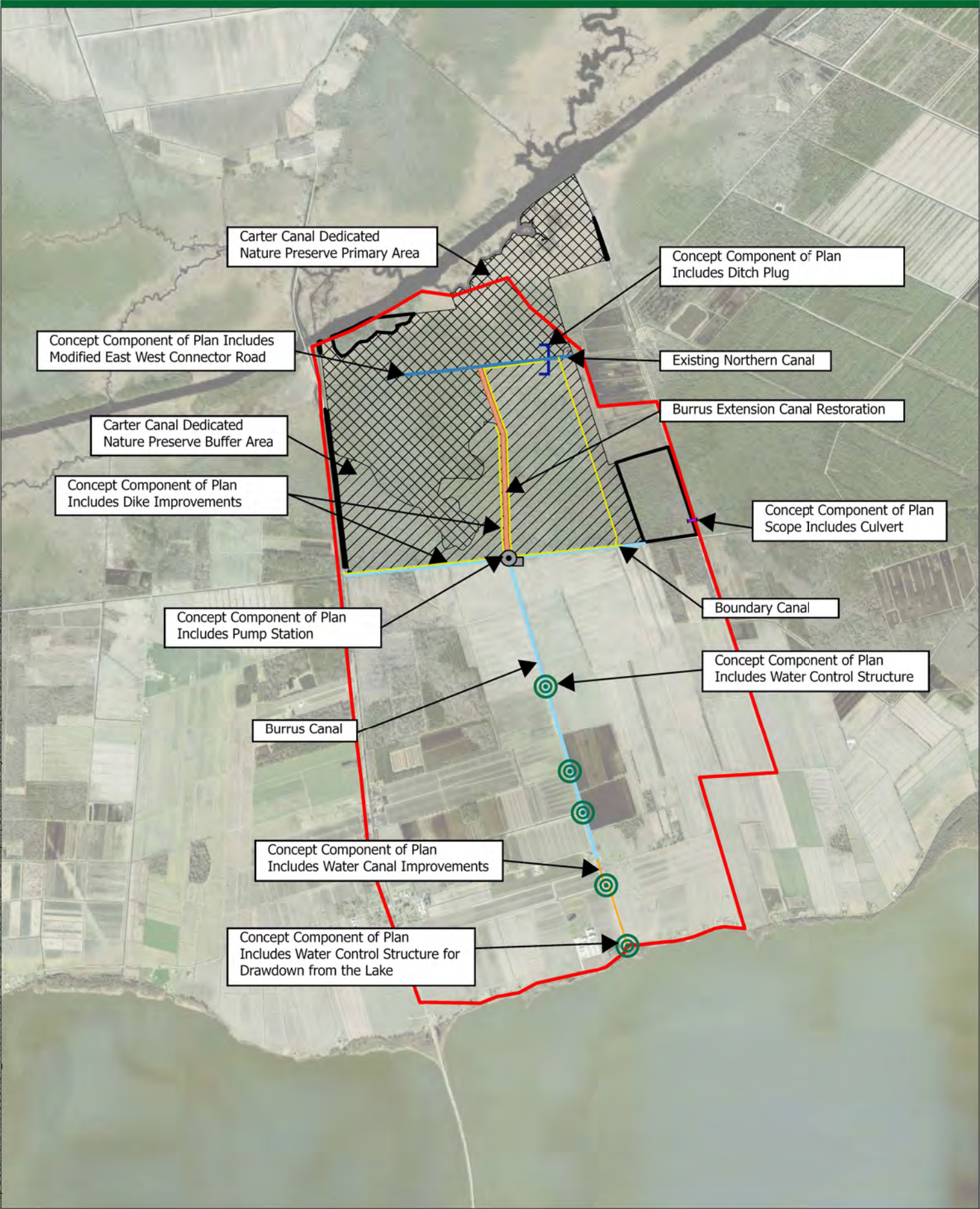
These components do not include additional item needed for erosion and sediment control. Additionally it should be noted that so far these designs are just concept and additional design and permitting will be needed.

Water samples were taken around the project area and potential locations where water could flow. All six locations exceeded standards for chlorophyll-a and some exceeded other parameters including fecal and total suspended solids. The sample location at N Lake Road exceeded the most parameters, meeting seven out of the ten criteria from the Fresh Water Quality Standards for Class C Waters. Though these values raised concerns it was found to not have effects on the wetlands in the gameland.

The project findings found that the proposed design was feasible. Based on water quality sampling within the project area there would be no negative effects to the water quality of Gull Rock Gameland. Additionally, there was no water quantity concerns for the Burrus Tract of the gameland that sheet flow will occur across and neighboring agriculture land to Burrus Canal. All stakeholders approved of the project with design alternative 4, given the following conditions would be met:

- No grading should be done outside of the existing road's footprint
- Initial pump discharge is into the existing Burrus Canal Extension
- Routine pumping can be modified or halted at the request of the Wildlife Resource Commission or Natural Heritage Program
- East-west road is modified to allow flow north
- Emergency and routine protocol are subject to modification if there are signs of stress

The recommended next steps include detailed topographic survey, final design, and permitting. The next phase of the project will need to include some site specific survey data at key locations which was sourced with the LiDAR data set for this portion of the study. With additional data the design can be studied in further detail to get detailed calculations and final design. Following a detailed site suitability assessment, a refined design can be settled upon to hone on a targeted volume to address water quality and quantity concerns for Lake Mattamuskeet and the residents of the Fairfield Drainage District.



\$2,000.00

Issued Jun 22 2004
\$2,000.00
State of Hyde
North Carolina County
Real Estate Excise Tax

FILED in Hyde County, NC
on Jun 22 2004 at 12:18:08 PM
by: Lora Mooney Byrd
Register of Deeds
BOOK 203 PAGE 415

NORTH CAROLINA

HYDE COUNTY

THIS DEED made this the 22nd day of June, 2004, from **PAMLICO ECO - MANAGEMENT GROUP LIMITED PARTNERSHIP**, a limited partnership organized and existing under and by virtue of the laws of the State of Georgia, having as its sole general partner, **Pamlico, Inc.**, a corporation organized and existing under and by virtue of the State of Georgia, and having as its sole limited partner, **Gerald D. Lankford** of the City of Powder Springs, State of Georgia, party of the first part, to **THE STATE OF NORTH CAROLINA**, c/o State Property Office, 1321 Mail Service Center, Raleigh, North Carolina 27591-1321, party of the second part, WITNESSETH;

THE PARTY OF the first part for TEN DOLLARS (\$10.00) and other valuable consideration to it in hand paid by the party of the second part, the receipt of which is hereby acknowledged, has bargained and sold, and by these presents, does grant, bargain, sell, and convey unto the party of the second part its successors and assigns, that certain parcel of land situated in **Fairfield Township** of Hyde County, North Carolina, which is more particularly described as follows:

Individual Pamlico Tract # 4 - The Pamlico (Carter Canal) Tract: BEGIN at the point of intersection of the northerly edge of Dyke Canal (also known as Boundary Canal) with the southwesterly right-of-way line of Blauvelt Avenue (or an imaginary prolongation of said southwesterly right-of-way line of Blauvelt Avenue in a southeasterly direction if necessary for said southwesterly right-of-way line of Blauvelt Avenue to intersest with the northerly edge of Dyke Canal) and run thence South 83 degrees 37 minutes West a distance of 850 feet to an iron pin; run thence North 85 degrees 22 minutes West a distance of 4,410 feet to an iron pin located at the point of intersection at the northerly edge of Dyke Canal with the center line of Baum Canal (said iron pin being located at the northwesterly corner of the 3,013 .2 acre tract of land conveyed to Lakeway Fuel Corporation by division deed from Georgia Timberlands, Inc., dated July 8, 1985 of record in Deed Book 123, page 979, Hyde County Registry, being

JUN 28 2004

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ATTORNEYS AT LAW
SWAN QUARTER, N.C.

designated therein as Tract D, the last two courses and distances being taken from the plat of said 3013.2 acre tract of land prepared by David Ross Smith on August 26, 1980); run thence in a westerly direction, along the northerly edge of Dyke Canal a distance of 5226 feet, more or less, to the point of intersection of the northerly edge of Dyke Canal with the westerly right-of-way line of Carter Canal; run thence North 87 degrees 36 minutes West, a distance of 11,977 feet to the water's edge on the east side of Fairfield Canal; run thence North 00 degrees 10 minutes West, a distance of 2,000 feet; run thence North 00 degrees 10 minutes West, a distance of 1,000 feet; run thence North 00 degrees 40 minutes West, a distance of 1,000 feet (the last four courses and distances coming from the compiled plat of the lands of Pamlico, Inc. prepared by Tamplin & Sherrill, Inc., dated December 12, 1973); run thence North 01 degree 00 minutes West a distance of 3,331 feet; run thence North 01 degree 00 minutes West, a distance of 537.07 feet to the southeasterly right-of-way line of the Intracoastal Waterway; run thence North 65 degrees 48 minutes 55 seconds East, along the southeasterly right of way line of the Intracoastal Waterway, a distance of 2,014.94 feet to the southerly line of Lot No. 12 shown on the map prepared by Joseph S. Mann, CE, dated May 25, 1917 of record in Deed Book 40, page 502, Hyde County Registry; run thence South 89 degrees 25 minutes East, along the southerly line of said Lot No. 12, a distance of 2,824.12 feet to the easterly line of said Lot No. 12; run thence North 13 degrees 45 minutes West, along the easterly line of said Lot No. 12, a distance of 550 feet, more or less, to the southerly edge of Alligator River; run thence in a generally easterly, northeasterly, and northerly direction, along the southerly, southeasterly, and easterly edge of Alligator River, a distance of 3,500 feet, more or less, to the point of intersection of the easterly edge of Alligator River with the southeasterly right-of-way line of the Intracoastal Waterway; run thence North 54 degrees 03 minutes 30 seconds East, with the southeasterly edge of the right-of-way line of the Intracoastal Waterway, about 2,500 feet to the center line of Carter Canal; run thence in a southeasterly direction, along the center line of Carter Canal, a distance of 5,280 feet, more or less, to the southerly most corner of the 8,105 acre tract of land conveyed to Lakeway Fuel Corporation by the division deed from Georgia Timberlands, Inc., dated July 8, 1985, of record in Deed Book 123, page 979, Hyde County Registry; run thence South 51 degrees 24 minutes West, a distance of 20 feet, more or less, to the iron pin shown on the W. C. Rodman III map of Mattamuskeet Farms, dated November 8, 1973, of record in Plat Cabinet A, Slide No. 178-A, as being located on the westerly edge of Carter Canal at the southwesterly end of the line shown on said plat as having a course of South 51 degrees 24 minutes West, and a distance of 10,923.76 feet; run thence North 09 degrees 09 minutes West, a distance of 217.58 feet to an iron pin; run thence South 80 degrees 51 minutes West, a distance of 2,118.4 feet to an iron pin; run thence South 09 degrees 09 minutes East, a

distance of 6,600 feet to an iron pin; run thence North 80 degrees 51 minutes East, a distance of 2,118.4 feet to an iron pin located on the westerly edge of Carter Canal; run thence North 09 degrees 09 minutes West, a distance of 5,497 feet to an iron pin; run thence North 09 degrees 09 minutes West, a distance of 113 feet to an iron pipe located on the southerly right-of-way line of Blauvelt Avenue (also known as and shown on the plat prepared by David Ross Smith, dated July 31, 1980, of the 320 acre tract of land conveyed to Lakeway Fuel Corporation by the division deed from Georgia Timberlands, Inc., dated July 8, 1985, of record in Deed Book 123, page 979, Hyde County Registry, as "Property Line Road", said 320 acre tract of land being designated in said division deed as "Tract E"); run thence North 79 degrees 55 minutes East, along the southerly right of way line of Blauvelt Avenue, a distance of 608.07 feet to an iron pin; run thence South 55 degrees 37 minutes East, along the southwesterly right of way line of Blauvelt Avenue (and an imaginary prolongation thereof in a southeasterly direction if necessary to strike the northerly edge of Dyke Canal), a distance of 13,541.71 feet, more or less, to the northerly edge of Dyke Canal (the foregoing eight courses and distances being taken from or approximated with reference to the plat of said 310 acre tract of land prepared by David Ross Smith, dated July 31, 1980), which is back to the point of beginning, containing 3,289 acres, more or less.

TOGETHER WITH the perpetual easement to the above described land from North Carolina Highway No. 94 as more particularly described in the warranty deed from James E. Griffin and wife, Maude S. Griffin, to Pamlico, Inc., dated November 16, 1967, recorded in Book 85, page 331, Hyde County Registry, for the purposes therein granted.

ALSO CONVEYED hereby is all of the grantor's right, title, and interest in and to all property adjoining the property hereinabove described located between the southeasterly right of way line of the Intracoastal Waterway and the center line of the Intracoastal Waterway.

THESE ARE a part of those lands described in a deed from Mulberry Street Investment Company to Pamlico Eco - Management Group Limited Partnership, dated February 28, 1991, and of record in the Office of the Register of Deeds of Hyde County, North Carolina, in Book 139 at page 440, which deed is made a part hereof for the purpose of description.

SAVING AND EXCEPTING however, from the above described tract, all that certain parcel of land located in Fairfield Township, Hyde County, North Carolina, containing 934.609 acres, more or less, as shown on that certain plat of survey drawn by John C. Kirkman, RLS, under date of February 1, 1992, entitled, ". . . *Georgia Southern Lumber, Inc.* . . .", a copy

of which is recorded in Plat Cabinet C, Slide No. 45-F, Hyde County Registry, and which was formerly recorded in that cabinet on Slide No. 270, and incorporated herein by reference for the purpose of description.

THIS CONVEYANCE IS MADE SUBJECT to the following:

1. The 2004 taxes and assessments assessed against said lands by Hyde County, pro rated to the date hereof;
2. Such rights as the owners of other lands have to drain through and maintain any ditches or canals that bound or cross said lands;
3. Such easements, if any, as may be outstanding across said lands for utility lines;
4. Such rights as others, including, but not limited to, the United States of America has in any part of said land that may lie within the right of way of the Intracoastal Waterway;
5. That oil, gas, and mineral reservation contained in a deed from Georgia Timberlands, Inc. to Mulberry Street Investment Company, dated December 30, 1986, and of record in the Office of the Register of Deeds of Hyde County, North Carolina, in Book 127 at page 505;
6. Those easements established in two reports of commissioners as are of record in the Office of the Register of Deeds of Hyde County, North Carolina in Deed Book 15 at page 186 and in Deed Book 18 at page 71;
7. Those easements established in the will of H. C. Carter, dated May 31, 1919, and of record in the Office of the Clerk of the Superior Court of Hyde County, North Carolina, in Will Book 12 at page 254;
8. Such drainage rights through and passways over said lands as were expressly reserved by the party of the first part's predecessors in title to the Fairfield Canal property;
9. Such drainage rights as were specifically reserved in a deed from Fairfield Canal and Turnpike Company and R. R. Grant as assignor, to T. H. Dawson, dated March 24, 1937, and recorded in Hyde County, North Carolina in Deed Book 57, page 190;
10. Such easements as were acquired by Hyde County Drainage District No. 7 by virtue of Special Proceeding 1085 instituted in the Superior Court of Hyde County, North Carolina; and,

11. Such easements and rights thereon as were conveyed to Hyde County Drainage District No. 7 by Mrs. Maude Grant by deed dated May 7, 1957, and recorded in the Office of the Register of Deeds of Hyde County, North Carolina, in Book 68 at page 470;

12. Such rights, if any, as others have in that parcel of land containing 0.23 of an acre, more or less, described in a deed from Hyde County Drainage District No. 7 to the United States of America, dated May 9, 1957, and of record in the Office of the Register of Deeds of Hyde County, North Carolina, in Book 69 at page 14; and,

13. Those easements described in a deed from Pamlico Eco - Management Group Limited Partnership to Carolina Timberland Eco-Management Partners, dated May 24, 1995, and of record in the Office of the Register of Deeds of Hyde County, North Carolina, in Book 154 at page 87.


TO HAVE AND TO HOLD the above described parcel of land, together with all improvements thereon and appurtenances thereto, unto it, the said party of the second part, its successors and assigns, to its only use and behoof, in fee simple absolute, forever.


AND THE SAID PARTY of the first part does for itself, and its successors, covenant to and with the party of the second part, its successors and assigns, that it is siezed of said lands in fee and has the right to convey the same in fee simple, that the same are free of all liens and encumbrances, except as set out above, and that it will forever warrant and defend the title to the same against all other lawful claims.

IN TESTIMONY WHEREOF, the party of the first part has caused this instrument to be signed in its partnership name by its sole general partner and by its sole limited partner, the day and year first above written, all by authority duly given.

PAMLICO ECO - MANAGEMENT GROUP LIMITED PARTNERSHIP

By: Pamlico Inc., its sole general partner

By: 
President

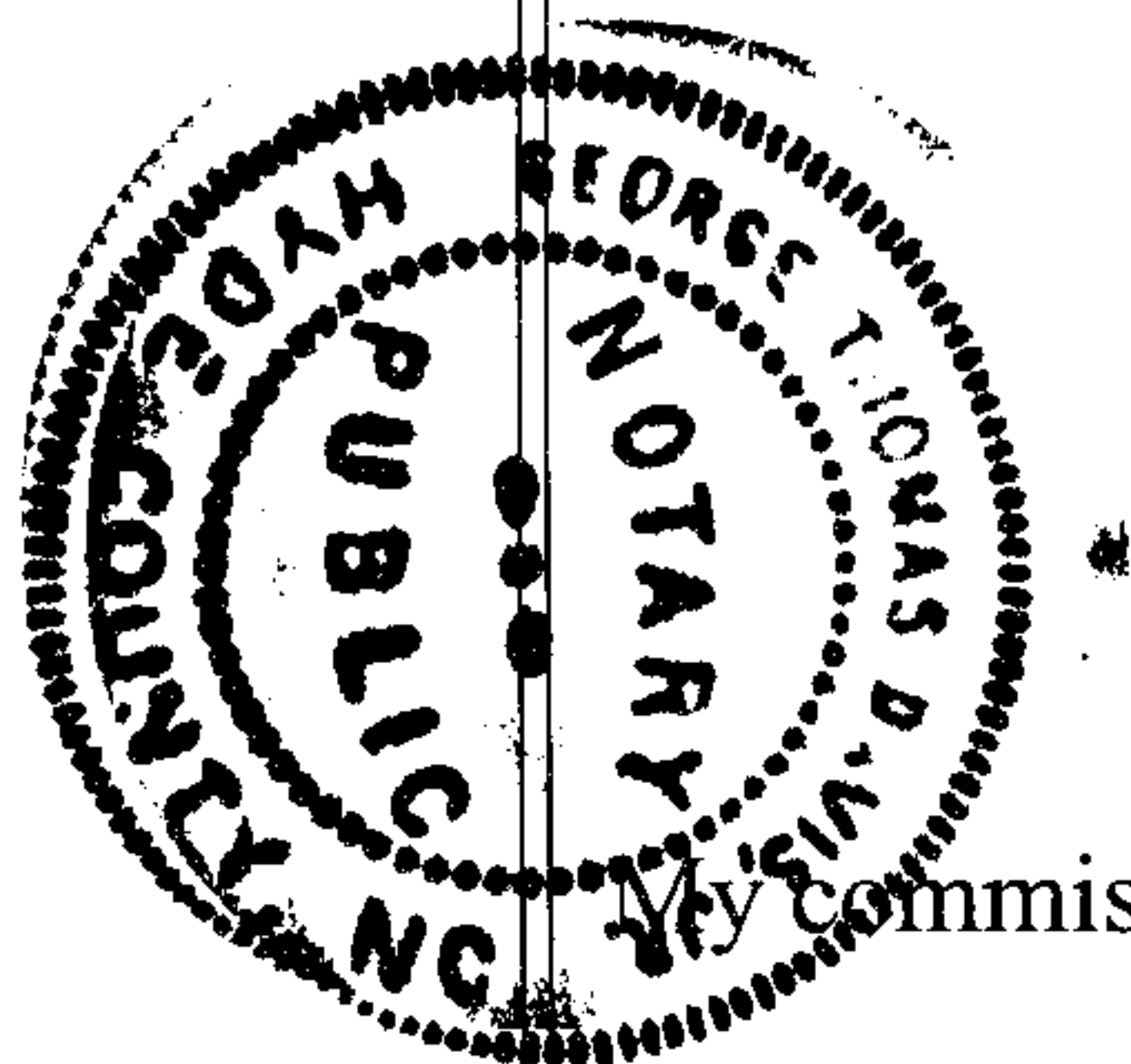
By: 
Gerald D. Lankford, its sole limited partner

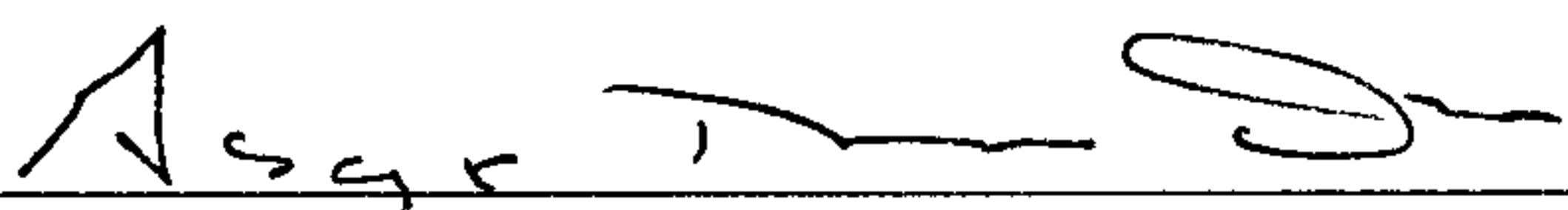
NORTH CAROLINA

HYDE COUNTY

I, George Thomas Davis, Jr., a Notary Public of the County of Hyde, State of North Carolina, do hereby certify that Gerald D. Lankford personally came before me this day and acknowledged that he is President of Pamlico, Inc., a Georgia corporation and the sole general Partner of Pamlico - Eco Management Group Limited Partnership, a Georgia limited partnership, and that by he, as president of said corporation, being authorized to do so, executed the foregoing on behalf of the corporation as general partner of said limited partnership.

Witness my hand and Notarial Seal, this the 22nd day of June, 2004.




Notary Public

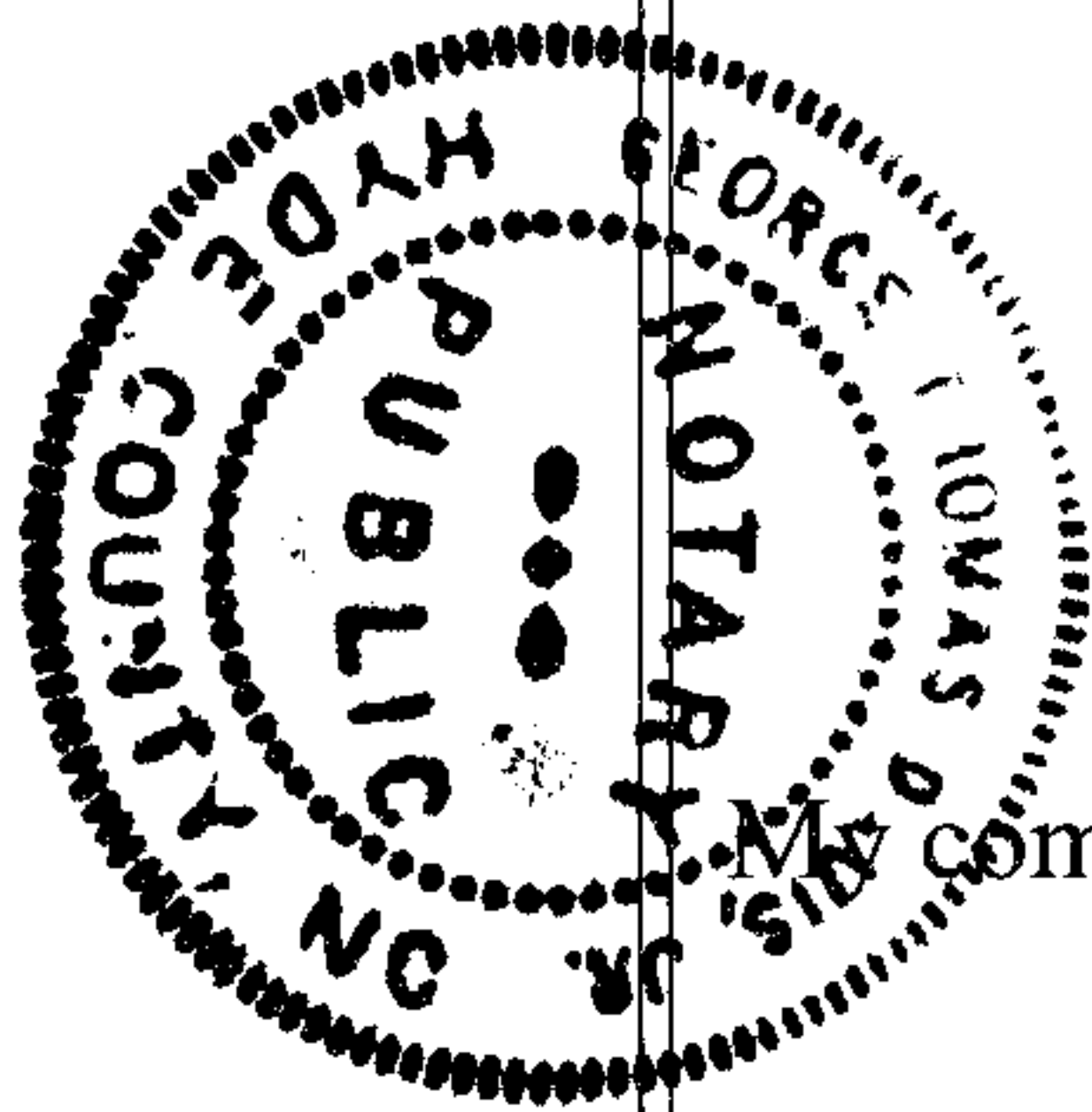
My commission expires: August 1, 2004.


NORTH CAROLINA

HYDE COUNTY

I, George Thomas Davis, Jr., a Notary Public of the County of Hyde, State of North Carolina, do hereby certify that Gerald D. Lankford, personally appeared before me this day as the sole limited partner of Pamlico Eco - Management Group Limited Partnership, and acknowledged the due execution of the foregoing deed by him on behalf of said Limited Partnership.

Witness my hand and Notarial Seal, this the 22nd day of June, 2002.




Notary Public

My commission expires: August 1, 2004.

NORTH CAROLINA

HYDE COUNTY

THE FOREGOING certificates of George Thomas Davis, Jr., a notary public of the County of Hyde, State of North Carolina, together with his notarial seals attached, are certified to be correct. This instrument was presented for registration this day and hour and duly recorded in the Office of the Register of Deeds of Hyde County, North Carolina, in Real Estate Book 203 at page 415.

THIS THE 22nd day of June, 2004, at 12:18 P.M.

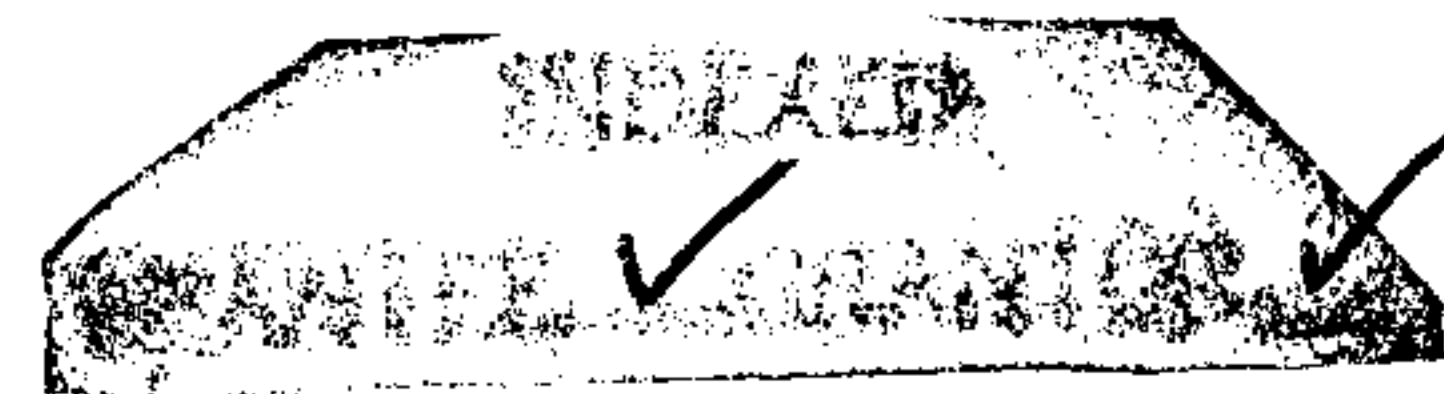
Lora M. Byrd
Register of Deeds

Hyde County, North Carolina

by: Pamela H. Sawyer, Deputy

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DAVIS & DAVIS
ATTORNEYS AT LAW
SWAN QUARTER, N.C.



Easement Request Gull Rock Game Land, Hyde County +/- 3.5 Total Miles



Easement Request–Gull Rock Game Land (Exhibit C-2)

- The NC Coastal Federation is requesting a temporary construction easement on Gull Rock Game Land in Hyde County.
 - The Temporary Construction Easement will allow NC Coastal Federation to execute the construction phase of this project to include dike repair, canal restoration, pump installation, and the installation of a ditch plug and culvert.
 - The primary goal of the project is to reduce water elevations in Lake Mattamuskeet by redirecting drainage from the lake.
- Fairfield Drainage District #7 is requesting a permanent easement to maintain the canals, dikes, and infrastructure, as well as pump water across Commission property.
 - The easement will allow machinery to maintain the canal system, dikes and infrastructure
 - The easement will also allow Fairfield Drainage District to pump water across Commission owned property
 - The pre-existing easement allows for pumping through the existing canal network, but does not permit sheet flow across the entirety of the property
- The Commission and NC Natural Heritage Program will retain the right to cease pumping if sheet flow from pumping is detrimental to the resource and Natural Heritage Primary Area.
- Easement value to be determined by the State Property Office.



(ON DEPARTMENT OF ADMINISTRATION STATIONERY)

(DATE) (LINE 6) (NOT IN BOLD)

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources
4601 Mail Service Center
Raleigh, North Carolina 27699-4601

Mr. Kyle Briggs, Executive Director
N.C. Wildlife Resources Commission
Mail Service Center 1701
Raleigh, North Carolina 27699-1701

Subject: Letter of Allocation and Dedication as a Nature Preserve of Portions of the **Sandy Mush Game Land**, Madison County

Dear Secretary Cashwell and Mr. Briggs:

Pursuant to Part 42 of Article 2 of Chapter 143B of the North Carolina General Statutes, this letter of allocation is executed for the purpose of dedicating the State-owned lands hereinafter described as a North Carolina Nature Preserve.

This real property which is subject to this Dedicated Nature Preserve is currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Sandy Mush Game Land** and consists of approximately 36 acres located in Madison County, composed of:

- | | |
|---|----------|
| 1. Sandy Mush Game Land Nature Preserve (Primary Areas) | 35 acres |
|---|----------|

which are specifically described in Exhibit A and shown on the diagram in Exhibit B both, attached hereto and incorporated herein and referred to hereafter as “Property”. The dedicated land shall be known collectively as the **Sandy Mush Game Land Dedicated Nature Preserve**.

Dedication of the qualified portions of the tract included herein fulfills the terms of NC Land and Water Fund grant agreements, including #2022-069.

THIS DEDICATION OF THE SANDY MUSH GAME LAND DEDICATED NATURE PRESERVE IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. **Definitions:** As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes, section 143B-135.254.
2. **Dedication:** Pursuant to North Carolina General Statutes 143B-135.264, all State-owned lands lying within the above designated area(s) are hereby dedicated as a nature preserve to be known collectively as the **Sandy Mush Game Land Dedicated Nature Preserve** (hereinafter "preserve") for the purposes provided in the North Carolina Nature Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Duration:** Subject to the limitations of NCGS 143B-135.264, this agreement shall be perpetual, in gross, running with the land.
4. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 07 NCAC 13H.300 and .0400. The Primary Custodian may hereinafter be referred to as "Primary Custodian" or "Custodian".
5. **Primary Classification and Purpose:** The primary classifications and purposes of the preserve will be natural area conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the preserve is described in Exhibit A.
6. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 36 acres, including 16 acres restoration), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof.

The Primary Area is deemed by the Secretary of the North Carolina Department of Natural and Cultural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 143B-135.260) and further serves one or more of the public purposes for a dedicated preserve as stated in G.S. 143B-135.252.

7. **Rules for Management of the Primary Area(s):**
 - A. **Character of Visitor Activity:** The principal visitor activities in the preserve shall be hunting, fishing, trapping, walking, research, and observation. These activities shall be regulated by the Custodian to protect and preserve the natural values of the

preserve. Activities and uses unrelated to those listed above are prohibited except as otherwise provided in these Articles or unless necessary to carry out the purposes of the preserve. Prohibited activities include, but are not limited to: construction; commercial activities and development; commercial silviculture; agriculture and grazing; gathering of native species of plants or plant products; the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources, except for research purposes as approved by the Custodian; and those activities specifically restricted in these Articles.

There shall be no fires, except as necessary for ecological management of the preserve or in conjunction with supervised educational activities of the Custodian, or further excepted as herein provided or otherwise expressly permitted.

- B. Consumptive Wildlife Uses: Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. Orientation and Guidance of Visitors: The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may restrict access to visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. Roads and Trails: Construction and maintenance of roads, trails, and other access structures within Primary and Buffer Areas of the preserve will be limited to the level necessary to appropriately manage the preserve. New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to staff use for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. Existing roads that occur within or form a boundary of the Primary Area may be maintained by grading the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary, to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.

If an existing North Carolina Department of Transportation (“NCDOT”) road runs within or along a boundary of the Primary Area and NCDOT demonstrates a

compelling need to do so, then subject to the written approval of both the Primary Custodian and the Natural Heritage Program, NCDOT may within the Primary Area use a strip of land up to fifty feet (50') wide outside and adjacent to the road's existing NCDOT right-of-way for the purpose of improving the NCDOT road. A strip of land approved under this provision shall not be longer than 1,000 feet long. The Primary Custodian and the Natural Heritage Program shall concur only if the proposed improvements and the associated activities will not cause significant impacts to rare species, small-patch natural communities, adjacent streams, or other Natural Heritage resource values. The existing NCDOT roads that run within or along a boundary of the Primary Area at the time of the issuance of this letter of allocation are as follows: S.R. 1115.

- E. Other Structures and Improvements: Structures or facilities shall not be erected within the preserve, except as may be consistent with the purposes of the preserve as stated in these Articles. Site selection shall be consistent with these Articles.
- F. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge spoil in, on, or under the preserve. No underground storage tanks may be placed within the preserve. Pollutants may not be added to surface or ground waters within the preserve.
- H. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, artifact removal, or other material, nor any change in topography or surface hydrology of the preserve. Exceptions may be made for permitted archaeological research or for ecological restoration to more natural conditions, consistent with the Management Plan, and in consultation with the North Carolina Natural Heritage Program.
- I. Water Level Control: The purpose of water level control shall be to maintain the preserve's natural water regime. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.
- J. Bringing in Flora and Fauna: No exotic flora and no animals except leashed

dogs and cats, hunting dogs as permitted on game lands, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the preserve. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.

- K. Wildfire Control: Wildfires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wildfire does not threaten human life or structures, it may be allowed to burn with minimal control. If wildfire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wildfire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.

- L. Disturbance of Natural Features: The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles.

Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.

- M. Control of Populations (natural and exotic): Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.

- N. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary, to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will

be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wildfire historically suppressed woody vegetation and promoted herbaceous diversity.

- O. **Management Plan:** The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Natural and Cultural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the Game Lands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 07 NCAC 13H.0300 and .0400. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
8. **Amendment, Modification, and Termination:** Any changes to this Dedication must be made in accordance with the provisions of North Carolina General Statutes 143B-135.250-.272 and the North Carolina Administrative Code, Chapter 7, Subchapter 13H, which require the approval of the Governor and the Council of State.
9. **Nature Preserve Held in Trust:** This Property is held in trust by the State for the benefit of the people of North Carolina for the uses and purposes expressed in the Nature Preserves Act under the terms and authority set forth in N.C. Gen. Stat. 143B-135.262.
10. **Access for Inspection and Right of Entry:** Natural Heritage Program staff, including their successors or assigns, shall have the right, by and through its agents and employees, to enter the Property to inspect the Dedication for compliance with these Articles of Dedication at all reasonable times and with prior notice.

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the **Sandy Mush Game Land Dedicated Nature Preserve** to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of (City Name), North Carolina, on the _____ of _____, (YEAR). (TYPE IN DATE AFTER COUNCIL OF STATE APPROVAL)

Sincerely,

Gabriel J. Esparza

CONSENTED AND AGREED TO:

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources

Kyle Briggs, Executive Director
Wildlife Resources Commission

EXHIBIT A

SANDY MUSH GAME LAND DEDICATED NATURE PRESERVE

COUNTY: Madison

PHYSIOGRAPHIC PROVINCE: Blue Ridge

TOPOGRAPHIC QUADS: Leicester

SIZE OF AREA: ca 35 acres (all Primary, including 16 acres Restoration)

OWNER/ADMINISTRATOR: State of North Carolina, Wildlife Resources Commission

LOCATION: South-central Madison County. The site is accessed from a parking area off Ramsey Snelson Road (SR 115) approximately 1.5 miles southeast of the intersection with Rector Corner Rd (SR 1116). All or portions of Madison County, South Marshall Township parcel number 9704736182.

DESCRIPTION: Sandy Mush Game Land lies within the French Broad River valley and encompasses the steep slopes of two narrow creek gorges of Sandymush and Turkey Creek, both tributaries of the French Broad River. Elevation ranges from 2,375 feet from the uplands to 1,730 feet down at the French Broad River. The area consists of rolling hills and moderately sloped ridges in the uplands, steep mesic slopes, rugged cliffs and rock outcrops along the creeks, and low floodplains along the French Broad River. The gorge has a unique geology with underlying varied metamorphic formation, including extensive areas of biotite gneiss interspersed with mafic areas of hornblende gneiss and amphibolite. The amphibolite weathers to circumneutral substrates and occurs along the cliffs, rock outcrops, and mesic forests along the creeks, supporting a unique flora for the region.

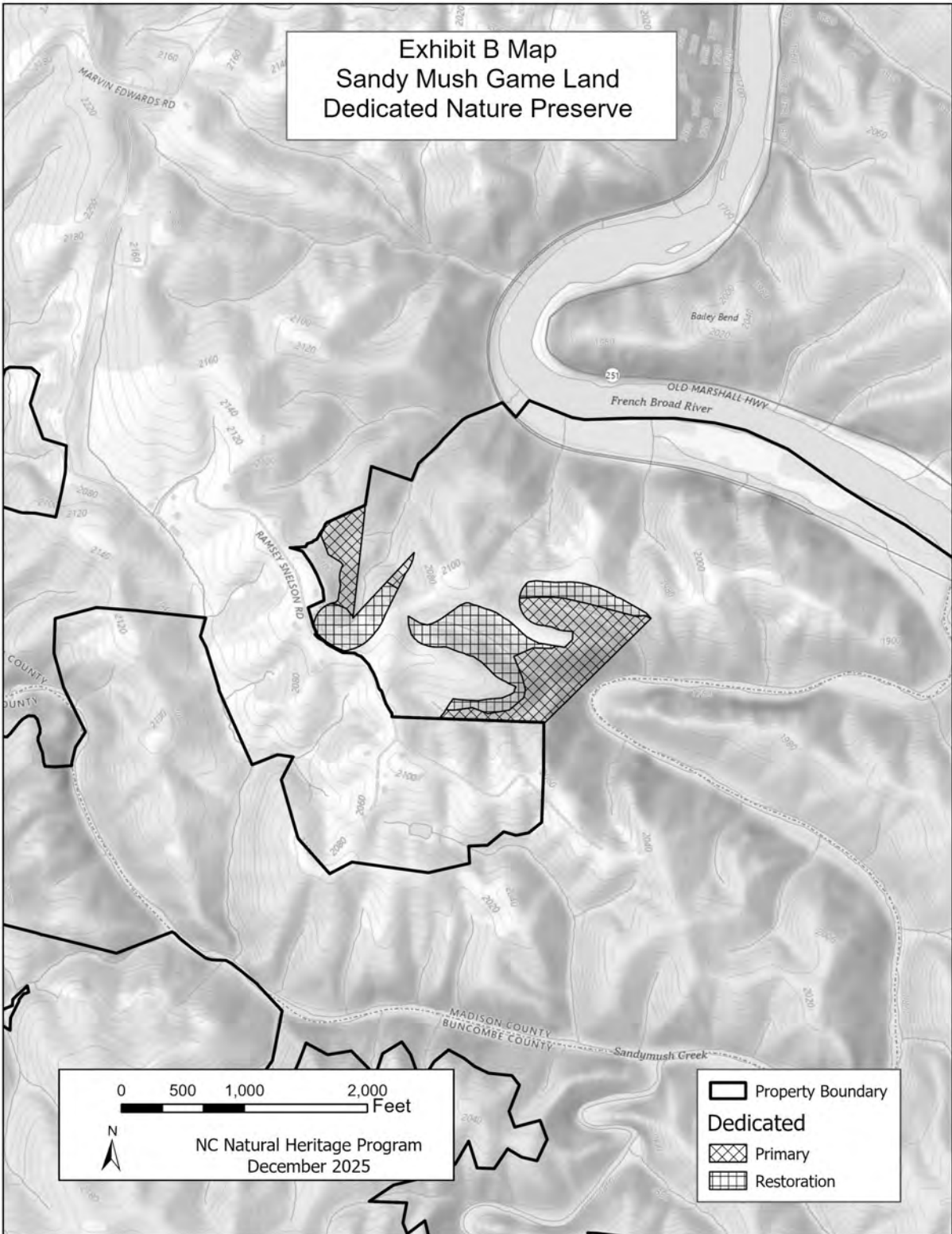
This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The 67-acre Snelson Access tract containing the preserve adds to NC Wildlife Resource Commission land in the area and conserves more of the Sandymush Creek corridor. The preserve consists of uplands and slopes above Sandymush Creek. Much of the uplands are open farmland/pasture and successional forest. The steep south-facing slopes above Sandymush Creek are in good condition and contain rare plants and natural communities. The tract is representative of typical mountainous terrain along the French Broad River corridor and contains portions of the Sandymush Gorge ranging from dry to mesic forests on steep slopes. The steep southern slopes above Sandy Mush Creek have Low Elevation Basic Glade (Montane Subtype), and Rich Cove Forest (Montane Intermediate Subtype), and fall within the Sandymush Creek/Turkey Creek Gorge natural area. Rare plants occur along the Sandymush gorge, including

Moss Phlox (*Phlox subulata*), NC Threatened American Barberry (*Berberis canadensis*), and Pinnate-lobed Brown-eyed Susan (*Rudbeckia triloba* var. *beadlei*) at the Low Elevation Basic Glade (Montane Subtype). Prostrate Blue Violet (*Viola walteri*) and Piratebush (*Buckleya distichophylla*) occur in the lower Rich Cove Forest (Montane Intermediate Subtype) along Sandymush Creek.

The preserve is important for its connection to the exceptionally significant Lower French Broad River Aquatic Habitat natural area. Eastern Hellbender (*Cryptobranchus alleghaniensis*), proposed federally Endangered, is among the rare aquatic species associated with the aquatic habitat.

BOUNDARY JUSTIFICATION: The Primary Area includes the relatively contiguous areas of natural communities in good condition, and riparian zones to protect aquatic systems. Following NC Land and Water Fund standards for funded projects, riparian zones extending 300 feet from the mainstem French Broad River and Sandymush Creek are dedicated as Primary Areas, as well as 200-foot riparian zones for contributing streams, to protect water quality and critical habitat for federally listed species. Portions of those riparian zones that are not currently in good condition are included as Primary (Restoration). The former farmland/pasture areas outside of the riparian zones are not included in the dedication.

MANAGEMENT AND USE: The dedicated nature preserve is used for public hunting, passive recreation, and wildlife management. Prescribed burning is encouraged throughout the dedicated area. A few roads are present within the dedicated areas; these may be maintained as previously existing disturbances. The dedicated nature preserve should be managed to promote its natural condition and to protect adjacent aquatic habitat. The forest should be allowed to mature naturally. In the Primary (Restoration) Areas where the riparian zone lacks natural forest cover, restoration of native riparian forest to protect water quality will minimally involve allowing natural succession to occur, but may involve planting of site-appropriate canopy species and minimizing weedy invasion, or in some areas extending/developing forests dominated by Shortleaf Pine (*Pinus echinata*) that have moderately developed, native grass/forb layers in the understory. Monitoring for, and control of, exotic invasive species is encouraged. Control measures for non-native invasive species should be limited to those that will not harm water quality or associated native plants. Planning for active management in the preserve should include consultation with the Natural Heritage Program.



(ON DEPARTMENT OF ADMINISTRATION STATIONERY)

(DATE)

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources
4601 Mail Service Center
Raleigh, North Carolina 27699-4601

Mr. Kyle Briggs, Executive Director
N.C. Wildlife Resources Commission
Mail Service Center 1701
Raleigh, North Carolina 27699-1701

Subject: Letter of Allocation and Dedication as a Nature Preserve of Portions of the **Uwharrie Game Land**,
Randolph and Montgomery Counties

Dear Secretary Cashwell and Mr. Briggs:

Pursuant to Part 42 of Article 2 of Chapter 143B of the North Carolina General Statutes, this letter of allocation is executed for the purpose of amending an existing Dedicated Nature Preserve encumbering State-owned lands. These Articles of Dedication replace those certain Articles of Dedication dated April 11, 2016. The purpose of this amendment is to reflect additions of property to the preserve and provide more accurate boundaries.

This real property which is subject to this Dedicated Nature Preserve is currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Uwharrie Game Land** and consists of approximately 560 acres located in Randolph and Montgomery Counties and composed of:

- | | | |
|----|-----------------------------------|-----------|
| 1. | Uwharrie Game Land (Primary Area) | 482 acres |
| 2. | Uwharrie Game Land (Buffer Area) | 78 acres |

all of which are specifically described in Exhibit A and shown on Diagrams B both attached hereto and incorporated herein and referred to hereafter as "Property". That 93-acre area depicted on the diagram attached as **Exhibit C**, attached hereto and incorporated herein by reference, is hereby added to the Dedicated Nature Preserve. The dedicated lands shall be known collectively as the **Uwharrie Game Land Dedicated Nature Preserve**.

Dedication of the qualified portions of the tract included herein fulfills the terms of grant agreements with the NC Land and Water Fund (former Natural Heritage Trust Fund or Clean Water Management Trust Fund).

THIS DEDICATION OF THE **UWHARRIE GAME LAND DEDICATED NATURE PRESERVE** IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. **Definitions:** As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes 143B-135.254.
2. **Dedication:** Pursuant to North Carolina General Statutes 143B-135.264, all State-owned lands lying within the above designated area are hereby dedicated as a nature preserve to be known collectively as the **Uwharrie Game Land Dedicated Nature Preserve** (hereinafter "preserve") for the purposes provided in the North Carolina Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Duration:** Subject to the limitations of NCGS 143B-135.264, this agreement shall be perpetual, in gross, running with the land.
4. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 07 NCAC 13H.0300 and .0400. The Primary Custodian may hereinafter be referred to as "Primary Custodian" or "Custodian".
5. **Primary Classification and Purpose:** The primary classifications and purposes of the preserve will be natural area conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the Preserve is described in Exhibit A.
6. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 480 acres, including a restoration area of 16 acres) and a Buffer Area (approximately 78 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof.

The Primary Area--composed of the natural area as described above--is deemed by the Secretary of the North Carolina Department of Natural and Cultural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 143B-135.260) and further serves all of the public purposes for a dedicated preserve as stated in G.S. 143B-135.252.

The Buffer Area, which contributes to the management and protection of the Primary Area, consists of less mature, lower quality natural communities and other areas which connect and adjoin the Primary Area..

7. **Rules for Management of the Primary Area(s):**
 - A. **Character of Visitor Activity:** The principal visitor activities in the preserve shall be hunting, fishing, trapping, walking, research, and observation. These activities shall be regulated by the Custodian to prevent significant disturbance of the preserve. These activities may specifically be regulated by the Custodian to protect and conserve the natural values of the preserve.

Activities and uses unrelated to those listed above are prohibited except as otherwise provided in these Articles or unless necessary to carry out the purposes of the preserve.

Prohibited activities include, but are not limited to: construction; commercial activities and development; commercial silviculture; agriculture and grazing; gathering of native species of plants or plant products; the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources, except for research purposes as approved by the Custodian; and those activities specifically restricted in these Articles.

There shall be no fires, except as necessary for ecological management of the preserve or in conjunction with supervised educational activities of the Custodian, or further excepted as herein provided or otherwise expressly permitted.

- B. Consumptive Wildlife Uses: Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. Orientation and Guidance of Visitors: The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may create and maintain signage or kiosks, overlooks, fences, barriers, guardrails, steps and boardwalks (hereinafter referred to as "Trail Accessories") associated with trails to be constructed within the preserve. The location of any Trail Accessories shall be decided in consultation with the North Carolina Natural Heritage Program and shall be for the purpose of ensuring the safe, permitted use of the preserve while protecting the preserve from unwanted or excessive visitor traffic. The Custodian may restrict the access of visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. Roads and Trails: Construction and maintenance of roads within Primary and Buffer Areas of the preserve will be limited to the level necessary to appropriately manage the preserve. New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to use by staff for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. The Custodian may locate, build and maintain trails within the boundary of the preserve in a manner consistent with this dedication and in consultation with the North Carolina Natural Heritage Program.

Existing roads that occur within or which form a boundary of the Primary Area may be maintained by grading of the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.

If an existing North Carolina Department of Transportation ("NCDOT") road runs within or along a boundary of the Primary Area and NCDOT demonstrates a compelling need to do so, then subject to the written approval of both the Primary Custodian and the Natural Heritage Program, NCDOT may within the Primary Area use a strip of land up to fifty feet

(50') wide outside and adjacent to the road's existing NCDOT right-of-way for the purpose of improving the NCDOT road. A strip of land approved under this provision shall not be longer than 1,000 feet long. The Primary Custodian and the Natural Heritage Program shall concur only if the proposed improvements and the associated activities will not cause significant impacts to rare species, small-patch natural communities, adjacent streams, or other Natural Heritage resource values. The existing NCDOT roads that run within or along a boundary of the Primary Area at the time of the issuance of this letter of allocation are as follows: S.R. 1108 and S.R. 1143.

- E. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.
- F. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge material in, on, or under the preserve. No underground storage tanks may be placed within the Preserve. No surface or ground waters of the Preserve may have pollutants added within the Preserve.
- H. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, artifact removal, or other material, nor any change in topography or surface hydrology of the preserve. Exceptions may be made for permitted archeological research or for ecological restoration to more natural conditions, consistent with the Management Plan, and in consultation with the North Carolina Natural Heritage Program.
- I. Water Level Control: The purpose of water level control shall be to maintain the Preserves' natural water regime. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.
- J. Bringing in Flora and Fauna: No exotic flora and no animals except leashed dogs and cats, hunting dogs as permitted in game lands, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the preserve. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.
- K. Wildfire Control: Wildfires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wildfire does not threaten human life or structures, it may be allowed to burn with minimal control. If wildfire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wildfire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural

hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.

- L. Disturbance of Natural Features: The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease or insect infestation that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.
 - M. Control of Populations (natural and exotic): Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.
 - N. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary, to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wildfire historically suppressed woody vegetation and promoted herbaceous diversity.
 - O. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Natural and Cultural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the game lands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 07 NCAC 13H.0300 and .0400. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
8. Rules for Management of the Buffer Area(s): Primary Area rules also apply except that additional forestry and wildlife management activities may be planned and carried out as needed. Construction and maintenance of roads within Buffer Area(s) of the preserve will be limited to the level necessary to appropriately manage the preserve. These activities will be conducted in accordance with policy of the N.C. Wildlife Resources Commission and general management philosophy as outlined in Commission planning documents, in addition to providing for the buffer functions in relation to the Primary Area(s). WRC rules and guidelines require the protection and enhancement

of wildlife populations and habitat so that hunting, fishing, trapping and other wildlife recreational opportunities are available to citizens of this State. Forest management is primarily conducted to enhance wildlife habitat.

Buffer functions within the dedicated area may include protecting the primary area(s) from indirect detrimental ecological effects, providing additional area for species and ecological processes that require larger areas, and providing important successional stages and disturbance regimes and other habitat diversity for wildlife. Based on these general objectives, the following buffer functions will be addressed in the management plan.

- 1) Landscape level function of community type and structure. (Buffer Area management may involve timber harvest and other forms of stand manipulation, but will not involve forest canopy type conversion over more than limited areas, other than to restore stands to types suited for the site. Introduction of exotic species known to be invasive in natural communities will be avoided.);
 - 2) Maintenance of habitat connectivity and continuity among Primary Areas;
 - 3) Providing for habitat diversity;
 - 4) Management needs of rare animal and plant species populations occurring within the Buffer Area; and
 - 5) Protection of soil and hydrologic resources and processes within the Primary Area and extending into the Buffer Area. (Naturally vegetated riparian zones will be retained along streams, and watersheds of Primary Areas will be protected from hydrologic alteration.)
9. **Amendment, Modification, and Termination:** The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Natural and Cultural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 143B-135.250-.272 and the North Carolina Administrative Code, Chapter 7, Subchapter 13H.
10. **Nature Preserve Held in Trust:** This Property is held in trust by the State for the benefit of the people of North Carolina for the uses and purposes expressed in the Nature Preserves Act under the terms and authority set forth in N.C. Gen. Stat. 143B-135.262.
11. **Access for Inspection and Right of Entry:** Natural Heritage Program staff, including their successors or assigns, shall have the right, by and through its agents and employees, to enter the Property to inspect the Dedication for compliance with these Articles of Dedication at all reasonable times and with prior notice.

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the **Uwharrie Game Land Dedicated Nature Preserve** to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of (City Name), North Carolina, on the _____ of _____, (YEAR).

Sincerely,

Gabriel J. Esparza

CONSENTED AND AGREED TO:

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources

Kyle Briggs, Executive Director
Wildlife Resources Commission

EXHIBIT A
UWHARRIE GAME LAND
DEDICATED NATURE PRESERVE
(KING MOUNTAIN TRACT)

DESCRIPTION

COUNTY: Randolph

PHYSIOGRAPHIC PROVINCE: Piedmont

TOPOGRAPHIC MAP: Eleazer

SIZE OF AREA: ca. 176 acres (all primary area)

OWNER/ADMINISTRATION: State of North Carolina
Wildlife Resources Commission

LOCATION: King Mountain, in extreme southern Randolph County, just west of King Mountain Road (SR 1108), and lying between two existing US Forest Service (Uwharrie National Forest) tracts in New Hope Township; all or portions of Randolph County parcel 7614745796 (source "NC1Map Parcels").

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The tract's main feature is a high hill known as King Mountain. It is fairly steep-sided, and rocks abound up on ridges and summits. Lower slopes are clothed with mixed pine-hardwood forest typical of the Uwharrie Mountains region: oaks, hickories, loblolly (*Pinus taeda*) and shortleaf (*P. echinata*) pines, black gum (*Nyssa sylvatica*), and red maple (*Acer rubrum*), with flowering dogwood (*Cornus florida*) in the understory. Hillside blueberry (*Vaccinium pallidum*) is numerous. This eastern portion of the forest generally is young to middle-aged, with essentially no big, old trees. Creek banks support red maple, tulip poplar (*Liriodendron tulipifera*), and sweetgum (*Liquidambar styraciflua*). Dense stands of mountain laurel (*Kalmia latifolia*) are present near several creeks.

The upper slopes and summit have numerous boulders and rocks breaking the surface of the soil. These areas are seasonally very dry, due to exposure and droughty soil. The specialized forest cover is a Piedmont Monadnock Forest. Dominants are chestnut oak (*Quercus montana*), mockernut hickory (*Carya alba*), and red maple, with a scattering of black oak (*Quercus velutina*), shortleaf pine, and persimmon (*Diospyros virginiana*). Sourwood (*Oxydendrum arboreum*) is common in the understory. Muscadine grape (*Vitis rotundifolia*) is common to abundant. One place where this forest is particularly well developed is around the summit of King Mountain, which is owned by the US Forest Service. Here also is a population of a rare plant, piedmont indigo-bush (*Amorpha schwerinii*), found during this evaluation.

The southern portion of the tract, which is owned by the NC Wildlife Resources Commission (hereafter, NCWRC), contains mature upland hardwood forests on the slopes and ridges, containing both Piedmont Monadnock Forest and Dry Oak-Hickory Forest natural communities. A wide variety of oaks, including white (*Quercus alba*), post (*Q. stellata*), southern red (*Q. falcata*), scarlet (*Q. coccinea*), and blackjack (*Q. marilandica*), is mixed with the dominant chestnut oak on these southern

ridges and slopes. Dense stands of dangleberry (*Gaylussacia frondosa*) are mixed with various blueberries on these ridges and slopes. Lying between King Mountain pinnacle and the southern ridge is a set of Low Elevation Seeps at the head of Duncombe Creek; a good variety of ferns, dominated by New York fern (*Thelypteris noveboracensis*) is present on this NCWRC land.

Of most significance on the NCWRC portion of the tract is a moderate population of the Federally Endangered Schweinitz's sunflower (*Helianthus schweinitzii*), located along both sides (and within) a jeep track in the northeastern portion of the property.

BOUNDARY JUSTIFICATION: The entire tract is dedicated as primary area based on the rare and high-quality common and rare natural communities and the rare species populations they contain.

MANAGEMENT AND USE: The property will be enrolled in the game lands program and will be open to the public for hunting and wildlife-related recreation. No management is needed over nearly the entire tract. However, the NCWRC will manage for the sunflower population with mechanical opening of the tree canopy and prescribed burning. Because the population exists along the jeep track, and considerable sunlight is required for the sunflower to prosper, it is important to keep the track open. However, many sunflower plants grow within the track itself; thus, management of the track by mowing in the non-growing season may be needed.

(October 2011, NC NHP)

EXHIBIT A

UHARRIE GAME LAND DEDICATED NATURE PRESERVE (BIRKHEAD TRACT)

DESCRIPTION

COUNTY: Randolph PHYSOGRAPHIC PROVINCE: Piedmont

TOPOGRAPHIC MAP: Eleazar

SIZE OF AREA: ca. 292 acres (primary dedication area 281 acres, buffer area 11 acres)

OWNER/ADMINISTRATION: State of NC, Wildlife Resources Commission

LOCATION: The Birkhead tract is approximately 7 miles south of Asheboro. The tract borders the Birkhead Mountain Wilderness area of the Uwharrie National Forest to the west. High Pine Church Road (SR 1143) touches a small portion of the tract on the eastern boundary. To the south and east is private property. The South Prong Little River flows through the eastern portion of the tract. Union Township; all or portions of Randolph County parcel 7637344744 (source "NC1Map Parcels").

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The Birkhead tract consists of gently rolling uplands drained by well-defined creeks and streamheads. Uplands on the tract consist primarily of Dry Oak-Hickory Forest (Piedmont Subtype), dominated by white oak (*Quercus alba*), southern red oak (*Q. falcata*), red maple (*Acer rubrum*), pignut hickory (*Carya glabra*), sourwood (*Oxydendrum arboreum*), and dogwood (*Cornus florida*). Shortleaf pine (*Pinus echinata*) is scattered in some areas. Herbs are very sparse, but low shrubs of dangleberry (*Gaylussacia frondosa*) commonly form patches. Piedmont Monadnock Forest (Typic Subtype) occurs on dry, rocky hilltops on the tract. These areas are dominated by mature chestnut oak (*Quercus montana*), scarlet oak (*Q. coccinea*), sourwood, and red maple. The chestnut oaks average approximately 15"-20" dbh. Black gum (*Nyssa sylvatica*) is scattered within the understory. Dominant shrubs included horse sugar (*Symplocos tinctoria*), and hillside blueberry (*Vaccinium pallidum*), with some American holly (*Ilex opaca*). Large rock outcrops are on these hilltops on the western portion of the tract.

Lower slopes support narrow Piedmont Headwater Stream Forests (Typic Subtype) adjacent to the streams. The canopy trees in these areas are dominated by Tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and red maple. American holly is common in the understory. The creeks have well defined banks, with limited flow, and lack a defined floodplain.

The most significant feature on the Birkhead tract is a small Hillside Seepage Bog, a globally rare (G2) natural community type. This bog supports a thin layer of sphagnum moss beneath a relatively open canopy of sweetgum, tulip poplar, and red maple. Shrubs include scattered highbush blueberries (*Vaccinium formosum*), tag alder (*Alnus serrulata*), and winterberry holly (*Ilex verticillata*). Herbs are

somewhat dense and dominated by royal fern (*Osmunda regalis*), cinnamon fern (*O. cinnamomea*), primrose violet (*Viola primulifolia*), and Jack-in-the-pulpit (*Arisaema triphyllum*). Scattered Nuttall's lobelia (*Lobelia nuttallii*), slender spikegrass (*Chasmanthium laxum*), plumegrass (*Saccharum sp.*), and bog witchgrass (*Dichanthelium lucidum*) also occur. Two species here, graceful goldenrod (*Solidago gracillima*) and screwstem bartonia (*Bartonia paniculata*), are typically confined to the coastal plain and are very rare in the piedmont, indicating this is the rare bog type. While this community has many species typical of seepage bogs, it lacks pitcher plants (*Sarracenia spp.*), sundews (*Drosera spp.*), orchids, and other species often found in them.

A right-of-way was cleared through the property for a proposed residential street prior to WRC acquisition, but is not paved. The right-of-way is now growing up in sweetgum saplings and silverling shrubs (*Baccharis halimifolia*) but no significant exotic invasive species were observed.

BOUNDARY JUSTIFICATION: Places on the tract where there are natural communities are dedicated as primary area. The far eastern portion of the tract, north and east of the cleared right-of-way, are designated as buffer. There are three patches in the center and northern portion of the tract that were previously cleared, possibly for wildlife food plots, and are now growing up in young loblolly pine trees. These areas are also excluded from the primary area and are dedicated as buffer.

MANAGEMENT AND USE: The property will be enrolled in the game lands program and will be open to the public for hunting and wildlife-related recreation. Prescribed fire would benefit the upland forests and the Hillside Seepage Bog, opening the canopy for herbaceous plant species that occur there.

(June 2015, NC NHP)

EXHIBIT A

UHARRIE GAME LAND DEDICATED NATURE PRESERVE (PANTHER BRANCH TRACT)

DESCRIPTION

COUNTY: Montgomery

PHYSOGRAPHIC PROVINCE: Piedmont

TOPOGRAPHIC MAP: Lovejoy

SIZE OF AREA: ca. 93 acres (primary area 26 acres, including 16-acre restoration zone; buffer area 67 acres)

OWNER/ADMINISTRATION: State of NC, Wildlife Resources Commission

LOCATION: Two miles south of Ophir. The west side of the tract borders Barnes Creek, the east side of tract is .9 mile west of Tower Rd. The tract shares a 1,300-foot border with a private property to the north, the remainder of the tract is surrounded by Uwharrie National Forest lands. Union Township; all or portions of Montgomery County parcel 7602 00 71 7109 (source "NC1Map Parcels").

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The Panther Branch tract is slightly less than 93 acres. The gently sloped uplands which make up over 80 percent of the tract have been cut and planted in loblolly pine (*Pinus taeda*). These pines range between 12-16" dbh and have been managed with thinning and prescribed fire, so these uplands have an open character and support diverse small trees, shrubs, vines, and grasses below the loblolly pine canopy. The subcanopy includes sweet gum (*Liquidambar styraciflua*), sourwood (*Oxydendrum arboreum*), dogwood (*Benthamidia florida*), red cedar (*Juniperus virginiana*), Virginia pine (*Pinus virginiana*), winged elm (*Ulmus alata*), and redbud (*Cercis canadensis*). The non-native tree-of-Heaven (*Ailanthus altissima*) is present in low numbers. The shrub layer is dominated by blackberries (*Rubus* sp.), and also includes winged sumac (*Rhus copallina*), beautyberry (*Callicarpa americana*), and mountain laurel (*Kalmia latifolia*) in the driest areas. The vines muscadine grape (*Vitis rotundifolia*) and Carolina jessamine (*Gelsemium sempervirens*) are widespread throughout, and dogfennel (*Eupatorium capillifolium*), roundleaf thoroughwort (*Eupatorium rotundifolium*), late-flowering thoroughwort (*Eupatorium serotinum*), and Christmas fern (*Polystichum acrostichoides*) are the most common native forbs. The non-native legume sericea (*Lespedeza cuneata*) is abundant. Broomsedges (*Andropogon* spp.) and purpletop (*Tridens flavus*) are common, along with non-native foxtail grass (*Setaria* sp.).

A 7-8-acre area in the southeast portion of the tract has 2 shallow ravines with small streams, both dry at the time of survey. This area had been cut but was not planted in loblolly pine. It contains a dense growth of woody species, including white oak (*Quercus alba*), beech (*Fagus grandifolia*), American holly (*Ilex opaca*), black gum (*Nyssa sylvatica*) and trumpet creeper (*Campsis radicans*). This area may have once been Piedmont Headwater Stream Forest (Typic Subtype) but was not deemed mappable in its present condition.

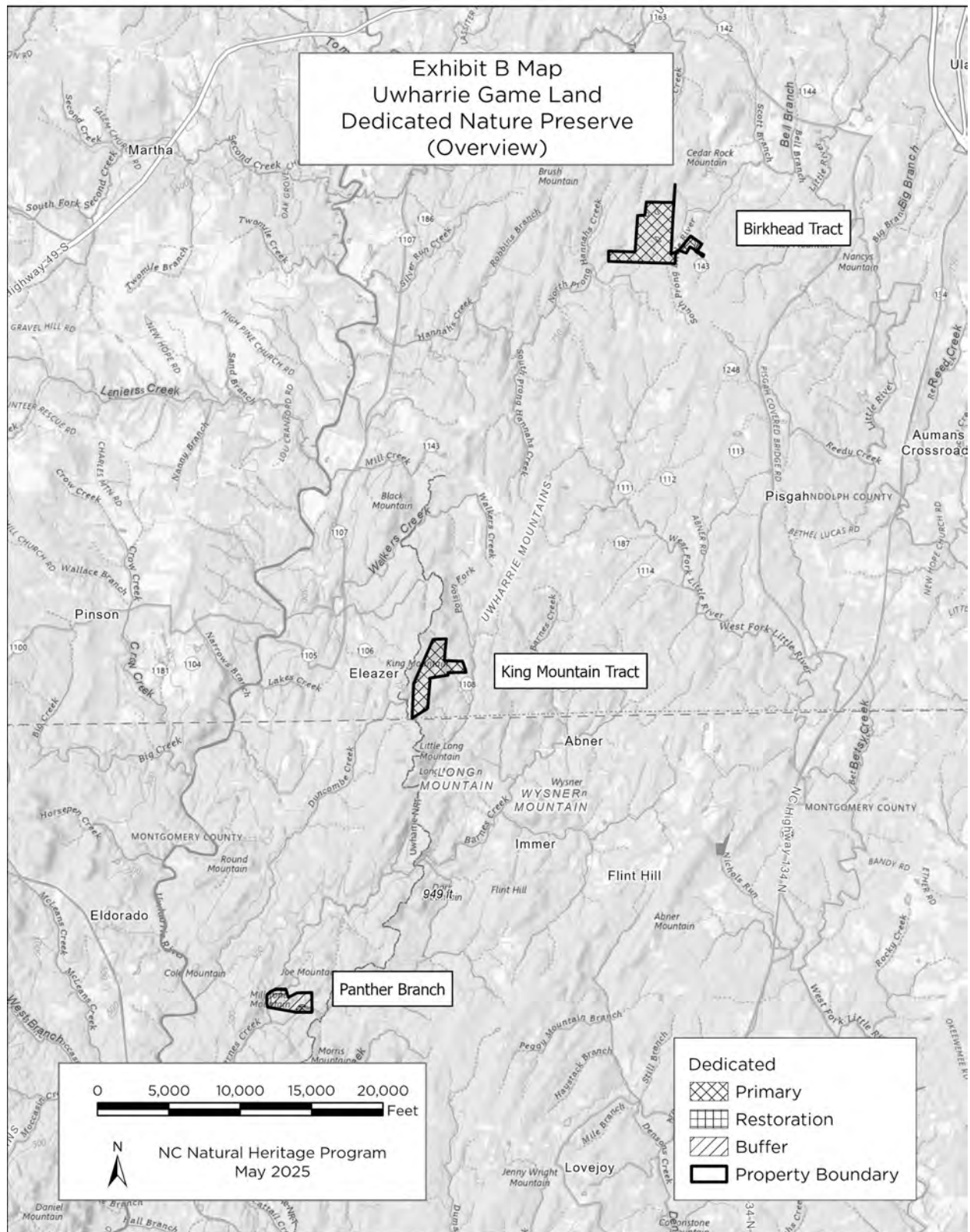
The western boundary of the tract has approximately 2,250 feet of frontage on Barnes Creek. Barnes Creek

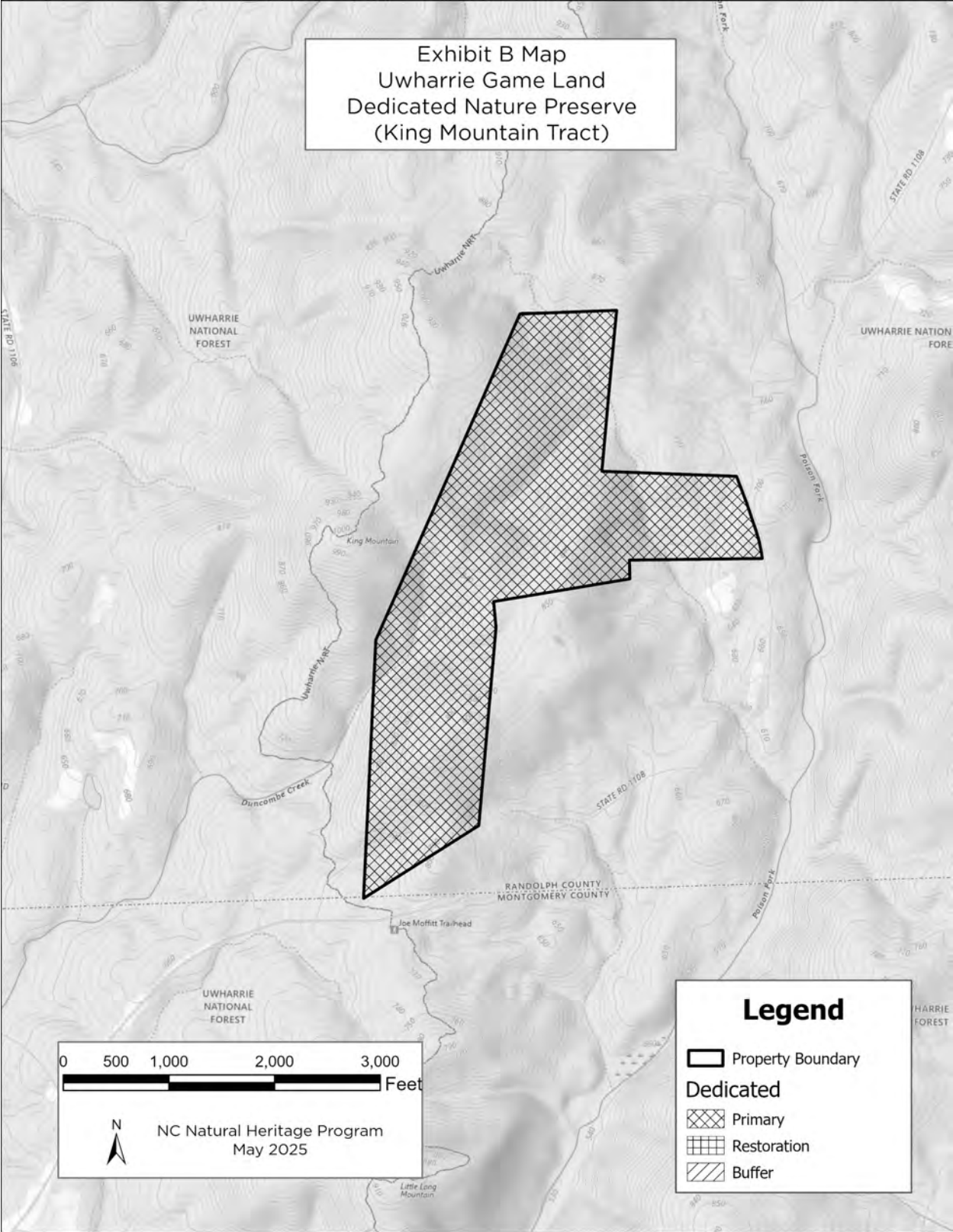
is part of the Barnes Creek/Poison Fork Aquatic Habitat, a conservation site designated by the NC Natural Heritage with exceptional significance, where the recently (2023) described Uwharrie elktoe (*Alasmidonta uwharriensis*) has been found.

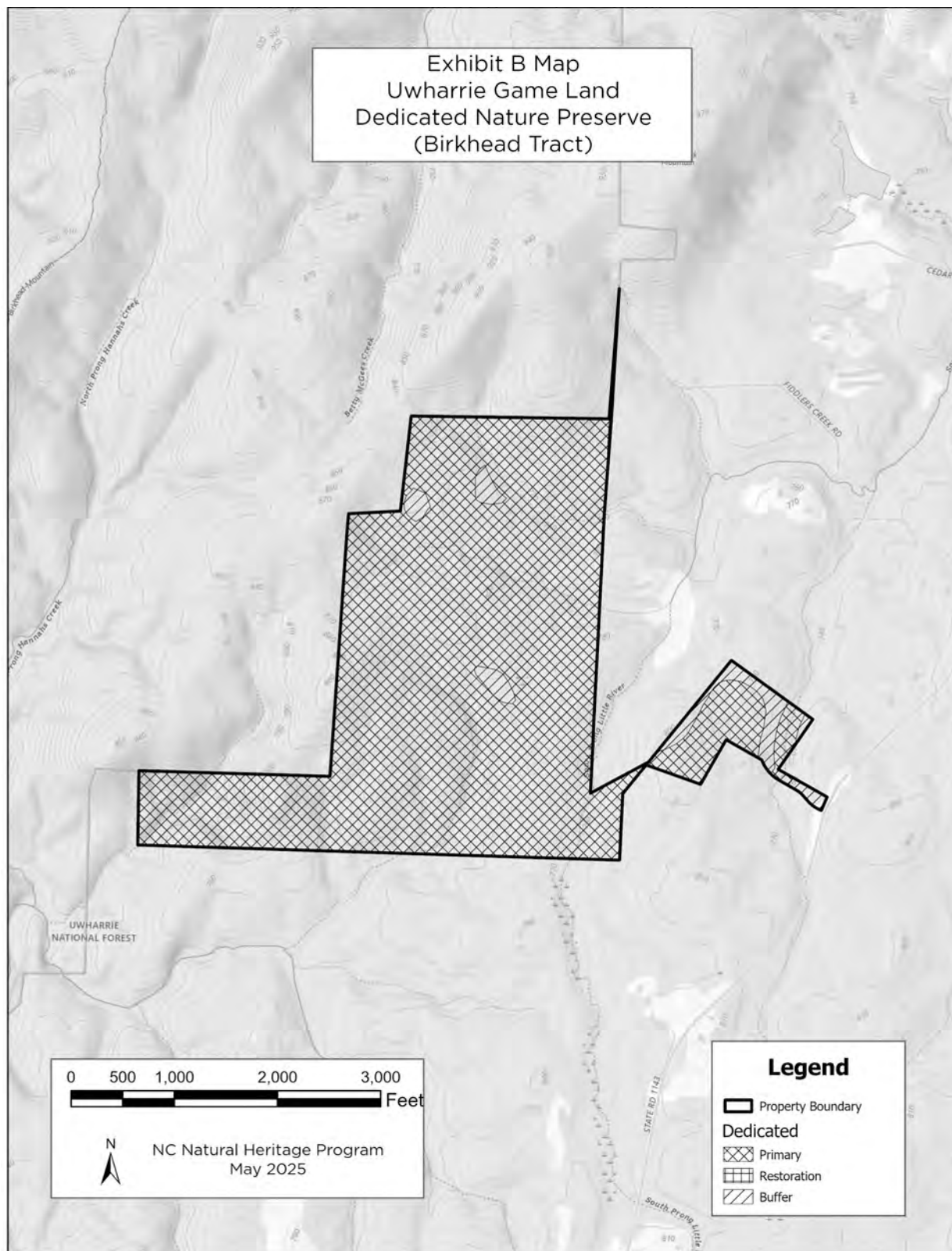
The floodplain between Barnes Creek and the planted pine was not cut. This area varies between 30 and 100 feet wide and consists of a flat terrace raised several feet above the incised channel of the creek. The canopy trees are diverse and large, ranging in size between 16-24" dbh. These include white oak, red oak (*Quercus rubra*), willow oak (*Quercus phellos*), sweet gum, beech, shortleaf pine (*Pinus echinata*), pignut hickory (*Carya glabra*), red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), sugarberry (*Celtis laevigata*), and green ash (*Fraxinus pennsylvanica*). The understory has notably large American hollies, ironwood (*Carpinus caroliniana*), southern sugar maples (*Acer floridanum*), American hop-hornbeam (*Ostrya virginiana*), and red cedar. Witch-hazel (*Hamamelis virginiana*), dwarf pawpaw (*Asimina parviflora*), and mountain laurel are patch dominants. Prominent herbaceous plants include yellow crownbeard (*Verbesina occidentalis*), switch cane (*Arundinaria tecta*), slender spikegrass (*Chasmanthium laxum*), and Christmas fern. This community is best described as Piedmont Bottomland Forest (High Subtype) and is in good condition, and would be a mappable element occurrence if further survey determines that it extends off the tract.

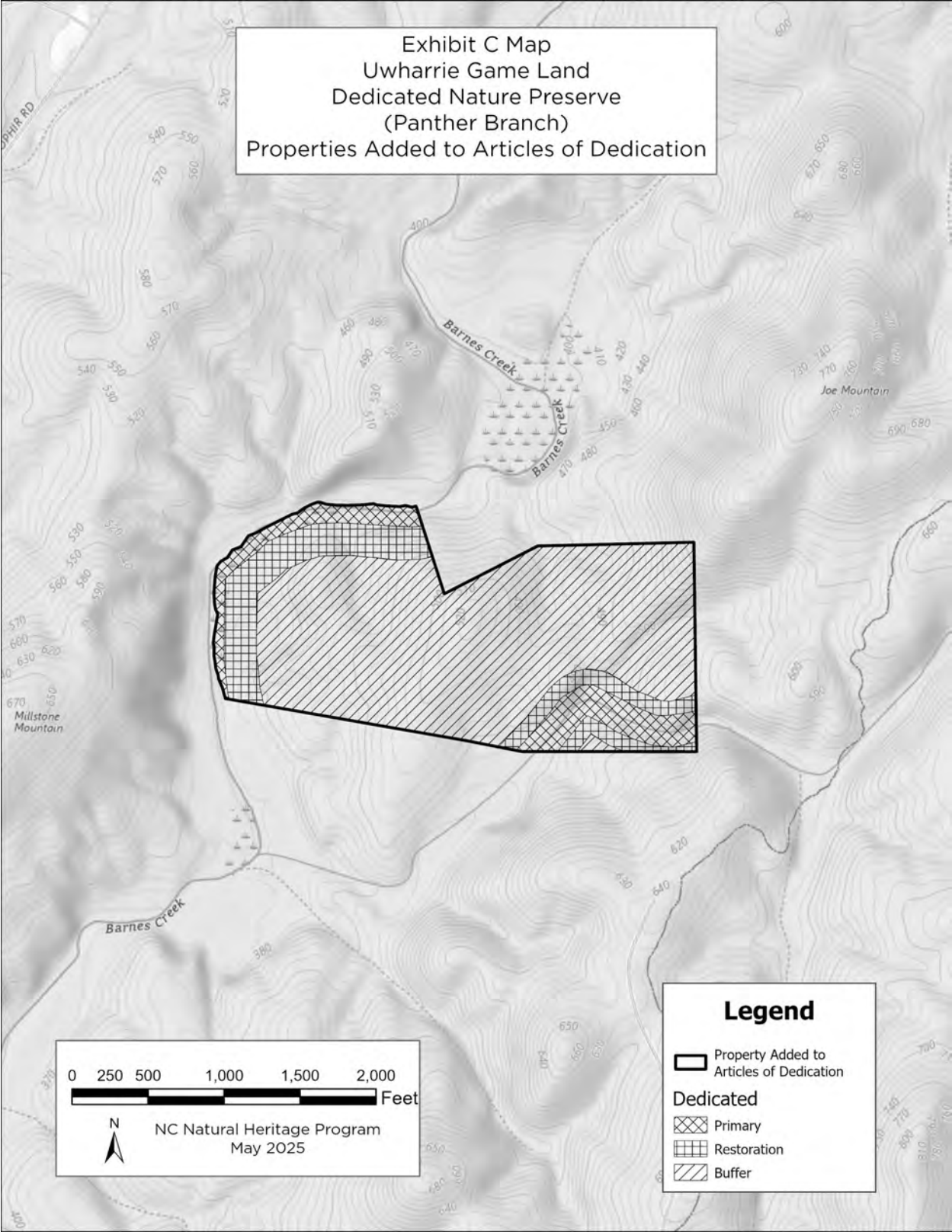
BOUNDARY JUSTIFICATION: Riparian zones are dedicated as Primary Area, consistent with standards for land acquired with NC Land and Water Fund grants, including 300-foot riparian zones on Barnes Creek (as noted, this reach is part of Barnes Creek/Poison Fork Aquatic Habitat), and 200-foot riparian zones on Panther Branch, as a tributary to the Barnes Creek/Poison Fork Aquatic Habitat. The 100 feet closest to the stream is mapped Primary, and the outer riparian zone is Primary (Restoration) – 200 foot on Barnes Creek, and 100 foot on Panther Branch -- as those areas contain a significant amount of young planted pine.

MANAGEMENT AND USE: The property will be enrolled in the game lands program and will be open to the public for hunting and wildlife-related recreation. The Primary Areas should be allowed to mature to old growth composition and structure. The Primary (Restoration) Areas should be managed to restore more natural vegetation while giving priority to protecting water quality in the river and wetlands. Passive restoration is generally appropriate, though silvicultural treatment may be beneficial in some areas where canopy composition is heavily altered. Pine plantation areas may be harvested. Additional treatment or planting may be needed to encourage regeneration of site-appropriate trees.









(DATE)

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources
4601 Mail Service Center
Raleigh, North Carolina 27699-4601

Mr. Kyle Briggs, Executive Director
N.C. Wildlife Resources Commission
Mail Service Center 1701
Raleigh, North Carolina 27699-1701

Subject: Letter of Allocation and Dedication as a Nature Preserve of Portions of the **Goose Creek Game Land**, Beaufort and Pamlico Counties

Dear Secretary Cashwell and Mr. Briggs:

Pursuant to Part 42 of Article 2 of Chapter 143B of the North Carolina General Statutes, this letter of allocation is executed for the purpose of amending an existing Dedicated Nature Preserve encumbering State-owned lands. These Articles of Dedication replace those certain Articles of Dedication dated January 19, 2010. The purpose of this amendment is to reflect additions of property to the preserve and provide more accurate boundaries.

This real property which is subject to this Dedicated Nature Preserve is currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Goose Creek Game Land** and consists of approximately 486 acres located in Beaufort and Pamlico Counties and composed of:

- | | | |
|----|--------------------------------------|-----------|
| 1. | Goose Creek Game Land (Primary Area) | 178 acres |
| 2. | Goose Creek Game Land (Buffer Area) | 308 acres |

all of which are specifically described in Exhibit A and shown on Diagrams B both attached hereto and incorporated herein and referred to hereafter as "Property". That 408-acre area depicted on the diagram attached as **Exhibit C**, attached hereto and incorporated herein by reference, is hereby added to the Dedicated Nature Preserve.. The dedicated lands shall be known collectively as the **Goose Creek Game Land Dedicated Nature Preserve**.

Dedication of the qualified portions of the tract included herein fulfills the terms of grant agreements with the NC Land and Water Fund (former Natural Heritage Trust Fund or Clean Water Management Trust Fund), including grants NCLWF #2001A-021, #2022-054.

THIS DEDICATION OF THE **GOOSE CREEK GAME LAND DEDICATED NATURE PRESERVE** IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. **Definitions:** As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes 143B-135.254.
2. **Dedication:** Pursuant to North Carolina General Statutes 143B-135.264, all State-owned lands lying within the above designated area are hereby dedicated as a nature preserve to be known collectively as the **Goose Creek Game Land Dedicated Nature Preserve** (hereinafter "preserve") for the purposes provided in the North Carolina Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Duration:** Subject to the limitations of NCGS 143B-135.264, this agreement shall be perpetual, in gross, running with the land.
4. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 07 NCAC 13H.0300 and .0400. The Primary Custodian may hereinafter be referred to as "Primary Custodian" or "Custodian".
5. **Primary Classification and Purpose:** The primary classifications and purposes of the preserve will be natural area conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the Preserve is described in Exhibit A.
6. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 178 acres) and a Buffer Area (approximately 308 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof. The Primary Area is deemed by the Secretary of the North Carolina Department of Natural and Cultural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 143B-135.260) and further serves all of the public purposes for a dedicated preserve as stated in G.S. 143B-135.252.

The Buffer Area, which contributes to the management and protection of the Primary Area, consists of successional forests which tend to be more altered in species composition than forests in the Primary Area.

7. **Rules for Management of the Primary Area(s):**
 - A. **Character of Visitor Activity:** The principal visitor activities in the preserve shall be hunting, fishing, trapping, walking, research, and observation. These activities shall be regulated by the Custodian to prevent significant disturbance of the preserve. These activities may specifically be regulated by the Custodian to protect and conserve the natural values of the preserve.

Activities and uses unrelated to those listed above are prohibited except as otherwise provided in these Articles or unless necessary to carry out the purposes of the preserve. Prohibited activities include, but are not limited to: construction; commercial activities and development; commercial silviculture; agriculture and grazing; gathering of native species

of plants or plant products; the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources, except for research purposes as approved by the Custodian; and those activities specifically restricted in these Articles.

There shall be no fires, except as necessary for ecological management of the preserve or in conjunction with supervised educational activities of the Custodian, or further excepted as herein provided or otherwise expressly permitted.

- B. Consumptive Wildlife Uses: Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. Orientation and Guidance of Visitors: The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may create and maintain signage or kiosks, overlooks, fences, barriers, guardrails, steps and boardwalks (hereinafter referred to as "Trail Accessories") associated with trails to be constructed within the preserve. The location of any Trail Accessories shall be decided in consultation with the North Carolina Natural Heritage Program and shall be for the purpose of ensuring the safe, permitted use of the preserve while protecting the preserve from unwanted or excessive visitor traffic. The Custodian may restrict the access of visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. Roads and Trails: Construction and maintenance of roads within Primary and Buffer Areas of the preserve will be limited to the level necessary to appropriately manage the preserve. New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to use by staff for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. The Custodian may locate, build and maintain trails within the boundary of the preserve in a manner consistent with this dedication and in consultation with the North Carolina Natural Heritage Program.

Existing roads that occur within or which form a boundary of the Primary Area may be maintained by grading of the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.

If an existing North Carolina Department of Transportation ("NCDOT") road runs within or along a boundary of the Primary Area and NCDOT demonstrates a compelling need to do so, then subject to the written approval of both the Primary Custodian and the Natural Heritage Program, NCDOT may within the Primary Area use a strip of land up to fifty feet (50') wide outside and adjacent to the road's existing NCDOT right-of-way for the purpose of improving the NCDOT road. A strip of land approved under this provision shall not be

longer than 1,000 feet long. The Primary Custodian and the Natural Heritage Program shall concur only if the proposed improvements and the associated activities will not cause significant impacts to rare species, small-patch natural communities, adjacent streams, or other Natural Heritage resource values. The existing NCDOT roads that run within or along a boundary of the Primary Area at the time of the issuance of this letter of allocation are as follows: NC Highway 33, NC Highway 304, S.R.1220.

- E. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.
- F. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge material in, on, or under the preserve. No underground storage tanks may be placed within the Preserve. No surface or ground waters of the Preserve may have pollutants added within the Preserve.
- H. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, artifact removal, or other material, nor any change in topography or surface hydrology of the preserve. Exceptions may be made for permitted archeological research or for ecological restoration to more natural conditions, consistent with the Management Plan, and in consultation with the North Carolina Natural Heritage Program.
- I. Water Level Control: The purpose of water level control shall be to maintain the Preserves' natural water regime. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.
- J. Bringing in Flora and Fauna: No exotic flora and no animals except leashed dogs and cats, hunting dogs as permitted in game lands, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the preserve. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.
- K. Wildfire Control: Wildfires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wildfire does not threaten human life or structures, it may be allowed to burn with minimal control. If wildfire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wildfire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.

- L. Disturbance of Natural Features: The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease or insect infestation that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.
 - M. Control of Populations (natural and exotic): Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.
 - N. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary, to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wildfire historically suppressed woody vegetation and promoted herbaceous diversity.
 - O. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Natural and Cultural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the game lands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 07 NCAC 13H.0300 and .0400. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
8. Rules for Management of the Buffer Area(s): Primary Area rules also apply except that additional forestry and wildlife management activities may be planned and carried out as needed. Construction and maintenance of roads within Buffer Area(s) of the preserve will be limited to the level necessary to appropriately manage the preserve. These activities will be conducted in accordance with policy of the N.C. Wildlife Resources Commission and general management philosophy as outlined in Commission planning documents, in addition to providing for the buffer functions in relation to the Primary Area(s). WRC rules and guidelines require the protection and enhancement of wildlife populations and habitat so that hunting, fishing, trapping and other wildlife recreational

opportunities are available to citizens of this State. Forest management is primarily conducted to enhance wildlife habitat.

Buffer functions within the dedicated area may include protecting the primary area(s) from indirect detrimental ecological effects, providing additional area for species and ecological processes that require larger areas, and providing important successional stages and disturbance regimes and other habitat diversity for wildlife. Based on these general objectives, the following buffer functions will be addressed in the management plan.

- 1) Landscape level function of community type and structure. (Buffer Area management may involve timber harvest and other forms of stand manipulation, but will not involve forest canopy type conversion over more than limited areas, other than to restore stands to types suited for the site. Introduction of exotic species known to be invasive in natural communities will be avoided.);
 - 2) Maintenance of habitat connectivity and continuity among Primary Areas;
 - 3) Providing for habitat diversity;
 - 4) Management needs of rare animal and plant species populations occurring within the Buffer Area; and
 - 5) Protection of soil and hydrologic resources and processes within the Primary Area and extending into the Buffer Area. (Naturally vegetated riparian zones will be retained along streams, and watersheds of Primary Areas will be protected from hydrologic alteration.)
9. **Amendment, Modification, and Termination:** The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Natural and Cultural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 143B-135.250-.272 and the North Carolina Administrative Code, Chapter 7, Subchapter 13H.
10. **Nature Preserve Held in Trust:** This Property is held in trust by the State for the benefit of the people of North Carolina for the uses and purposes expressed in the Nature Preserves Act under the terms and authority set forth in N.C. Gen. Stat. 143B-135.262.
11. **Access for Inspection and Right of Entry:** Natural Heritage Program staff, including their successors or assigns, shall have the right, by and through its agents and employees, to enter the Property to inspect the Dedication for compliance with these Articles of Dedication at all reasonable times and with prior notice.

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the **Goose Creek Game Land Dedicated Nature Preserve** to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of (City Name), North Carolina, on the _____ of _____, (YEAR).

Sincerely,

Gabriel J. Esparza

CONSENTED AND AGREED TO:

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources

Kyle Briggs, Executive Director
Wildlife Resources Commission

EXHIBIT A

GOOSE CREEK GAME LAND DEDICATED NATURE PRESERVE GOOSE CREEK/CAMPBELL CREEK SECTION

COUNTY: Beaufort

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUAD: South Creek

SIZE OF AREA: ca. 78 acres (78 acres Primary Area)

OWNER/ADMINISTRATOR: State of North Carolina, North Carolina Wildlife Resources Commission

LOCATION: Located on the south side of Campbell Creek which flows into Goose Creek, bordered on the west and east by several tributaries of Campbell Creek (Carrie and Smith Creek, respectively), and on the south by Highway 33. Richland Township; all or portions of Beaufort County parcel 7506-53-2166 (source "NC1Map Parcels").

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The preserve includes riparian areas on the south side of Campbell Creek, on the east side of Carrie Creek, and on the west side of Smith Creek. Carrie Creek and Smith Creek are tributaries that flow into Campbell Creek. The preserve includes cutover areas and pine plantations which will be allowed to regenerate and form a vegetated hydrologic buffer.

BOUNDARY JUSTIFICATION: The Primary Areas include 100-foot riparian zones on the south side of Campbell Creek, on the east side of Carrie Creek, and on the west side of Smith Creek. The designation is mandated by the funding sources, the NC Land and Water Fund, as a minimum primary riparian area to be dedicated on state agency lands acquired with the funds.

MANAGEMENT AND USE: The dedicated nature preserve will be managed as part of the Goose Creek Game Land, for protection of wildlife habitat and public hunting, trapping and fishing. Within riparian primary areas, existing fields will be allowed to naturally regenerate and forests will be allowed to mature. Control of non-native invasive species, especially prevalent along existing roads, should be implemented.

EXHIBIT A
GOOSE CREEK GAME LAND
DEDICATED NATURE PRESERVE
BAY RIVER SECTION

COUNTY: Pamlico

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUAD: Vandemere

SIZE OF AREA: ca. 408 acres (100 acres Primary Area; 308 acres Buffer Area)

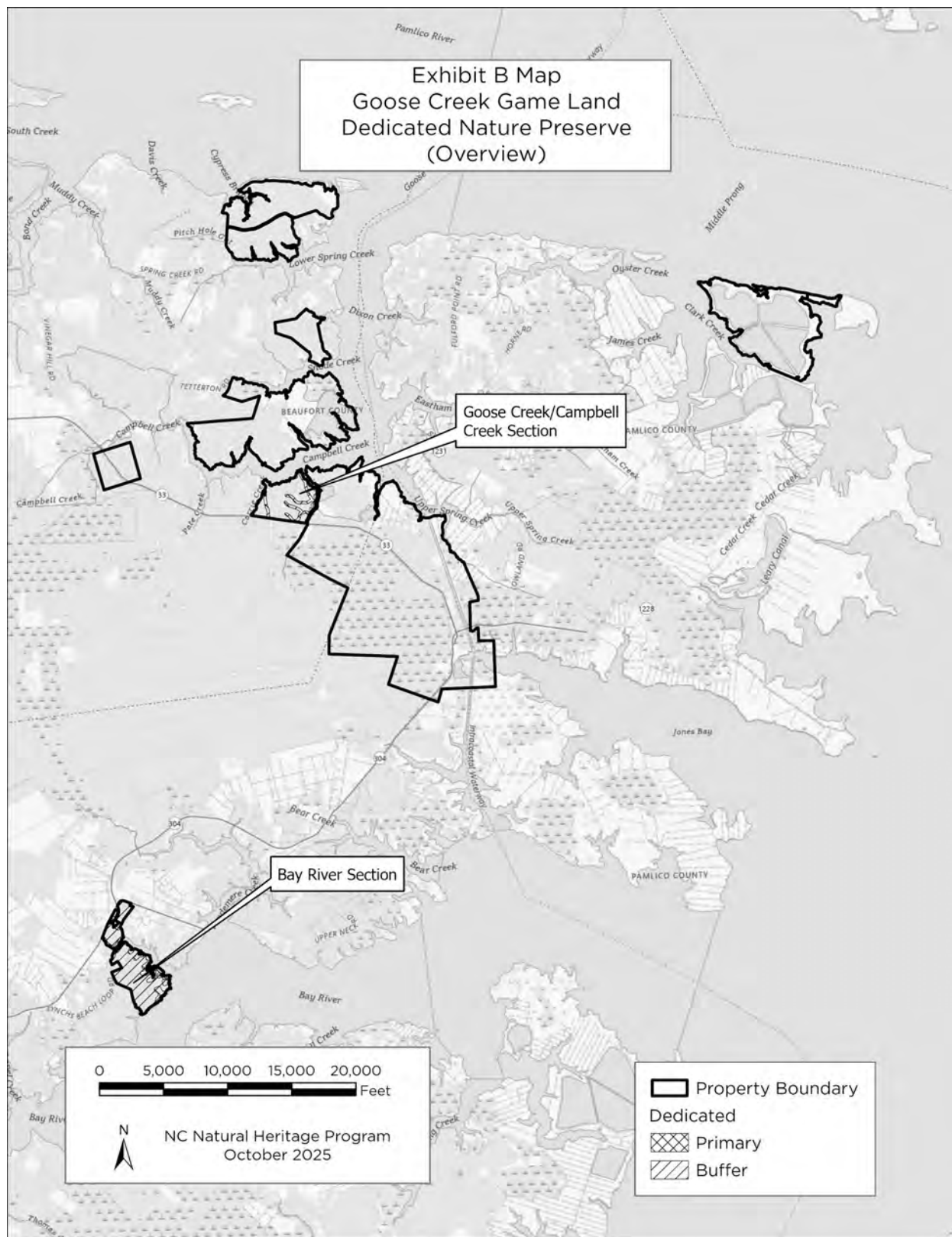
OWNER/ADMINISTRATOR: State of North Carolina, North Carolina Wildlife Resources Commission

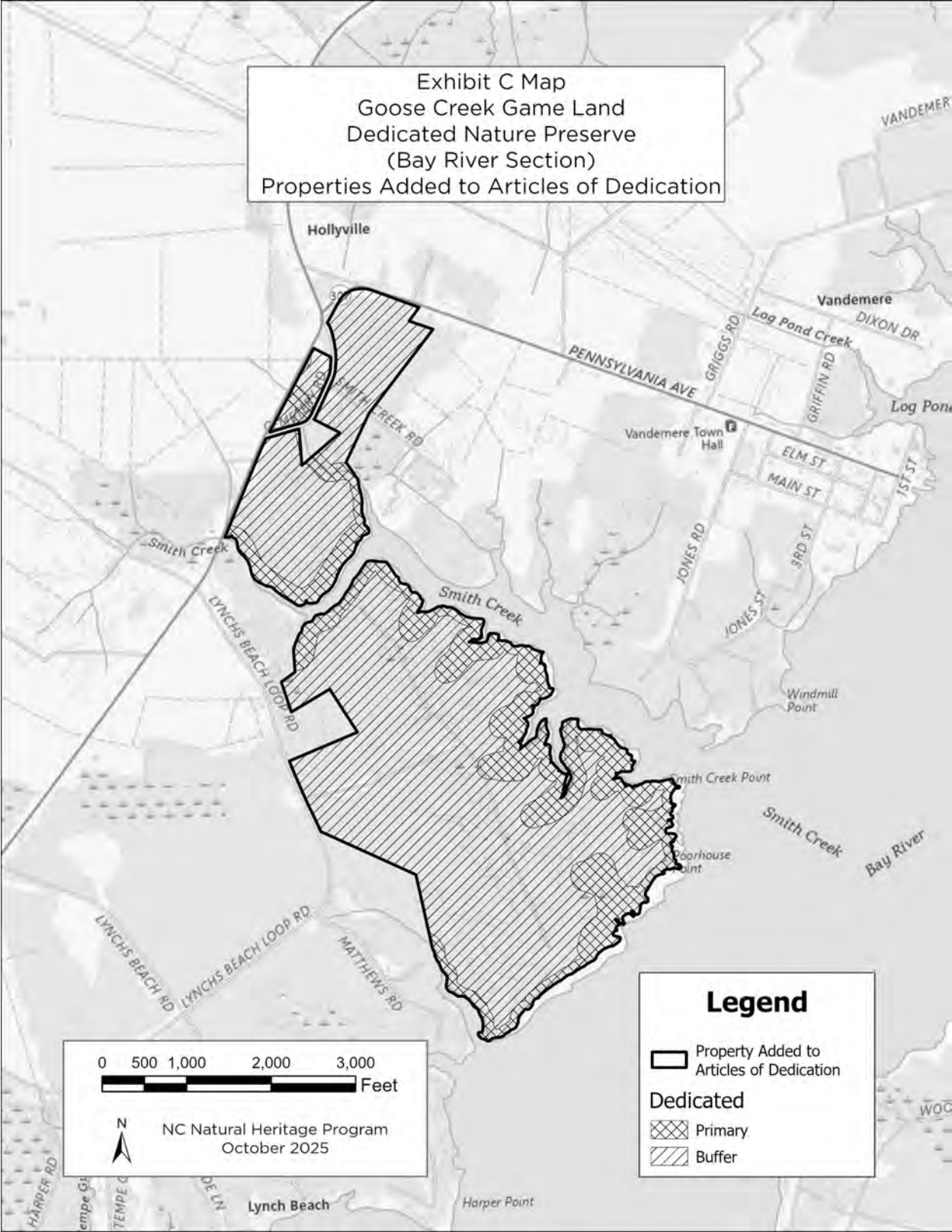
LOCATION: Located on the northwest side of the Bay River and west side of Smith Creek, east of NC 304. Townships 3 and 4, all or portions of Pamlico County parcel 6592362498000, 6593212177000, and 6593105830000 (source "NC1Map Parcels").

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The preserve includes riparian areas on the Bay River and Smith Creek, which is a tributary that flows into the Bay River. Approximately 1 acre of Estuarine Beach, consisting of open sand with patches of saltmeadow cordgrass (*Spartina patens*) and other species tolerant of chronic disturbance by wave action, occurs on the Bay River shoreline. Rare salt-marsh wild-rye (*Elymus halophilus*) occurs on the inland edge of the Estuarine Beach. In addition to forest and marsh along waterways, the preserve includes cutover areas which will be allowed to regenerate and form a vegetated hydrologic buffer.

BOUNDARY JUSTIFICATION: The Primary Areas include the Estuarine Beach Community as well as 100-foot riparian zones on the west side of the Bay River, and along Smith Creek. The designation is mandated by the funding sources, the NC Land and Water Fund, as a minimum primary riparian area to be dedicated on state agency lands acquired with the funds. Areas outside the Primary riparian zones are designated as Buffer.

MANAGEMENT AND USE: The dedicated nature preserve will be managed as part of the Goose Creek Game Land, for protection of wildlife habitat and public hunting, trapping and fishing. Within riparian primary areas, existing fields will be allowed to naturally regenerate and forests will be allowed to mature. Control of non-native invasive species, especially prevalent along existing roads, should be implemented.





(ON DEPARTMENT OF ADMINISTRATION STATIONERY)

(DATE)

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources
4601 Mail Service Center
Raleigh, North Carolina 27699-4601

Mr. Kyle Briggs, Executive Director
N.C. Wildlife Resources Commission
Mail Service Center 1701
Raleigh, North Carolina 27699-1701

Subject: Letter of Allocation and Dedication as a Nature Preserve of Portions of the **Chowan Swamp Game Land**, Gates, Hertford, and Bertie Counties

Dear Secretary Cashwell and Mr. Briggs:

Pursuant to Part 42 of Article 2 of Chapter 143B of the North Carolina General Statutes, this letter of allocation is executed for the purpose of amending an existing Dedicated Nature Preserve encumbering State-owned lands. These Articles of Dedication replace those certain Articles of Dedication dated November 7, 2012. The purpose of this amendment is to reflect additions of property to the preserve and provide more accurate boundaries.

This real property which is subject to this Dedicated Nature Preserve is currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Chowan Swamp Game Land** and consists of approximately 22,738 acres located in Gates, Hertford, and Bertie Counties and composed of:

- | | | |
|----|---------------------------------------|--------------|
| 1. | Chowan Swamp Game Land (Primary Area) | 16,250 acres |
| 2. | Chowan Swamp Game Land (Buffer Area) | 6,488 acres |

all of which are specifically described in Exhibit A and shown on Diagrams B both attached hereto and incorporated herein and referred to hereafter as "Property". That 677-acre area depicted on the diagrams attached as **Exhibit C**, attached hereto and incorporated herein by reference, is hereby added to the Dedicated Nature Preserve. The dedicated lands shall be known collectively as the **Chowan Swamp Game Land Dedicated Nature Preserve**.

Dedication of the qualified portions of the tract included herein fulfills the terms of grant agreements with the NC Land and Water Fund (former Natural Heritage Trust Fund or Clean Water Management Trust Fund). Grants include 2001B-033, 200609606, 2006A-017, 200804602, 2021-020, 2022-065.

THIS DEDICATION OF THE **CHOWAN SWAMP GAME LAND DEDICATED NATURE PRESERVE** IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. **Definitions:** As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes 143B-135.254.
2. **Dedication:** Pursuant to North Carolina General Statutes 143B-135.264, all State-owned lands lying within the above designated area are hereby dedicated as a nature preserve to be known collectively as the **Chowan Swamp Game Land Dedicated Nature Preserve** (hereinafter "preserve") for the purposes provided in the North Carolina Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Duration:** Subject to the limitations of NCGS 143B-135.264, this agreement shall be perpetual, in gross, running with the land.
4. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 07 NCAC 13H.0300 and .0400. The Primary Custodian may hereinafter be referred to as "Primary Custodian" or "Custodian".
5. **Primary Classification and Purpose:** The primary classifications and purposes of the preserve will be natural area conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the Preserve is described in Exhibit A.
6. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 16,250 acres, including a restoration area of 1,253 acres) and a Buffer Area (approximately 6,488 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof. The Primary Area consists essentially of the Tidal Cypress-Gum Swamp, Tidal Freshwater Marsh, Nonriverine Swamp Forest, Mesic Mixed Hardwood Forest, Dry-Mesic Oak-Hickory Forest, Dry Oak-Hickory Forest, and restorable Pine/Scrub Oak Sandhill natural communities.

The Primary Area is deemed by the Secretary of the North Carolina Department of Natural and Cultural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 143B-135.260) and further serves all of the public purposes for a dedicated preserve as stated in G.S. 143B-135.252

The Buffer Area, which contributes to the management and protection of the Primary Area, consists primarily of young, successional pine stands.

7. **Rules for Management of the Primary Area(s):**
 - A. **Character of Visitor Activity:** The principal visitor activities in the preserve shall be hunting, fishing, trapping, walking, research, and observation. These activities shall be regulated by the Custodian to prevent significant disturbance of the preserve. These activities may specifically be regulated by the Custodian to protect and conserve the natural values of the preserve.

Activities and uses unrelated to those listed above are prohibited except as otherwise provided in these Articles or unless necessary to carry out the purposes of the preserve. Prohibited activities include, but are not limited to: construction; commercial activities and development; commercial silviculture; agriculture and grazing; gathering of native species of plants or plant products; the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources, except for research purposes as approved by the Custodian; and those activities specifically restricted in these Articles.

There shall be no fires, except as necessary for ecological management of the preserve or in conjunction with supervised educational activities of the Custodian, or further excepted as herein provided or otherwise expressly permitted.

- B. Consumptive Wildlife Uses: Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. Orientation and Guidance of Visitors: The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may create and maintain signage or kiosks, overlooks, fences, barriers, guardrails, steps and boardwalks (hereinafter referred to as "Trail Accessories") associated with trails to be constructed within the preserve. The location of any Trail Accessories shall be decided in consultation with the North Carolina Natural Heritage Program and shall be for the purpose of ensuring the safe, permitted use of the preserve while protecting the preserve from unwanted or excessive visitor traffic. The Custodian may restrict the access of visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. Roads and Trails: Construction and maintenance of roads within Primary and Buffer Areas of the preserve will be limited to the level necessary to appropriately manage the preserve. New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to use by staff for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. The Custodian may locate, build and maintain trails within the boundary of the preserve in a manner consistent with this dedication and in consultation with the North Carolina Natural Heritage Program.

Existing roads that occur within or which form a boundary of the Primary Area may be maintained by grading of the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.

If an existing North Carolina Department of Transportation ("NCDOT") road runs within or along a boundary of the Primary Area and NCDOT demonstrates a compelling need to

do so, then subject to the written approval of both the Primary Custodian and the Natural Heritage Program, NCDOT may within the Primary Area use a strip of land up to fifty feet (50') wide outside and adjacent to the road's existing NCDOT right-of-way for the purpose of improving the NCDOT road. A strip of land approved under this provision shall not be longer than 1,000 feet long. The Primary Custodian and the Natural Heritage Program shall concur only if the proposed improvements and the associated activities will not cause significant impacts to rare species, small-patch natural communities, adjacent streams, or other Natural Heritage resource values. The existing NCDOT roads that run within or along a boundary of the Primary Area at the time of the issuance of this letter of allocation are as follows: U.S. Hwy 13, S.R. 1120, S.R. 1131, S.R. 1129, and S.R. 1175.

- E. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.
- F. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge material in, on, or under the preserve. No underground storage tanks may be placed within the Preserve. No surface or ground waters of the Preserve may have pollutants added within the Preserve.
- H. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, artifact removal, or other material, nor any change in topography or surface hydrology of the preserve. Exceptions may be made for permitted archeological research or for ecological restoration to more natural conditions, consistent with the Management Plan, and in consultation with the North Carolina Natural Heritage Program.
- I. Water Level Control: The purpose of water level control shall be to maintain the Preserves' natural water regime. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.
- J. Bringing in Flora and Fauna: No exotic flora and no animals except leashed dogs and cats, hunting dogs as permitted in game lands, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the preserve. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.
- K. Wildfire Control: Wildfires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wildfire does not threaten human life or structures, it may be allowed to burn with minimal control. If wildfire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will

be utilized for wildfire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.

- L. Disturbance of Natural Features: The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease or insect infestation that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Specifically, a component of management planning will address restoration of areas (identified as Primary (Restoration) Areas in the Exhibit B map). Hardwood restoration will minimally involve permitting natural succession to occur, but may involve active removal of the pine plantation canopy. Consideration will be given to encouraging advanced hardwood regeneration and minimizing weedy invasion. Restoration of longleaf on the ridges will minimally focus on removal of unnatural canopy components and planting of longleaf. It may additionally involve thinning of dense longleaf to enhance the condition of the ground layer. Site-specific modifications of restoration plans will be addressed through consultation between Wildlife Resources Commission and Natural Heritage Program staff.

Primary Areas defined around existing depressions and swales are identified by both topography and the presence of wetland vegetation. When adjoining Buffer Areas are managed, these features will need to be evaluated and it is mutually recognized that the exact location of Primary Area boundaries may be subject to change.

Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.

- M. Control of Populations (natural and exotic): Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.
- N. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary, to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wildfire historically suppressed woody vegetation and promoted herbaceous diversity.

- O. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Natural and Cultural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the game lands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 07 NCAC 13H.0300 and .0400. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
8. Rules for Management of the Buffer Area(s): Primary Area rules also apply except that additional forestry and wildlife management activities may be planned and carried out as needed. Construction and maintenance of roads within Buffer Area(s) of the preserve will be limited to the level necessary to appropriately manage the preserve. These activities will be conducted in accordance with policy of the N.C. Wildlife Resources Commission and general management philosophy as outlined in Commission planning documents, in addition to providing for the buffer functions in relation to the Primary Area(s). WRC rules and guidelines require the protection and enhancement of wildlife populations and habitat so that hunting, fishing, trapping and other wildlife recreational opportunities are available to citizens of this State. Forest management is primarily conducted to enhance wildlife habitat.
- Buffer functions within the dedicated area may include protecting the primary area(s) from indirect detrimental ecological effects, providing additional area for species and ecological processes that require larger areas, and providing important successional stages and disturbance regimes and other habitat diversity for wildlife. Based on these general objectives, the following buffer functions will be addressed in the management plan.
- 1) Landscape level function of community type and structure. (Buffer Area management may involve timber harvest and other forms of stand manipulation, but will not involve forest canopy type conversion over more than limited areas, other than to restore stands to types suited for the site. Introduction of exotic species known to be invasive in natural communities will be avoided.);
 - 2) Maintenance of habitat connectivity and continuity among Primary Areas;
 - 3) Providing for habitat diversity;
 - 4) Management needs of rare animal and plant species populations occurring within the Buffer Area; and
 - 5) Protection of soil and hydrologic resources and processes within the Primary Area and extending into the Buffer Area. (Naturally vegetated riparian zones will be retained along streams, and watersheds of Primary Areas will be protected from hydrologic alteration.)
9. Amendment, Modification, and Termination: The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Natural and Cultural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 143B-135.250-.272 and the North Carolina Administrative Code, Chapter 7, Subchapter 13H.

10. **Nature Preserve Held in Trust:** This Property is held in trust by the State for the benefit of the people of North Carolina for the uses and purposes expressed in the Nature Preserves Act under the terms and authority set forth in N.C. Gen. Stat. 143B-135.262.
11. **Access for Inspection and Right of Entry:** Natural Heritage Program staff, including their successors or assigns, shall have the right, by and through its agents and employees, to enter the Property to inspect the Dedication for compliance with these Articles of Dedication at all reasonable times and with prior notice.

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the **Chowan Swamp Game Land Dedicated Nature Preserve** to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of (City Name), North Carolina, on the _____ of _____, (YEAR).

Sincerely,

Gabriel J. Esparza

CONSENTED AND AGREED TO:

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources

Kyle Briggs, Executive Director
Wildlife Resources Commission

EXHIBIT A

CHOWAN SWAMP GAME LAND DEDICATED NATURE PRESERVE

COUNTY: Gates, Hertford, Bertie County PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUADS: Gatesville, Harrellsville, Mintonville, Valhalla, Colerain, Winton, Riverdale, and Murfreesboro

SIZE OF AREA: ca. 22,738 acres total (primary area 16,250 acres, including several restoration areas totaling 1,253 acres; buffer area 6,488 acres.

OWNER/ADMINISTRATOR: State of North Carolina, Wildlife Resources Commission

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. Chowan Swamp Game Land includes several tracts in the valley of the Chowan River and its tributaries the Wiccacon River, Meherrin River, and Potecasi Creek. Much of the land near the rivers consists of low organic deposits which are permanently saturated and are subject to wind tides on the river. These areas support Tidal Swamp (Cypress–Gum Subtype) communities dominated by a mix of bald cypress (*Taxodium distichum*), swamp black gum (*Nyssa biflora*), and water tupelo (*Nyssa aquatica*). Vast expanses are mature and in good condition, with trees averaging 10"-14" dbh in different portions. Old remnant trees 24" to 36" dbh, especially cypress, are present. As is typical of this community type, the shrub and herb layers are well-developed and diverse. Common shrubs include cane (*Arundinaria tecta*), titi (*Cyrilla racemiflora*), alder (*Alnus serrulata*), swamp rose (*Rosa palustris*), swamp dogwood (*Swida foemina*), southern wild raisin (*Viburnum nudum*), Virginia willow (*Itea virginica*), highbush blueberries (*Vaccinium fuscatum*), and a number of others. Common herbs include sedges (*Carex* spp.), false nettle (*Boehmeria cylindrica*), arrowhead (*Peltandra virginica*), jewelweed (*Impatiens capensis*), cinnamon fern (*Osmundstrum cinnamomeum*), and royal fern (*Osmunda spectabilis*). Woody vines are often prominent. The edges of the swamp along the shoreline are diffuse, with many cypress trees standing in the water. Some large beds of cow lily (*Nuphar advena*) occur along the river.

At the mouth of the Wiccacon River is a small area of Tidal Freshwater Marsh. It is dominated by southern wild rice (*Zizaniopsis miliacea*), with cattails (*Typha latifolia*) and various broad-leaf herbs. Some portions of it are heavily invaded by common reed (*Phragmites australis*), but it is otherwise in good condition.

Smaller areas on the inland side of the swamps or on small rises in the interior, support Nonriverine Swamp Forests. These swamps are dominated by swamp black gum, with some bald cypress and sometimes loblolly pine (*Pinus taeda*) or Atlantic white cedar (*Chamaecyparis thyoides*). The understory, shrub, and herb layer are lower in diversity and consist mostly of peatland species such as fetterbush (*Lyonia lucida*), gallberry holly (*Ilex glabra*), sweet pepperbush (*Clethra alnifolia*), netted chainfern (*Lorinseria areolata*), and peat moss (*Sphagnum* spp.). One similar site on the upper Chowan River is a Peatland Atlantic White Cedar Forest, with a canopy of Atlantic white cedar (*Chamaecyparis thyoides*). This community, as well as many of the Nonriverine Swamp Forests, suffered heavy wind throw in Hurricane Isabel in 2003. In addition, some of the nonriverine patches are being strongly affected by rising sea level. As background water levels become higher, some have recently developed the character of Tidal Swamp, and more can be expected to follow that trajectory.

On the east side of the upper Chowan River is a large expanse of stabilized sand dunes known as the Sand Banks. The dunes have a gently rolling irregular surface but are arranged in large ridges and swales parallel to the river. The dunes are a large expanse of uplands that once supported Pine/Scrub Oak Sandhill communities dominated by longleaf pine (*Pinus palustris*). This area is well north of the range of wiregrass (*Aristida stricta*) and is near the northern range limit of longleaf pine. It represents the distinctive and very rare North Subtype, marked by the presence of plant species not found in other subtypes, such as black huckleberry (*Gaylussacia baccata*) and oatgrass (*Danthonia spicata*), along with more widespread species such as bracken fern (*Pteridium aquilinum*), little bluestem (*Schizachyrium scoparium*), Virginia goat's-rue (*Tephrosia virginiana*), tread-softly (*Cnidioscolus stimulosus*), and fragrant goldenrod (*Solidago odora*). Almost all of the sandhills on the game land were converted to pine plantation in the last several decades. Virtually no longleaf pine remains, and the diverse herbaceous layer is badly degraded by soil disturbance, dense canopy shade, absence of fire, and herbicide use. This area has potential for restoration of more natural sandhill communities. Some areas have excellent potential, with a seed source of characteristic herbs dispersed through the plantations. Other stands have little or no remaining herb layer and have more limited potential.

The swales amid the sandhills in the Sand Banks have muck soils. Most support Nonriverine Swamp Forest communities which are somewhat different from those embedded in the tidal swamps. Some appear to connect to drainages and have Coastal Plain Small Stream Swamp communities. They include species such as laurel oak (*Quercus laurifolia*) and sweetgum (*Liquidambar styraciflua*) as well as swamp black gum and cypress. While the transition from the sandhills to the swamps is usually fairly sharp, a couple of places have small patches of Mesic Mixed Hardwood Forest in the transition zone. They have some beech (*Fagus grandifolia*) and water oak (*Quercus nigra*), otherwise absent in the sand banks, along with loblolly pine and sweetgum. The northern part of the Sand Banks has a number of smaller, more round depressions. These look like limesink ponds, but probably are small wind-formed swales. They support a Small Depression Swamp community, or another different form of Nonriverine Swamp Forest.

The Wiccacon River, Meherrin River, and Potecasi Creek are each bordered by bluffs that rise to upland terraces. Most of the uplands are pine plantations, recent clearcuts, or former agricultural fields. A few steep bluffs, and one broader dissected area along Potecasi Creek, contain intact upland natural communities. Most common is Mesic Mixed Hardwood Forest, dominated by beech (*Fagus grandifolia*) and white oak (*Quercus alba*), sometimes with abundant loblolly pine (*Pinus taeda*). A few small patches on the Wiccacon River are Basic Mesic Forest, with similar species but with the addition of others that benefit from richer soils, including black walnut (*Juglans nigra*) and columbine (*Aquilegia canadensis*). Other small bluffs, on both the Wiccacon River and Potecasi Creek, are Piedmont/Coastal Plain Heath Bluff, with a canopy of white oak and other species, but with a shrub layer of mountain laurel (*Kalmia latifolia*). One other bluff on Potecasi Creek is a distinctive Low Elevation Seep, with ground water seeping over the bare, dense clay face and sparse wetland plants growing on it. The drier upland areas are Dry-Mesic Oak-Hickory Forest, dominated by white oak along with red oak (*Quercus rubra*), black oak (*Quercus velutina*), and mockernut hickory (*Carya tomentosa*). Mesic Mixed Hardwood Forest also occurs on a few higher ridges embedded in the tidal swamps in the middle part of the Chowan River swamp. Also present there is Dry Oak-Hickory Forest, with white oak and southern red oak (*Quercus falcata*). Though all of these upland communities are small in extent, all are quite rare this far east in the Coastal Plain and are significant.

The Chowan River and Meherrin River are significant aquatic sites. Several rare species occur in them, including the tidewater mucket (*Leptodea ochracea*), eastern lampmussel (*Lampsilis radiata*), eastern pondmussel (*Ligumia nasuta*), alewife floater (*Anodonta implicata*), and Chowanoke crayfish (*Orconectes virginienensis*).

BOUNDARY JUSTIFICATION: The Primary Areas are drawn based on the extent of intact natural communities. Communities damaged by natural disturbances such as wind are also included, as are communities in transition as a result of sea level rise. Primary Areas include most of the swamps, and limited patches of upland communities. Other areas of the riparian zone along streams and rivers are also dedicated as primary areas, to protect water quality and stream banks. Specifically, 300 feet on each side of the significant aquatic habitats on the Chowan and Meherrin Rivers and 100 feet on each side of any perennial tributaries draining into the significant aquatic habitats are designated as primary areas, as are any tributaries required by the NC Land and Water Fund.

Large areas are dedicated as Primary (Restoration) Areas. Most of the acreage of Restoration Area is the extensive sandhills, where there is potential to restore a very rare type of community. Some areas of recently clearcut swamps are also dedicated as Primary (Restoration) areas. Passive restoration over time may be successful in these, but some may benefit from more intensive management to restore them. Small areas of plantation that are low enough in elevation to have become saturated are also treated as Restoration areas. These are areas where development of Tidal Swamp is already occurring.

More altered lands within the sandhills which retain little intact herbaceous cover are included as Buffer Areas. Plantations, successional pine stands, and other altered areas on the uplands are also included as Buffer where they are embedded in the Primary Areas or are adjacent to them. The Gatlington Landing Boat Ramp and the 99-acre pine stand west of S.R. 1444 are excluded from the dedicated nature preserve.

Additional significant areas on the Game Land are not included in the dedicated nature preserve at this time, including the Wyanoke Sandhills natural area, and many riparian zones; these areas would qualify for dedication.

MANAGEMENT AND USE: The dedicated nature preserve is a portion of the Chowan Swamp Game Land owned by the State and used for public hunting and passive recreation.

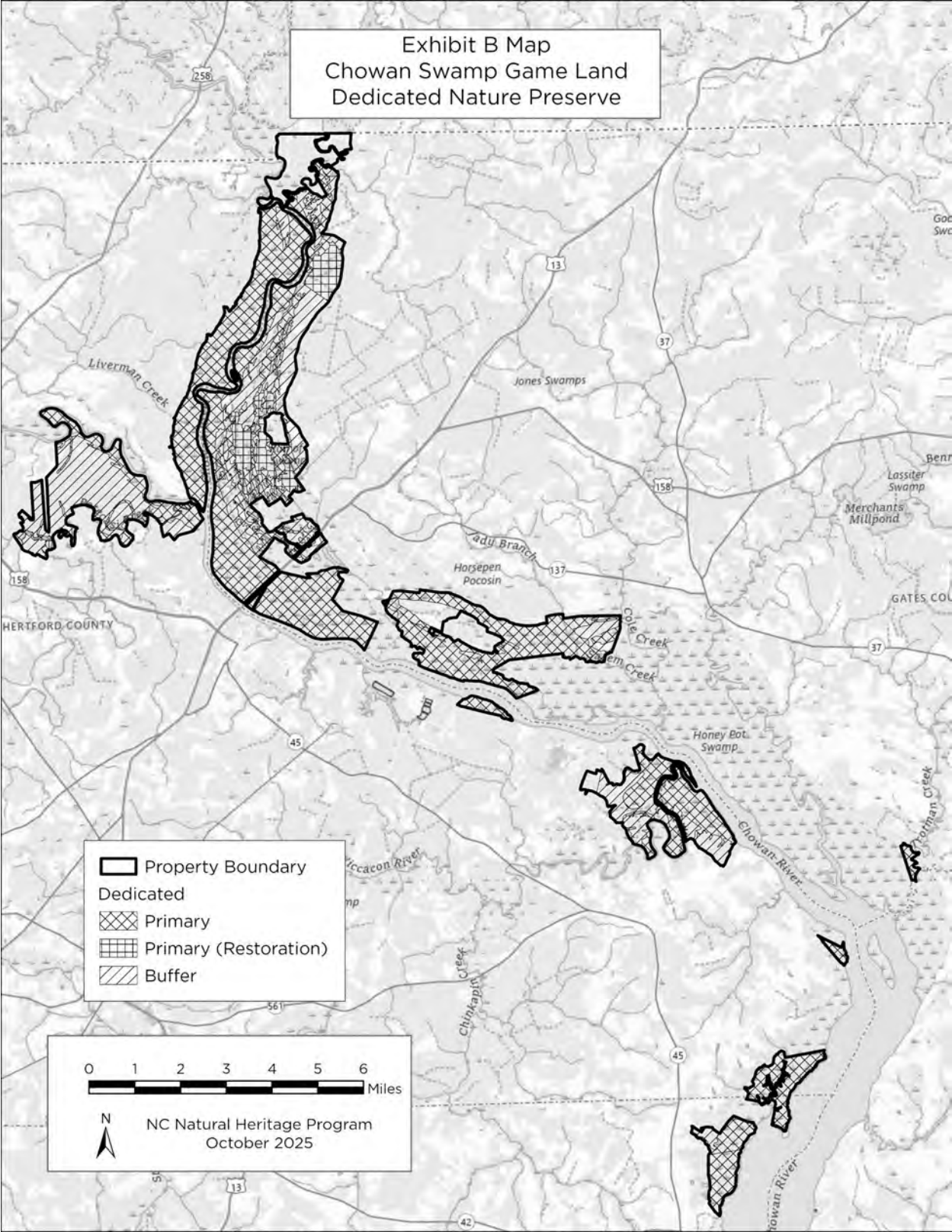
The greatest need for management is in the sandhill Restoration areas. All portions of the sandhill need restoration of fire in the form of prescribed burning. Fires may need to be very frequent at first, to reverse the effects of past fire suppression and reduce the amount of shrubs and hardwoods. Ongoing burning about every three years will be needed to maintain the restored community. Where hardwoods and shrubs are too dense, mechanical reduction of these layers may be needed, and stem treatment of hardwoods with herbicide may be appropriate. Broadcast herbicide treatment should not be used, as it threatens the remaining herbaceous species. Gradual replacement of the planted loblolly pine with longleaf is recommended. Some dense plantations need to be thinned soon, while others can be left to mature while the ground cover vegetation is improved by prescribed burning. Given the absence of a seed source, longleaf pine will need to be planted, and planted material should be derived from local genetic sources. With limited herbaceous cover at present in most of the Restoration area, longleaf pine should be planted in small gaps or underplanted under thinned canopy, leaving the loblolly as a source of pine needles to support the prescribed fires that are needed.

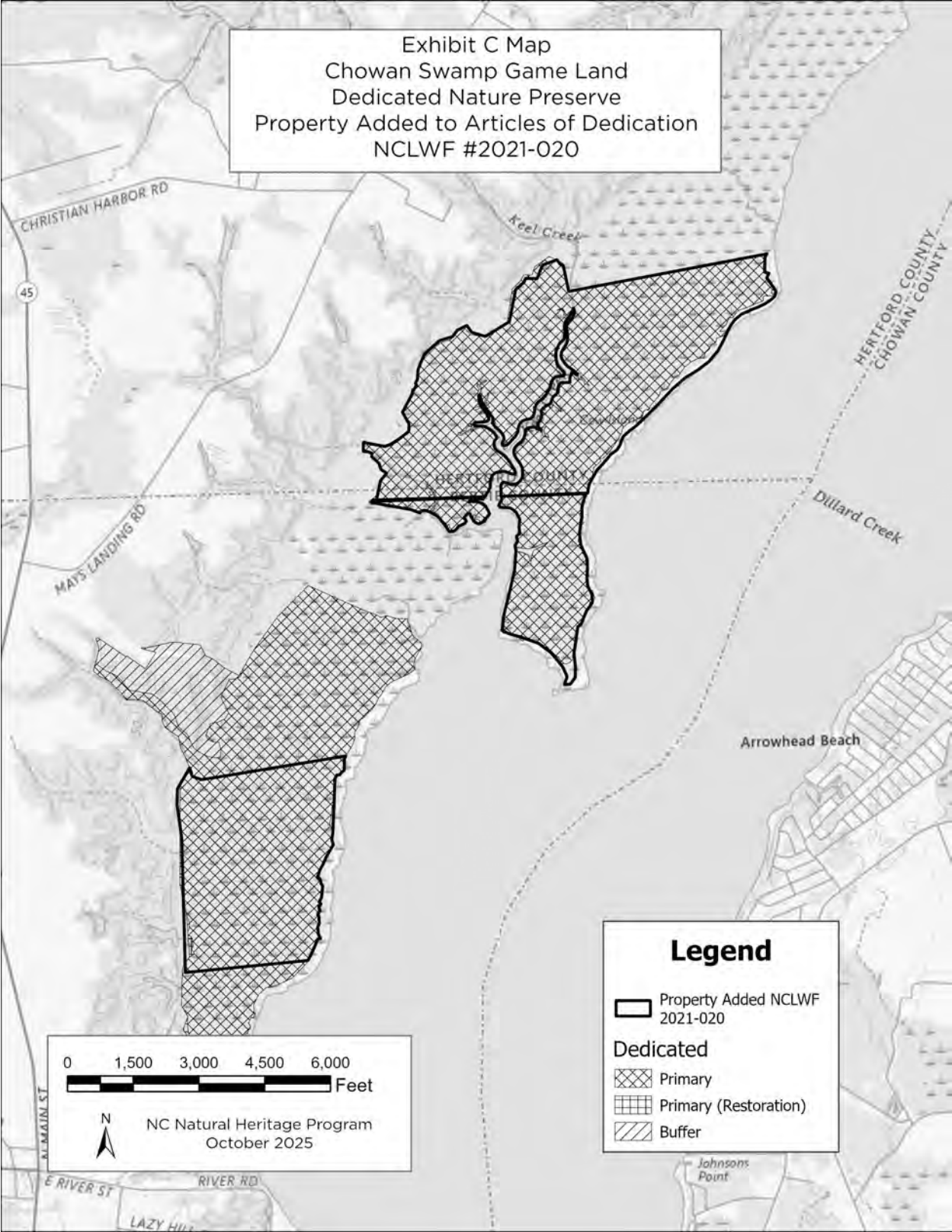
The Restoration areas in cut-over swamps should be allowed to recover naturally. If appropriate canopy trees have not established in a reasonable amount of time, some additional treatment may be needed to control shrubs or undesired trees, or planting of the appropriate trees may be needed.

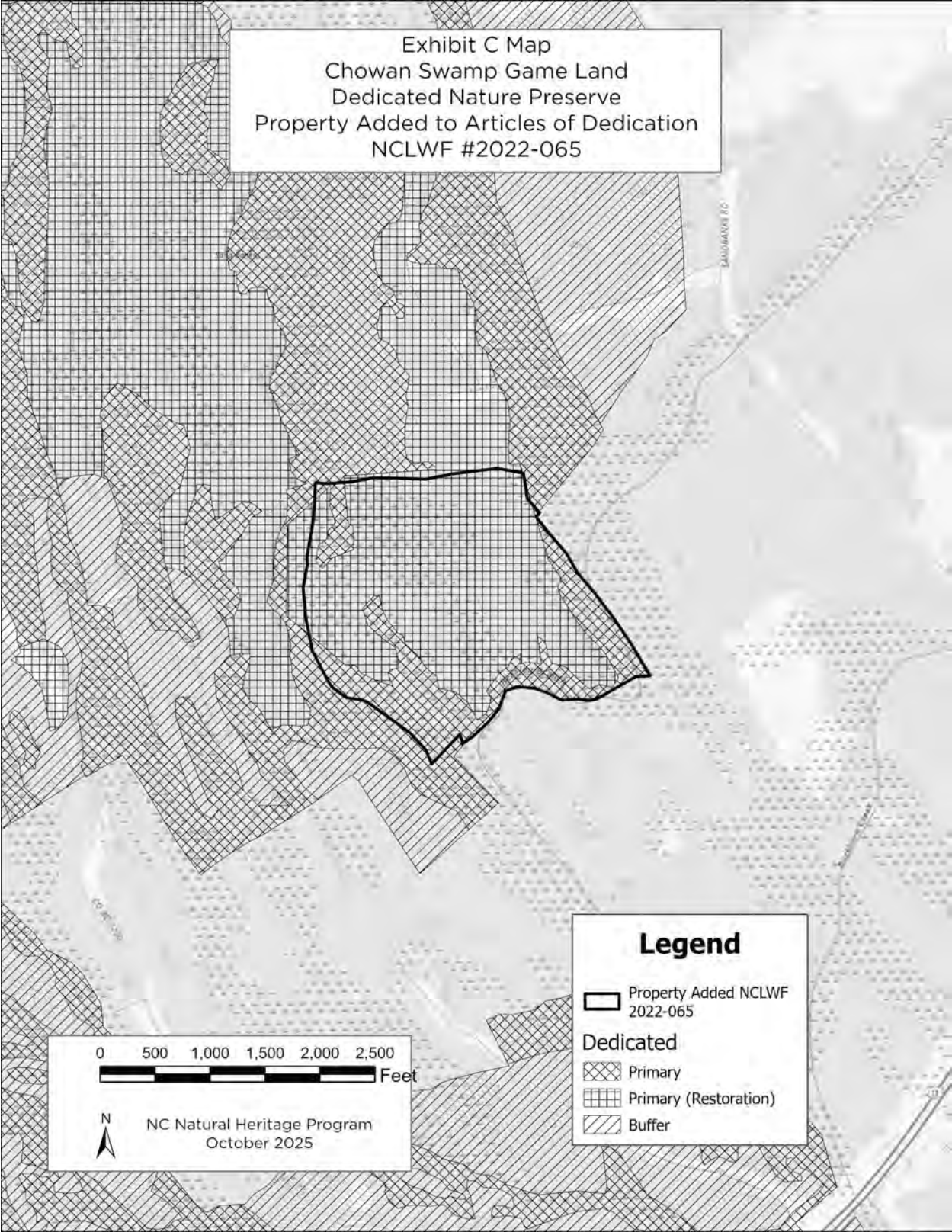
No special management needs are identified for the tidal swamps and mature nonriverine communities. The forests should be allowed to mature to old-growth. Rising sea level is likely to increasingly affect the forests

and some parts may ultimately turn into marshes. At present there is evidence of stress from rising sea level in some portions but not in others.

Control of the common reed (*Phragmites australis*) in the Tidal Freshwater Marsh is strongly encouraged. Besides degrading a portion of the marsh at present, this species has high potential to expand into newly developing marshes as sea level rises. Careful herbicide treatment and persistent attention will likely be needed to control this invasive species.







(INSERT DATE)

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources
Mail Service Center 4601
Raleigh, North Carolina 27699-4061

Re: Letter of Allocation and Dedication as a Nature Preserve of Areas within the State Park System

Dear Secretary Cashwell:

Pursuant to Part 42 of Article 2 of Chapter 143B of the North Carolina General Statutes, this letter of allocation is executed for the purpose of amending an existing Dedicated Nature Preserve encumbering State-owned lands. These Articles of Dedication replace those certain Articles of Dedication for Lake Waccamaw State Park dated February 10, 2014. The purpose of this amendment is to reflect additions of property to the preserve, recommended by the Natural Heritage Advisory Committee at their _____, 20__ meeting, and provide more accurate boundaries.

This real property which is subject to this Dedicated Nature Preserve is allocated to the Department of Natural and Cultural Resources and currently managed by the Division of Parks and Recreation, briefly described below and more specifically described in **Exhibit A**, and shown on the diagram(s) in **Exhibit B**, both attached hereto and incorporated herein and referred to hereafter as "Property". That 199-acre area depicted on the diagram(s) attached as **Exhibit C**, attached hereto and incorporated herein by reference, is hereby added to the Dedicated Nature Preserve.

<u>Site Name</u>	<u>Approximate Total Acreage</u>
A. Lake Waccamaw State Park	641 acres

Dedication of the qualified portions of certain tracts included herein fulfill the terms of grant agreements, including those of the NC Land and Water Fund (former Clean Water Management Trust Fund and Natural Heritage Trust Fund).

THIS ALLOCATION IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. **Definitions:** As used in this allocation, the terms “natural area,” and “nature preserve” have the same meaning as contained in North Carolina General Statutes 143B-135.254.
2. **Dedication:** The preserve, as described in this Allocation, is hereby dedicated as a **nature preserve** for the purposes provided in the Nature Preserves Act.
3. **Duration:** Subject to the limitations of NCGS 143B-135.264, this agreement shall be perpetual, in gross, running with the land.
4. **Primary Custodian:** The primary Custodian of the preserve will be the Department of Natural and Cultural Resources, Division of Parks and Recreation. The Primary Custodian may hereinafter be referred to as “Primary Custodian” or “Custodian.”
5. **Primary Classification and Purpose:** The primary classification and purpose of the preserve will be natural area conservation, scientific research, passive recreation, and nature education.
6. **Rules for Management:**

- A. **Character of Visitor Activity:** The principal activities in the preserve shall be non-consumptive outdoor recreation and education in designated areas. These activities may be regulated by the Custodian to protect and conserve the natural values of the preserve.

Activities and uses unrelated to those listed above are prohibited except as provided in this Dedication or unless necessary to carry out the purposes of the preserve. Prohibited activities include, but are not limited to, commercial development; commercial silviculture; agriculture and grazing; gathering of plants or plant products for purposes other than approved research; the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources; and those activities specifically restricted in this Dedication.

- B. **Orientation and Guidance of Visitors:** The Custodian reserves the right to orient and guide visitors for educational programs, scientific research, and preserve management. Exhibits, programs and printed materials may be provided by the Custodian. The Custodian may create and maintain nature trails, overlooks, boardwalks, and primitive campsites adequate to promote the permitted use of the preserve. Guardrails, fences, steps, bridges, and boardwalks may be provided when appropriate. The Custodian reserves the right to erect structures necessary to protect the preserve from unwanted or excessive visitor traffic and structures to restrict visitor access to sensitive environmental resources.
- C. **Roads and Trails:** The Custodian may construct and maintain service roads for patrol, fire control, right-of-way maintenance, and other management activities. The Custodian may maintain roads presently existing within the preserve. Otherwise, the construction of roads will be prohibited.

- D. Other Structures and Improvements: Buildings or facilities other than those defined above shall not be erected by the Custodian within the preserve, and they must be consistent with the purposes of the preserve as stated herein.
- E. Research and Collecting Permits: Any person wishing to engage in scientific research or collecting shall first secure written permission from the Custodian.
- F. Vehicles: There will be no horseback riding or bicycling except on trails designated for these purposes and no use of any motorized vehicles except boats. The Custodian may use vehicles as necessary for the management of the preserve.
- G. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, or other material, nor any change in topography or surface hydrology of the preserve. Exceptions for permitted archeological research or ecological restoration to more natural conditions, consistent with the Management Plan, may be made in consultation with the North Carolina Natural Heritage Program.
- H. Water Level Control: The purpose of water level control shall be to maintain the preserve's natural water regimes. Water levels that have been altered by human activities may be changed, if necessary, to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. Millponds are an example of situations in which water levels have been historically managed.
- I. Bringing in Flora and Fauna: No exotic flora and no animals except leashed dogs and cats, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the preserve. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.
- J. Fire: Use of prescribed burning is permitted as necessary for the biological management of the preserve. Any prescribed burning must be done according to an approved fire management plan for the park unit in question. Fires are also permitted in conjunction with supervised activities of the Custodian, or in designated areas within primitive campsites.
- K. Disturbance of Natural Features: The disturbance of other natural features is prohibited except for control of disease that would damage or reduce the significance of the preserve, reduction of fire fuel load after severe storm damage, or for purposes of ecological management as stipulated in the Park unit's approved management plan and that which is consistent with the purposes of this Dedication.
- L. Control of Populations (natural and exotic): Any control of animal or plant populations, other than fishing, shall be only to correct situations where populations have been significantly altered from natural conditions. The Custodian may, in accordance with an approved resource management plan, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve.

- M. Control of Natural Processes: Natural processes will be managed according to the policy of the North Carolina State Parks Natural Resource Management Policy. Generally, natural resources will be managed by allowing natural environments to evolve through natural processes with minimal influence from human activities. Exceptions are enumerated in the Policy Statement.
- N. Management Plan: These rules for management constitute a management plan within the meaning of 07 NCAC 13H.0300 until detailed plans for each park are prepared. The dedicated nature preserve will continue to be subject to other applicable regulations within NCAC Title 07, Chapter 13. Where contradictions may arise between this instrument of dedication and other management regulations, the terms of this Dedication shall take precedence.
7. **Amendment, Modification, and Termination**: Any changes to this Dedication must be made in accordance with the provisions of North Carolina General Statutes 143B-135.250-.272 and the North Carolina Administrative Code, Chapter 7, Subchapter 13H, which require the approval of the Governor and the Council of State.
8. **Nature Preserve Held in Trust**: This Property is held in trust by the State for the benefit of the people of North Carolina for the uses and purposes expressed in the Nature Preserves Act under the terms and authority set forth in N.C. Gen. Stat. 143B-135.262.
9. **Access for Inspection and Right of Entry**: Natural Heritage Program staff, including their successors or assigns, shall have the right, by and through its agents and employees, to enter the Property to inspect the Dedication for compliance with these Articles of Dedication at all reasonable times and with prior notice.

The Governor and Council of State have approved the dedication of the State-owned lands described by this document at a meeting in (City Name), North Carolina on (DATE).

Sincerely,

Gabriel J. Esparza

CONSENTED AND AGREED TO:

Secretary Pamela B. Cashwell
Department of Natural and Cultural Resources

EXHIBIT A

LAKE WACCAMAW STATE PARK DEDICATED NATURE PRESERVE COVE SWAMP SEGMENT

DESCRIPTION

COUNTY: Columbus

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC MAP: Lake Waccamaw West

SIZE OF AREA: ca. 442 acres total (all primary)

OWNER/ADMINISTRATION: State of North Carolina
Division of Parks and Recreation

LOCATION: Cove Swamp is located just northwest of Lake Waccamaw. The swamp is bounded by a canal on the southeast, and uplands to the north, west, and south. It lies south of NC 214.

DESCRIPTION: This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants or animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and (3) a rare aquatic community and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. Cove Swamp is that part of the very large Carolina bay that is not “flooded” by Lake Waccamaw. It lies at the northwestern end of the lake, separated from it by a road and a canal. The forest along the outer (northern and western) margin of the swamp is Basic Mesic Forest (Coastal Plain subtype); this is a rare natural community in the region. This mature hardwood forest is dominated by tuliptree (*Liriodendron tulipifera*), laurel oak (*Quercus laurifolia*), green ash (*Fraxinus pennsylvanica*), sweetgum (*Liquidambar styraciflua*), bitternut hickory (*Carya cordiformis*), pignut (*C. glabra*) or sweet pignut (*C. ovalis*) hickory, American elm (*Ulmus americana*), and red maple (*Acer rubrum*). A few swamp chestnut oak (*Q. michauxii*) and black walnut (*Juglans nigra*) trees are also present. The few understory tree species include American hornbeam (*Carpinus caroliniana*) and American holly (*Ilex opaca*). However, locally very common shrubs are red buckeye (*Aesculus pavia*) and tall pawpaw (*Asimina triloba*), both indicative of rich, circumneutral soils. Most of the herbs are ferns, such as Christmas fern (*Polystichum acrostichoides*), lady fern (*Athyrium asplenoides*), and New York fern (*Thelypteris noveboracensis*). This natural community also occurs on a narrow east-west ridge located within the swamp but just south of the outer margin of the forest. The ridge is dominated by a dense stand of tall pawpaw, but eastern red cedar (*Juniperus virginiana*), basswood (*Tilia* sp.), and sweet pignut hickory are also present. Dwarf palmetto (*Sabal minor*) is present at the south base. Some shortleaf basket grass (*Oplismenus hirtellus* ssp. *setarius*), State Significantly Rare, is present in the Basic Mesic Forest, both on the north side of the swamp and along the western margin.

The great majority of Cove Swamp is a Cypress-Gum Swamp (Intermediate subtype) natural community, likely extending all the way to Lake Waccamaw. This is a mature forest dominated strongly by water tupelo (*Nyssa aquatica*). Other canopy trees are green ash or pumpkin ash (*Fraxinus profunda*), or likely both, and bald-cypress (*Taxodium distichum*). Herbs include smartweed (*Polygonum punctatum*), marsh pennywort (*Hydrocotyle* sp.), and marsh St. John’s-wort (*Triadenum walteri*). The drier portion of the swamp contains the uncommon log fern (*Dryopteris celsa*), along the Basic Mesic Forest fringe. The

swamp also contains many pools and various sedges; broad-leaved forbs such as lizard's-tail (*Saururus cernuus*), arrow arum (*Peltandra virginica*), clearweed (*Pilea pumila*), and false-nettle (*Boehmeria cylindrica*) are present. The southeastern margin of the swamp, lying just northwest of the canal, contains a fairly good amount of both swamp tupelo (*Nyssa biflora*) and red maple, though water tupelo is common. The shrub zone along the canal is dominated by wax myrtle (*Myrica cerifera*) and sweet-pepperbush (*Clethra alnifolia*), along with a few coastal fetterbush (*Leucothoe racemosa*).

The State Threatened American Alligator (*Alligator mississippiensis*) occurs in the canal, along the southeastern margin of the tract. A historical record exists in the swamp for the State Threatened Waccamaw Snail (*Triodopsis soelneri*). The State Threatened green fly orchid (*Epidendrum magnoliae*) grows on cypress limbs in the swamp, at least along the canal margin. Also, there is an historical record for the State Significantly Rare pale mannagrass (*Torreyochloa pallida*) from the edge of the swamp, near the canal.

BOUNDARY JUSTIFICATIONS: The Primary Area boundary includes all the high-quality natural communities and the rare species they support. Though several acres along the northern and western margins contain moderate to high levels of the exotic Chinese privet (*Ligustrum sinense*), the forest canopy and subcanopy above the privet stands is intact.

MANAGEMENT AND USE: In addition to its primary use for protection of the hydrology of Lake Waccamaw, which contains a large number of rare and/or endemic aquatic animals (fishes and mussels), the tract will be used for passive recreation, such as for nature study. Some management to control or remove privet is recommended.

MAP: attached

(November 14, 2011, NC NHP)

**LAKE WACCAMAW STATE PARK
DEDICATED NATURE PRESERVE
WACCAMAW RIVER SEGMENT**

DESCRIPTION

COUNTY: Columbus

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC MAP: Old Dock

SIZE OF AREA: ca. 199 acres total (all primary)

OWNER/ADMINISTRATION: State of North Carolina
Division of Parks and Recreation

LOCATION: The Waccamaw River segment lies on the east side of the Waccamaw River, southwest of Lake Waccamaw and occurs within the Upper Waccamaw River Swamp National Area, approximately 1.3 miles south of Lake Waccamaw dam.

DESCRIPTION: The dedicated area consists of frequently flooded swamp along the Waccamaw River. This Property qualifies for Dedication because of the presence of (1) a habitat for individual species of plants of animals that are in danger of or threatened by extirpation, (2) a rare terrestrial natural community, and (3) a rare aquatic community and after Natural Heritage Program Staff evaluation of the factors presented in 07 NCAC 13H .0202. The majority of the property is a Cypress-Gum Swamp (Intermediate Subtype) natural community. This swamp forest is dominated by water tupelo (*Nyssa aquatica*) and swamp tupelo (*Nyssa biflora*), with few bald-cypress (*Taxodium distichum*). Shrubs are sparse, but switch cane (*Arundinaria tecta*), coastal fetterbush (*Eubotrys racemosa*), and southern wild raisin (*Viburnum nudum*) are present. Canopy gaps are home to a diversity of herbs, including smartweed (*Persicaria* sp.), lizard's tail (*Saururus cernuus*), bedstraw (*Galium tinctorium*), and false-nettle (*Boehmeria cylindrica*), among several other species. Other areas, with dense canopy, have few herbs. The swamp forest varies in condition. Some areas near the river are quite mature.]

Another small area is classified as a Blackwater Bottomland Hardwoods (Swamp Transition Subtype) natural community, with a canopy of laurel oak (*Quercus laurifolia*), water tupelo (*Nyssa aquatica*), and a few water hickory (*Carya aquatica*).

The Significantly Rare, Yellow-crowned Night-heron (*Nyctanassa violacea*) occurs on this tract within the Waccamaw River floodplain. The Special Concern Waccamaw River spider lily (*Hymenocallis pygmaea*) is also present within the Waccamaw River segment.

The LBR/Waccamaw River Aquatic Habitat flows along the edge of the Waccamaw River tract, and the tract contributes to protection of its water quality. A population of the Black-banded Sunfish (*Enneacanthus chaetodon*) occurs within the Waccamaw River in this reach. Other rare species present in this river system include Broadtail Madtom (*Noturus* sp.), Waccamaw Crayfish (*Procambarus braswelli*), and Eastern Lampmussel (*Lampsilis radiata*).

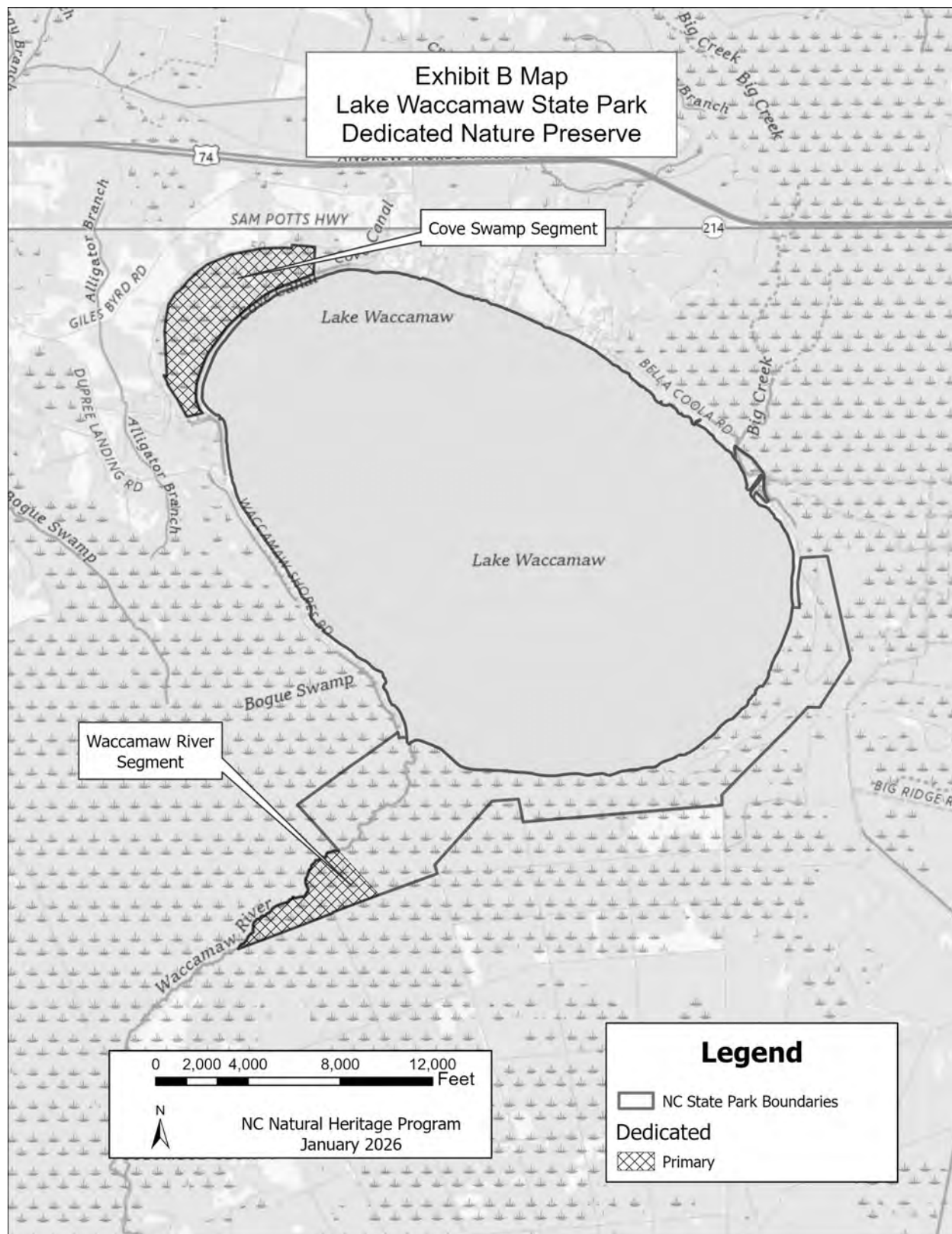
BOUNDARY JUSTIFICATIONS: The Primary Area boundary includes all the high-quality natural communities and wetlands, and the rare species they support.

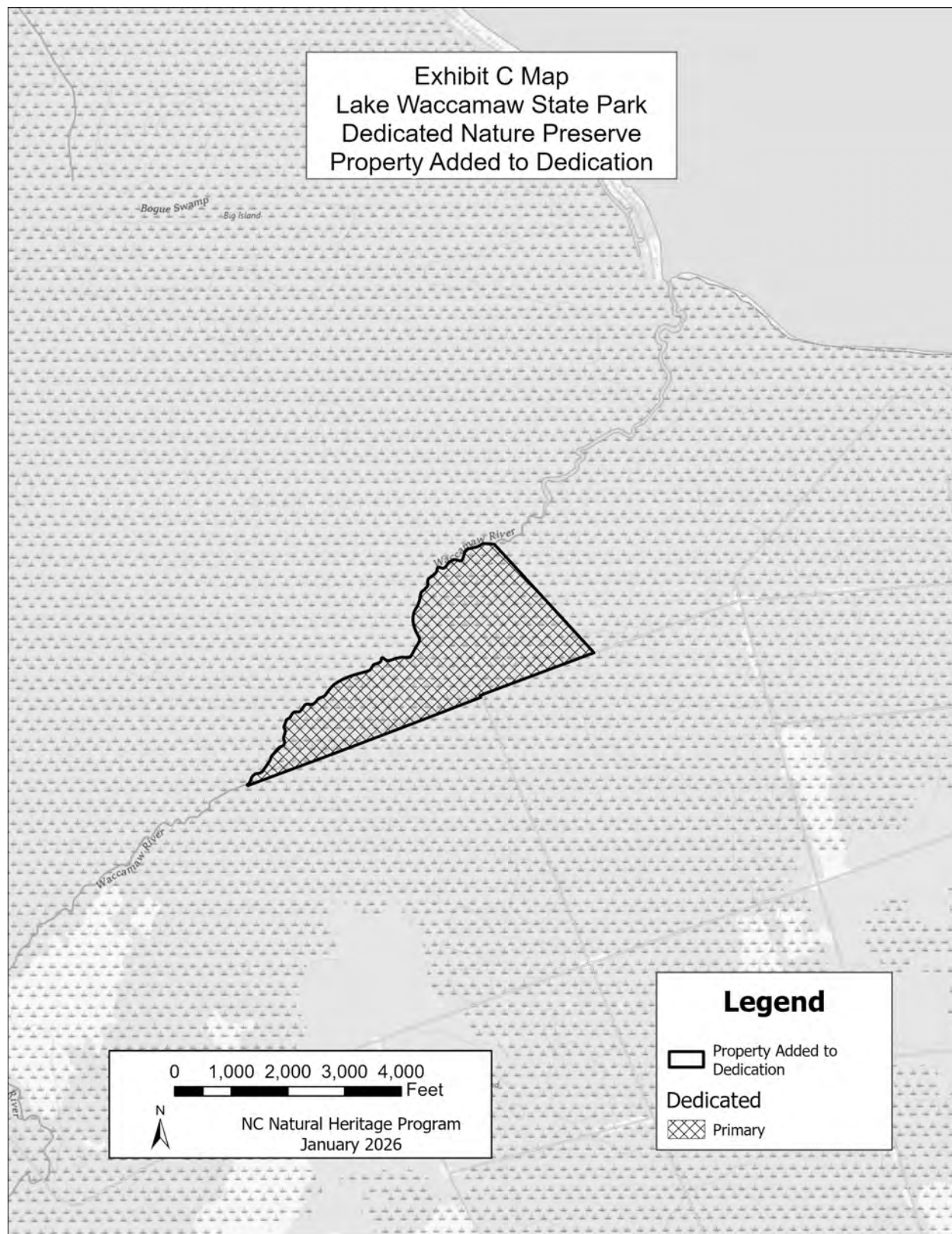
MANAGEMENT AND USE: In addition to protection of the natural habitats and rare species, the property will be used for passive recreation, such as for nature study.

Invasive species monitoring and treatment should be a priority. Chinese Tallow Tree (*Triadica sebifera*) is scattered in the dedicated area but has the potential to increase greatly. Marsh dewflower (*Murdannia keisak*) also occurs in several places, and it too has the potential to spread widely and threaten the herbaceous species. Taro (*Colocasia esculenta*), extensively established on the shores of Lake Waccamaw, shows evidence of spreading southward in the swamp and may reach the dedicated tract. Additionally, the invasive Red Swamp Crayfish (*Procambarus clarkii*) was observed along the Waccamaw River floodplain on this tract.

MAP: attached

(October 2024 NC NHP)





NORTH CAROLINA REGISTRY OF NATURAL HERITAGE AREAS

Letter of Intent and Agreement to Register and Protect a Natural Area

WHEREAS, the U.S. Fish and Wildlife Service is the owner and administrator of the Pocosin Lakes National Wildlife Refuge, consisting of approximately 101,400 acres in Tyrrell, Hyde, and Washington County.

WHEREAS, U.S. Fish and Wildlife Service had previously registered the Pungo Unit of Pocosin Lakes National Wildlife Refuge when it was the Pungo Lake National Wildlife Refuge.

WHEREAS, large additional portions of Pocosin Lakes National Wildlife Refuge possess natural areas of ecological significance, justifying their recognition by the State as an outstanding part of the natural heritage of North Carolina:

The Pocosin Lakes area is one of the largest and most significant southern peatlands in the United States. Its vast expanse includes diverse wetland communities: some in relatively pristine condition; some in transition from one type to another due to rising sea level; and, some more significantly altered by past ditching and vegetation destruction, but undergoing restoration to return natural hydrology and ecological function. Its array of large wetlands includes primarily High Pocosin, Pond Pine Woodland, Nonriverine Swamp Forest, Tidal Swamp, and Tidal Freshwater Marsh natural communities. Other rare natural communities include remnants of canebrakes and Low Pocosin. While other conservation lands make up part of this landscape -- including state game lands, a coastal reserve, and a state park -- Pocosin Lakes National Wildlife Refuge constitutes the majority of the natural acreage.

Pocosin Lakes National Wildlife Refuge also contains two of the rare natural lakes of North Carolina, along with their marshy and swampy shoreline communities. One of them, Pungo Lake, has long been known as critical wintering areas for waterfowl.

The Pocosin Lakes area is home to a large suite of rare animals and plants, including well-known species such as the red wolf (*Canis rufus*), red-cockaded woodpecker (*Dryobates borealis*), and some of the southernmost populations of cranberries (*Vaccinium macrocarpon*). It is also home to many lesser-known rare species, such as giant peatmoss (*Sphagnum torreyanum*), silvery sedge (*Carex disjuncta*), and glossy crayfish snake (*Liodytes rigida*).

Peatlands have been recognized as particularly important in global carbon balance, retaining large pools of carbon in both biomass and organic soils as well as continuing to remove carbon dioxide from the atmosphere. The vast intact

peatlands at Pocosin Lakes are an important contributor to this, while the hydrological restoration under way in other portions is increasing their capacity to contribute.

Pocosin Lakes National Wildlife Refuge contains six natural areas recognized by the Natural Heritage Program, and an additional restoration area. These are shown on the attached maps, [Exhibit A], and individually described here:

1. Harvester Road Tall Pocosin natural area (15,498 acres) consists virtually entirely of peatland supporting a Pond Pine Woodland community. The area has some ditching and fragmentation by roads, but most of it was spared the intensive ditching and alteration of the pocosins to the west of it. It does show the effects of several large wildfires that have burned across parts of the area; different parts have pond pine canopy of different ages, some parts were recently killed and are regenerating, and some areas show extensive epicormic sprouting in older trees. Extensive fires are a natural process in Pond Pine Woodlands, and this area has not had the destructive deep peat burns seen in the heavily ditched areas. Rare species known in this natural area include a population of viviparous spikerush (*Eleocharis vivipara*) in a ditch along its southern edge, and timber rattlesnake (*Crotalus horridus*), which was observed locally but may range widely through the area.

2. New Lake Fork Pocosin and New Lake natural area (11,377 acres) includes the lake and the peatlands extending south to the Intracoastal Waterway. New Lake has limited access and is not as well studied as Pungo Lake, but it is one of the small number of natural lakes in North Carolina. It is not known to host such large wintering populations of birds, but nesting bald eagles occur there and a heron nesting colony was known in the past. Around the lake is an example of the rare Natural Lake Shoreline Swamp (Sweetgum Subtype) community. Most of the peatland south of the lake supports Pond Pine Woodland. While most is of the Typic Subtype, of particular note are some patches of the very rare Canebrake Subtype, where switchcane (*Arundinaria tecta*) rather than broadleaf shrubs dominates beneath the trees. This may be one of the best opportunities to maintain and expand this extremely rare community. The eastern part of the natural area has supported Nonriverine Swamp Forest (Mixed Subtype), which is transitioning to Tidal Swamp along the Lake Fork of the Alligator River. The river is still and lake-like in its upper reaches. Parts are lined with floating vegetated peat, the extremely rare Floating Bog community. Within this mat have been found rare plants, including cranberry (*Vaccinium macrocarpon*) and viviparous spikerush (*Eleocharis vivipara*). Red-cockaded woodpeckers (*Dryobates borealis*) and Carolina pygmy rattlesnakes (*Sistrurus miliarius miliarius*) have also been found in this natural area in the past, and may still occur.

3. Upper Alligator River Pocosin (42,087 acres) natural area is the largest natural area within the refuge, and the habitat extends across an additional 8,000 acres in other conservation ownerships. The natural area occurs in the transition from the contiguous Pond Pine Woodlands in the west to hardwood and mixed swamps nearer the Northwest Fork of the Alligator River and its tributaries; large expanses of both occur. The Nonriverine Swamp Forest communities are diverse; they include the Cypress—Gum Subtype, Mixed Subtype, and Sweetgum Subtype. The natural area includes much acreage strongly affected by rising sea level. Tidal Swamp is replacing the Nonriverine Swamp Forest, and extensive tree mortality shows that much is already well into the further transition to Tidal Freshwater Marsh. While not extensively ditched, several roads crossing the area have affected its hydrology by impounding water. Recent breaching of roads may help restore more natural conditions and intended future work on them may help further. A large number of rare species has been found in this natural area, including the tricolored bat (*Perimyotis subflavus*), Carolina swamp snake (*Seminatrix pygaea paludis*), glossy crayfish snake (*Liodytes rigida*), timber rattlesnake (*Crotalus horridus*), southern water grass (*Luziola fluitans*), and cranberry (*Vaccinium macrocarpon*).

A smaller portion of this natural area encompasses refuge lands east of highway NC 94. This area is distinctly wetter, with both deeper peat areas and areas more changed by the rising Alligator River. It includes an area of Low Pocosin and Pocosin Opening communities. There is a small area of Peatland Atlantic White Cedar Forest, which may have since died with increasing wetness. There are also areas of Estuarine Fringe Pine Forest (Pond Pine Subtype), where Pond Pine Woodland has come under the influence of rising water. One rare plant species, savanna nutrush (*Scleria verticillata*), has been found in this portion.

4. Upper Alligator River Marshes (2,581 acres) is a large natural area, with only a portion contained within the Pocosin Lakes National Wildlife Refuge. The natural area occurs along the Lake Fork of the Alligator River in an area where there are Tidal Freshwater Marsh communities, including the Cattail, Threesquare, Sawgrass, and Shrub subtypes. It is unusual that marshes have been present on this upstream part of the Alligator River for decades while they have not been present downstream. This is often attributed to somewhat saltier (oligohaline) water being transported by the Pungo River Canal, which has a small frontage on the refuge lands. However, the marshes follow the bed of the Alligator River more than the canal, and, if induced by the canal, have naturalized to the point that they resemble naturally occurring marsh complexes. Also present here, farther from the river, is good-quality Tidal Swamp (Cypress—Gum Subtype).

5. Frying Pan Swamps (7,093 acres) natural area is in a disjunct unit of the refuge located on the western shore of the wide Alligator River and along the large bay known at the Frying Pan. The site consists of peat and mucky mineral soils that are now extensively affected by rising sea level. When first studied in the 1980s,

this natural area consisted largely of Nonriverine Swamp Forest, with patches of Peatland Atlantic White Cedar Forest and a band of Tidal Swamp along the shoreline. It now demonstrates the kind of rapid changes that can occur with rising sea level. Most of its acreage has become Tidal Freshwater Marsh (Shrub Subtype), dominated by wax myrtle (*Morella cerifera*) and a mix of herbaceous plants. Tidal Swamps now occur largely in the most inland portions and are of limited extent. If allowed to develop naturally, this area is expected to become a large and highly significant marsh complex.

6. Scuppernong River Swamp (2,660 acres) natural area consists of the bottomlands and limited bluffs along the river, from near its origin to the broad estuary at its mouth at Columbia. Pocosin Lakes owns a series of separate parcels scattered along its length, interspersed among other public and private ownership. The downstream parts, similar to Frying Pan Swamps, consist of Tidal Freshwater Marsh (Shrub Subtype) that has recently developed from Tidal Swamp. Upstream is Tidal Swamp, and possibly some remaining Cypress—Gum Swamp at the upper end. Embedded within the tidal swamps are oval shaped areas that are slightly higher and not influenced by tidal waters. These support Nonriverine Swamp Forest (Mixed Subtype). Some of these areas previously supported Peatland Atlantic White Cedar Forest, much of which was clearcut before acquisition by the refuge. Several stands that survived on refuge lands may still be present but have suffered wind damage associated with hurricanes. Red-cockaded woodpeckers (*Dryobates borealis*) have been found nesting in loblolly pines in the swamps here.

7. Allen Road Restoration Area (20,104 acres) is an area of deep peatland south of Lake Phelps and east of Pungo Lake that was more heavily altered than the natural areas of the refuge. This area appears to have naturally been primarily High Pocosin, grading to Pond Pine Woodland near the lakes, though it is possible there was some Peatland Atlantic White Cedar Forest or Nonriverine Swamp Forest. A dense network of roads and large ditches, along with a very dense network of smaller ditches, was installed under the previous ownership but the vegetation was not converted. The dried peatland was the scene of intensive wildfire that consumed large amounts of peat and heavily altered much of the vegetation. More recently, under refuge ownership, this area is the focus of intensive restoration effort. A carefully planned network of water control structures has raised groundwater levels and is allowing more natural vegetation to begin recovering over much of the area. Though there are no exemplary natural communities at present, this area is of great scientific and conservation interest as a well-established successful restoration area. It also provides part of the large unbroken landscape of the refuge, connecting Pungo Lake and Lake Phelps to Harvester Road Tall Pocosin and the natural areas farther east and allowing wildlife movement between them.

AGREEMENT

The Registry Agreement is a mutual understanding between the landowner and the North Carolina Department of Natural and Cultural Resources to protect outstanding examples of the natural diversity occurring in North Carolina and preserve unique and unusual natural features. In addition to an approach by landowners and managers that follows these principles and strives to maintain natural character and integrity, the program submits more specific management recommendations below. Changes in current management should be made only if they will enhance the natural character of the areas. The Natural Heritage Program is available for consultation on management.

Forests that are healthy should be allowed to continue maturing. Some of the swamp forests and some of the Pond Pine Woodlands can be expected to mature to old-growth, while other parts may be burned in wildfires and become part of a natural mosaic of ages.

Forests adjacent to the Alligator River and Scuppernong River can be expected to transition to open marsh, with an intermediate stage of dominance by shrubs and young tree regeneration that is not likely to mature. These will give way to more typical herbaceous marsh as they become wetter. This tree mortality may be gradual or may occur abruptly over large areas in response to a storm surge. It should be regarded as a natural process, similar to the effects of rising sea level that have been occurring in recent geologic time.

Pocosin Lakes NWR has relatively few harmful exotic species. However, common reed (*Phragmites australis*) is a great concern. It is a particular threat to the developing marshes, where it is likely to assume dominance over large areas and prevent the formation of more natural vegetation. It is strongly recommended to control existing patches in marshes and transitioning swamp forests and along roads in these areas. There is also a need for control along Pungo Lake and perhaps New Lake. Control methods such as herbicide spraying should be carefully targeted to avoid damage to nearby native vegetation. Destruction of the native vegetation will also preclude development of natural vegetation and can be expected to leave the area vulnerable to future common reed invasion. Treatment may begin with populations along forest roads and in other accessible areas where hand treatment is possible.

Monitoring for invasive exotic species and controlling them promptly is recommended more generally in the registered area.

Fire is a natural process in Pond Pine Woodland and other pocosins, and to some degree, in Nonriverine Swamp Forest and marshes. Prescribed burning is recommended for the Pond Pine Woodland and pocosin communities, wherever it can be safely practiced. Because the appropriate fire return interval for these communities is not well known, a range of fire frequencies and monitoring of the results is recommended. Ideally, large burn units would allow more natural fire patterns to develop, but it is recognized that any prescribed burning may need to be small in scale for years to come. Fire breaks for

prescribed burning and for wildfire control should be constructed with the least disturbance possible while being effective.

Fire would be particularly beneficial in the areas of cane. Burning is encouraged in these areas, which offer the chance to sustain the very rare canebrake community. These areas are likely to need burning at more frequent intervals than the pocosins and other communities.

The occurrence of multiple very large wildfires shows the potential for Pocosin Lakes to burn. Especially where there is artificial drainage, wildfires can result in deep peat burns that are ecologically destructive and very slow to recover. Such peat burns release large amounts of carbon dioxide, undoing the atmospheric benefits of peatlands. Efforts to control wildfires can also bring substantial disturbance. Hydrologic restoration is expected to reduce the likelihood of peat fires. Judicious prescribed burning might also help, and is encouraged.

Numerous ditches and roads are present within and along the edges of the natural areas. The hydrological restoration done in the Allen Road Restoration Area has improved conditions there, though recovery will take a long time. If possible, it is recommended to improve the restoration by adding more water control structures, to reduce the extremes of wetness and dryness produced by the current spacing between them.

There is a need for other kinds of hydrological restoration in other parts of the refuge as well. Roadbeds are impounding water and altering vegetation in parts of Upper Alligator River Pocosin and Frying Pan Swamps, perhaps elsewhere. Restoration of natural hydrology by blocking ditches and removing roadbeds or adding culverts is recommended where feasible. Ditches that bring the influence of rising sea level further inland than it would naturally occur are a particular priority for restoration.

THEREFORE, it is agreed between the parties whose names are affixed below that the indicated portions of the Pocosin Lakes National Wildlife Refuge, in Tyrrell, Hyde, and Washington Counties, be entered on the official North Carolina Registry of Natural Heritage Areas on the ____ day of _____, 20____.

It is understood that this agreement involves no change of title or loss of ownership rights, nor does it cede any management authority, but simply expresses the sincere intentions of the landowner to refrain from making or permitting changes that alter the natural values for which this area was registered within the boundaries outlined on the attached maps and/or survey descriptions. To the greatest extent possible, the U.S. Fish and Wildlife Service agrees to maintain and protect the natural ecosystems and plant communities represented in the preserve and to control human-related disturbances to the sites, except where necessary and appropriate to maintain natural conditions. Use of the site for educational, scientific, aesthetic, and recreational purposes in ways that do not conflict with these goals is appropriate. This agreement does not preclude other federal designations with similar goals.

It is further understood that neither the Department nor the landowner offers any assurances as to the conditions on the tracts involved or for the safety of persons thereon. Neither party shall incur any liability for any injury to persons or property on the land as a result of this agreement.

The U.S. Fish and Wildlife Service Natural Areas at Pocosin Lakes National Wildlife Refuge are hereby registered for an indefinite period until terminated in writing by either party to the other upon thirty (30) days notice.

By _____
Rebekah Martin, Refuge Manager
Pocosin Lakes National Wildlife Refuge
U.S. Fish and Wildlife Service
205 South Luddington Drive
Columbia, NC 27925

By _____
Pamela B. Cashwell, Secretary
North Carolina Department of
Natural and Cultural Resources
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

Date: _____

Date: _____

KEY TO OVERVIEW MAP

Registered Natural Heritage Areas on the Pocosin Lakes National Wildlife Refuge (2024)

1. Harvester Road Tall Pocosin (15,681 acres)
2. New Lake Forest Pocosin and New Lake (11,377)
3. Upper Alligator River Pocosin (39,801 acres)
4. Upper Alligator River Marshes (2,581 acres)
5. Frying Pan Swamps (7,093 acres)
6. Scuppernong River Swamp (2,768 acres)
7. Allen Road Restoration Area (20,104 acres)

Acres indicate Pocosin Lakes National Wildlife Refuge portion of natural area.

The pre-existing registered area at Pungo Lake is not shown.

Exhibit A.
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area overview

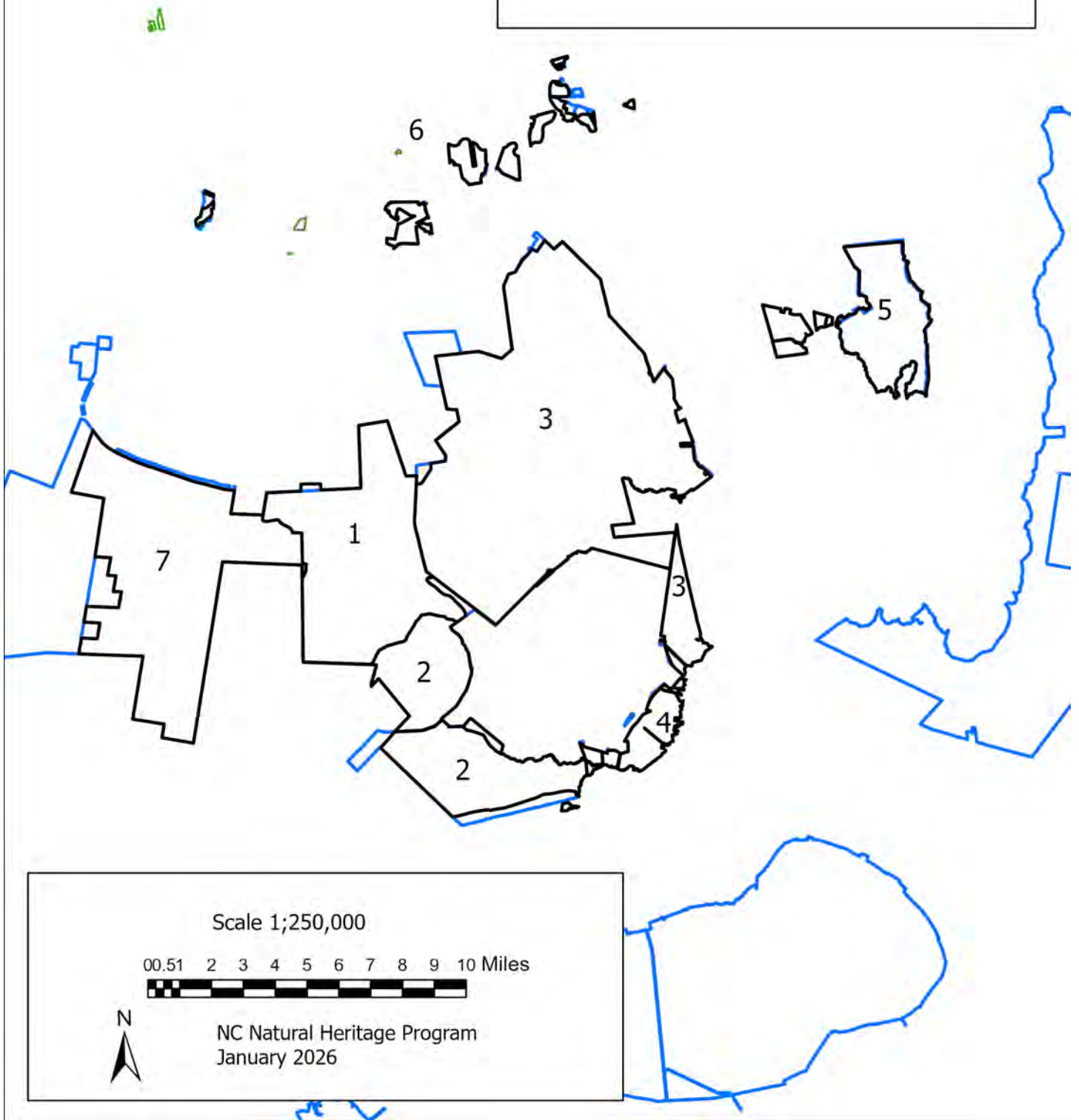


Exhibit A. 1.
Harvester Road Tall Pocosin Natural Area
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area

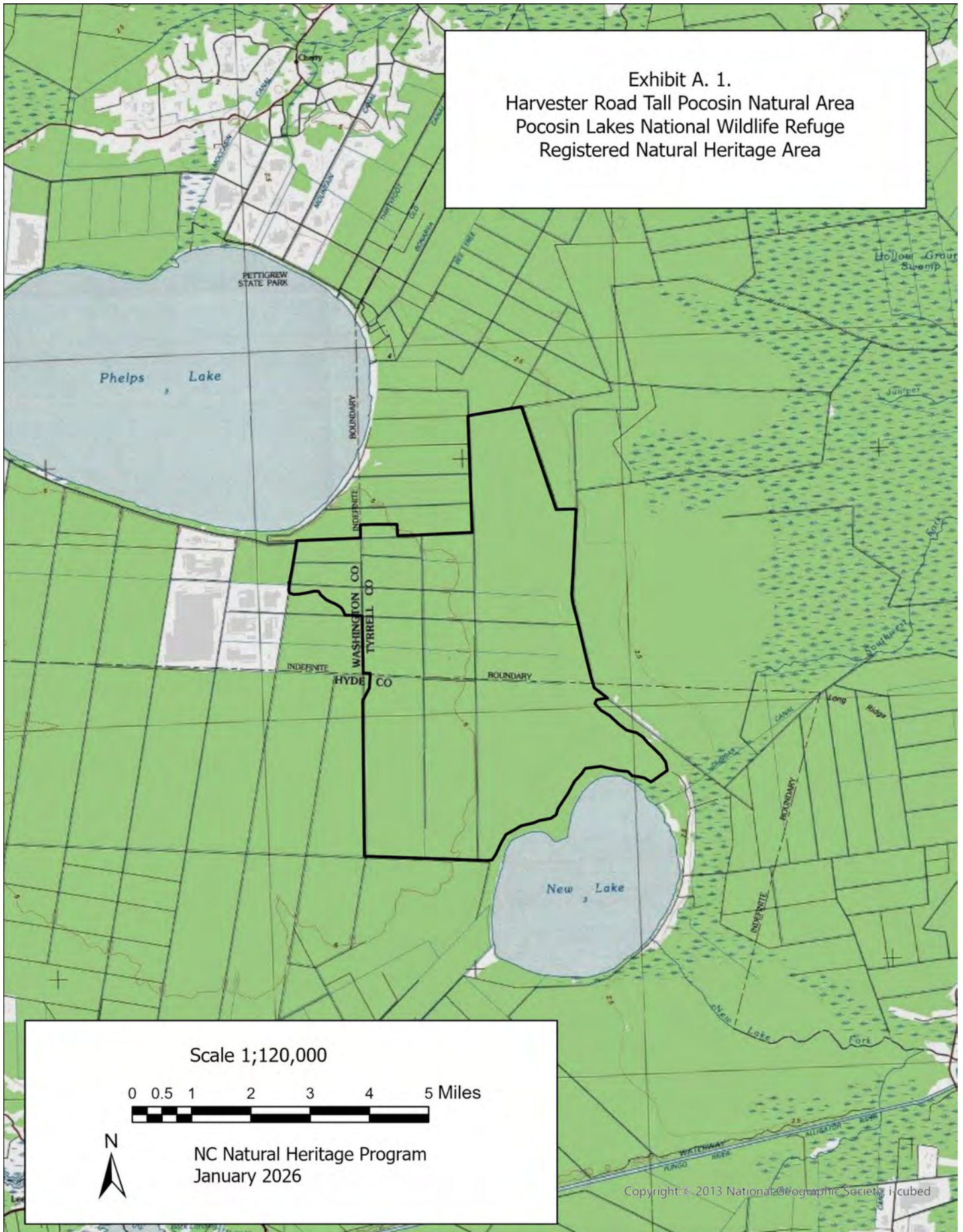


Exhibit A. 2.
New Lake Fork Pocodin and New Lake Natural Area
Pocodin Lakes National Wildlife Refuge
Registered Natural Heritage Area

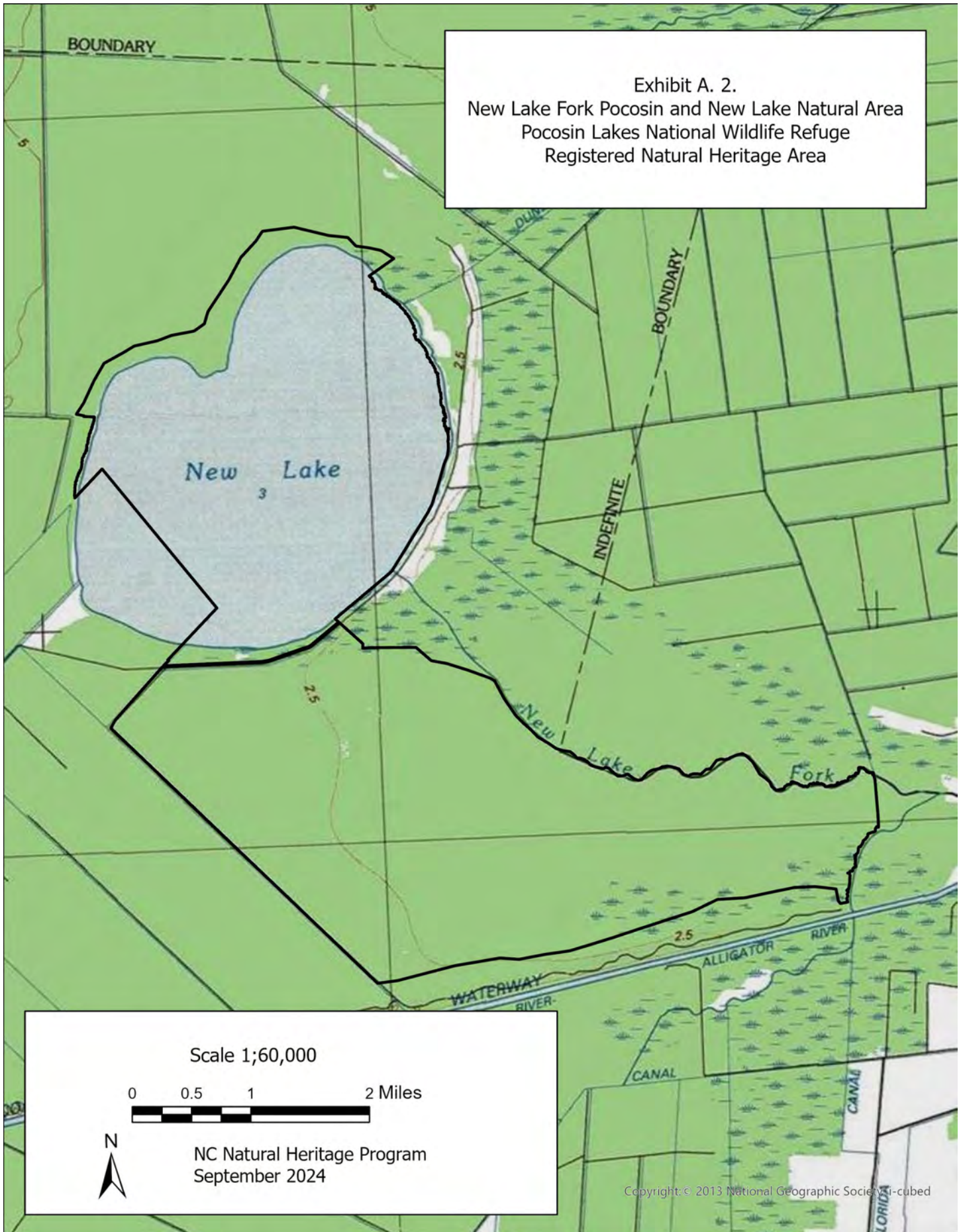


Exhibit A. 3.
Upper Alligator River Pocosin Natural Area
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area

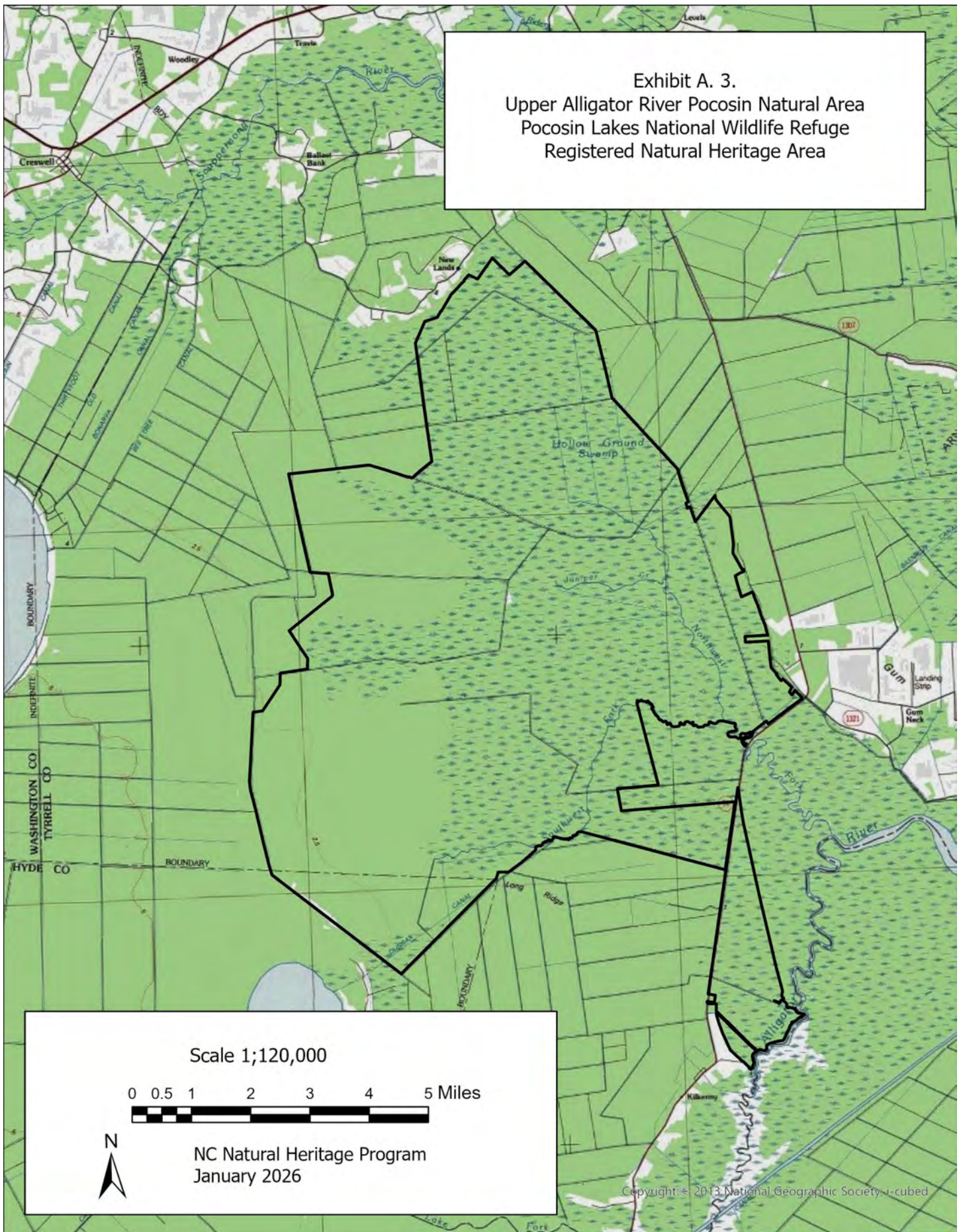


Exhibit A. 4.
Upper Alligator River Marshes Natural Area
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area

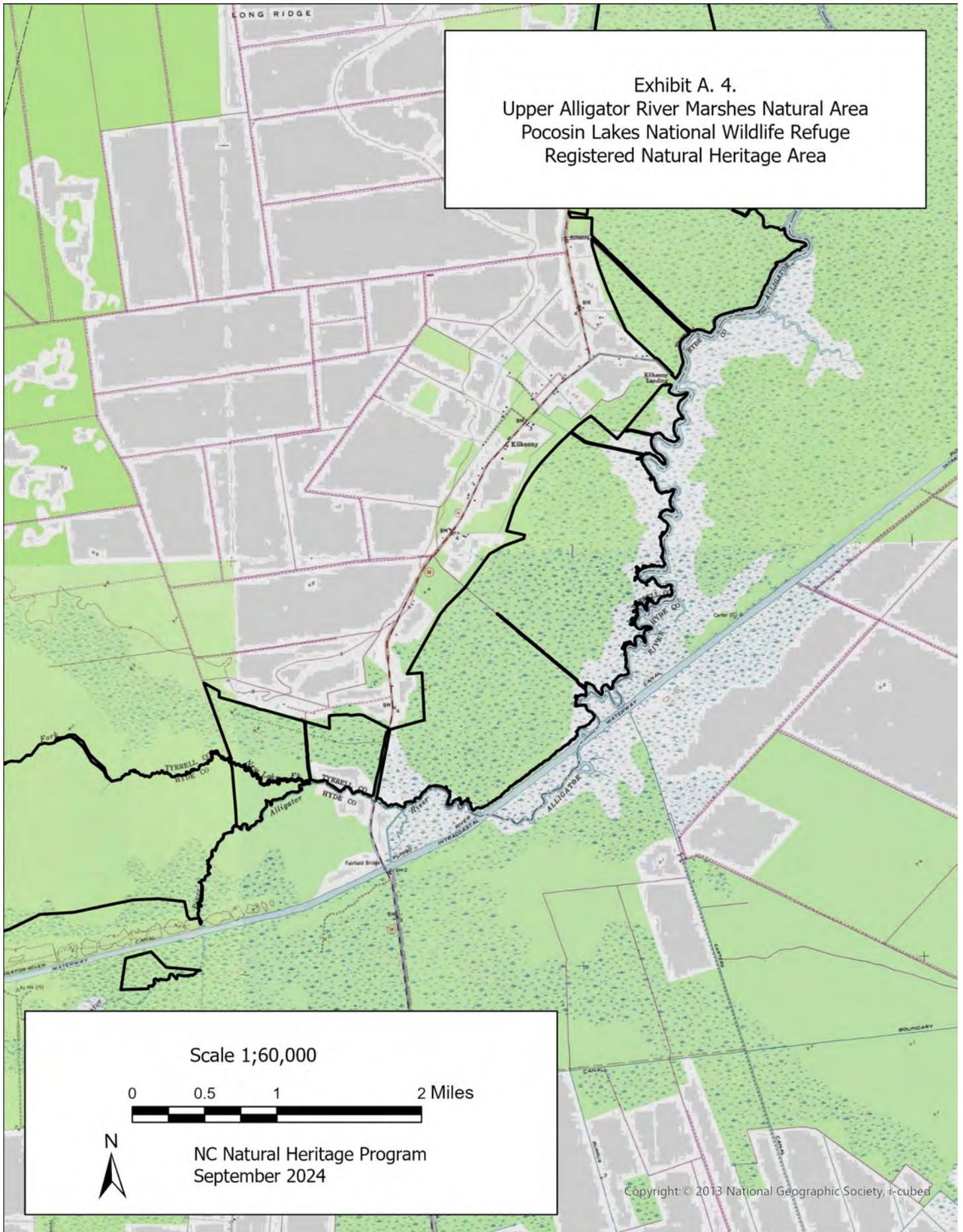


Exhibit A. 5.
Frying Pan Swamps Natural Area
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area

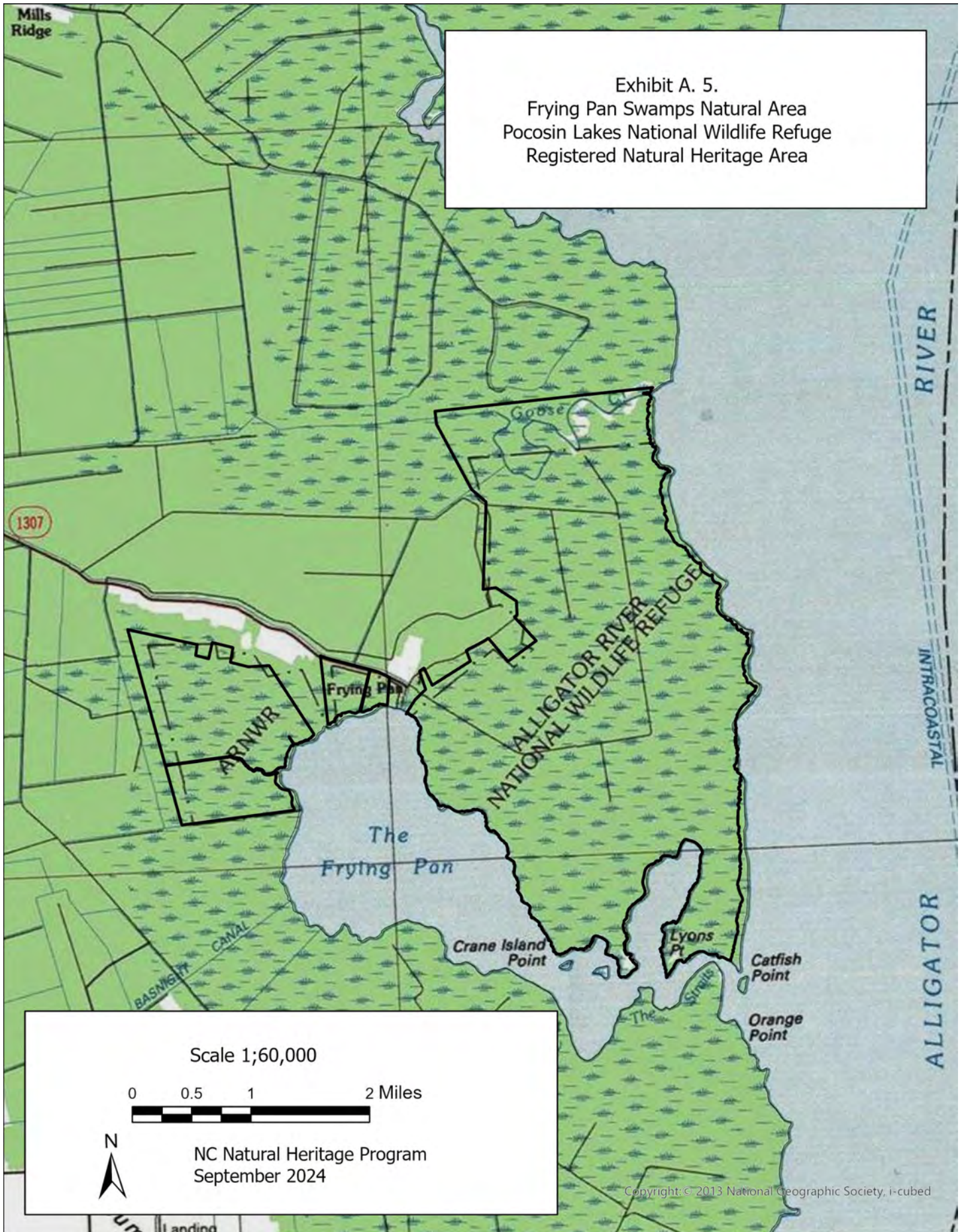


Exhibit A. 6.
Scuppernong River Swamp Forest Natural Area
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area

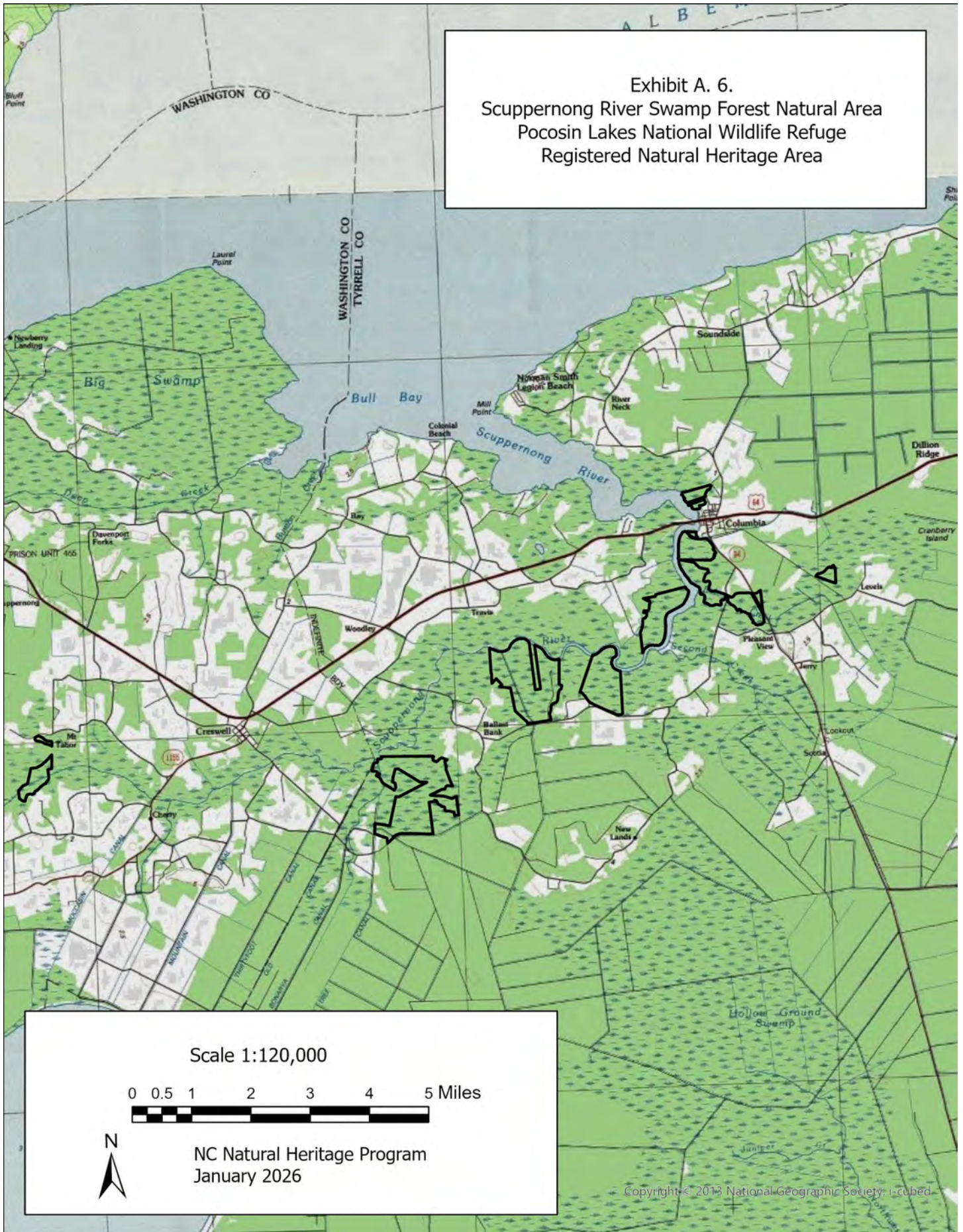
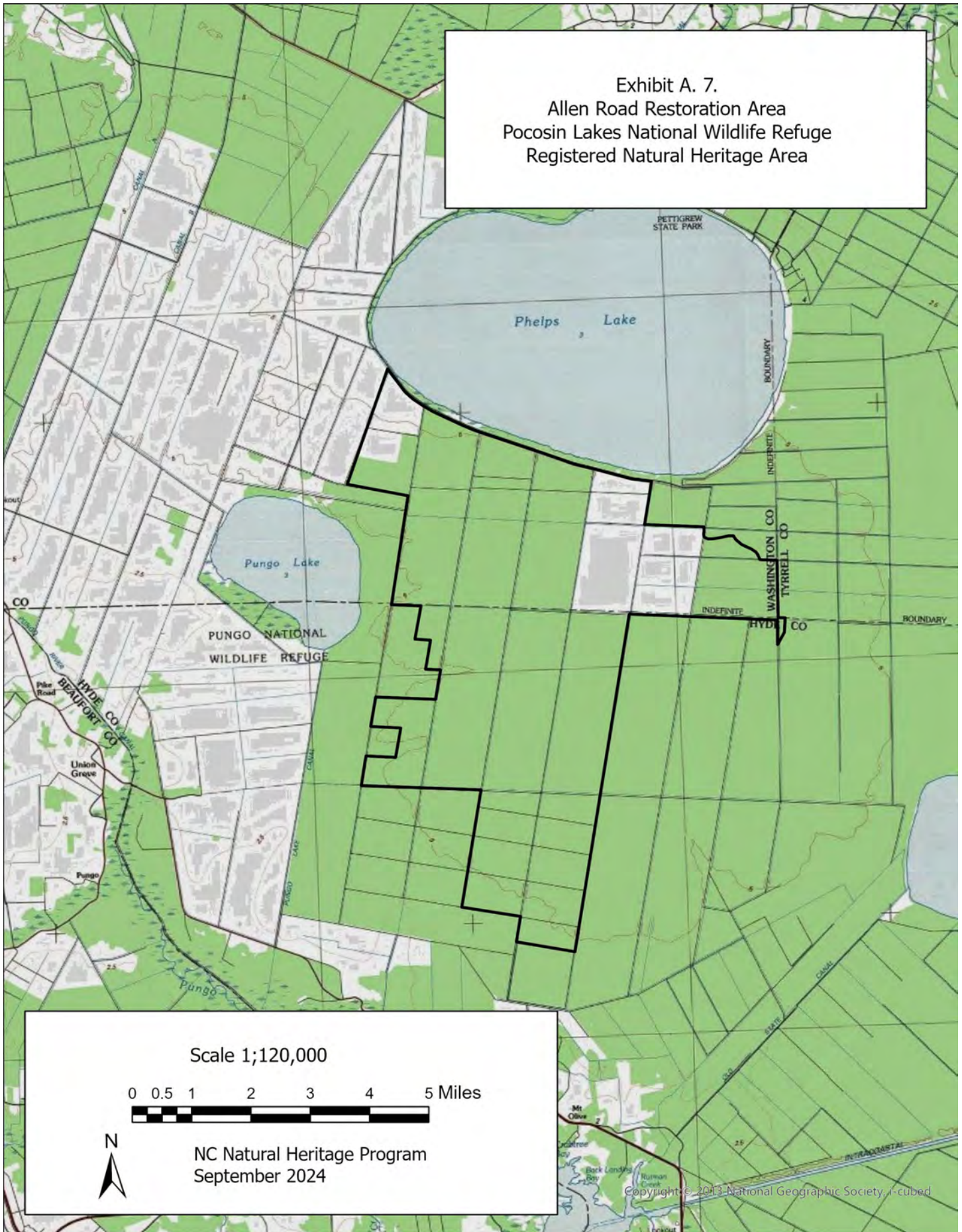
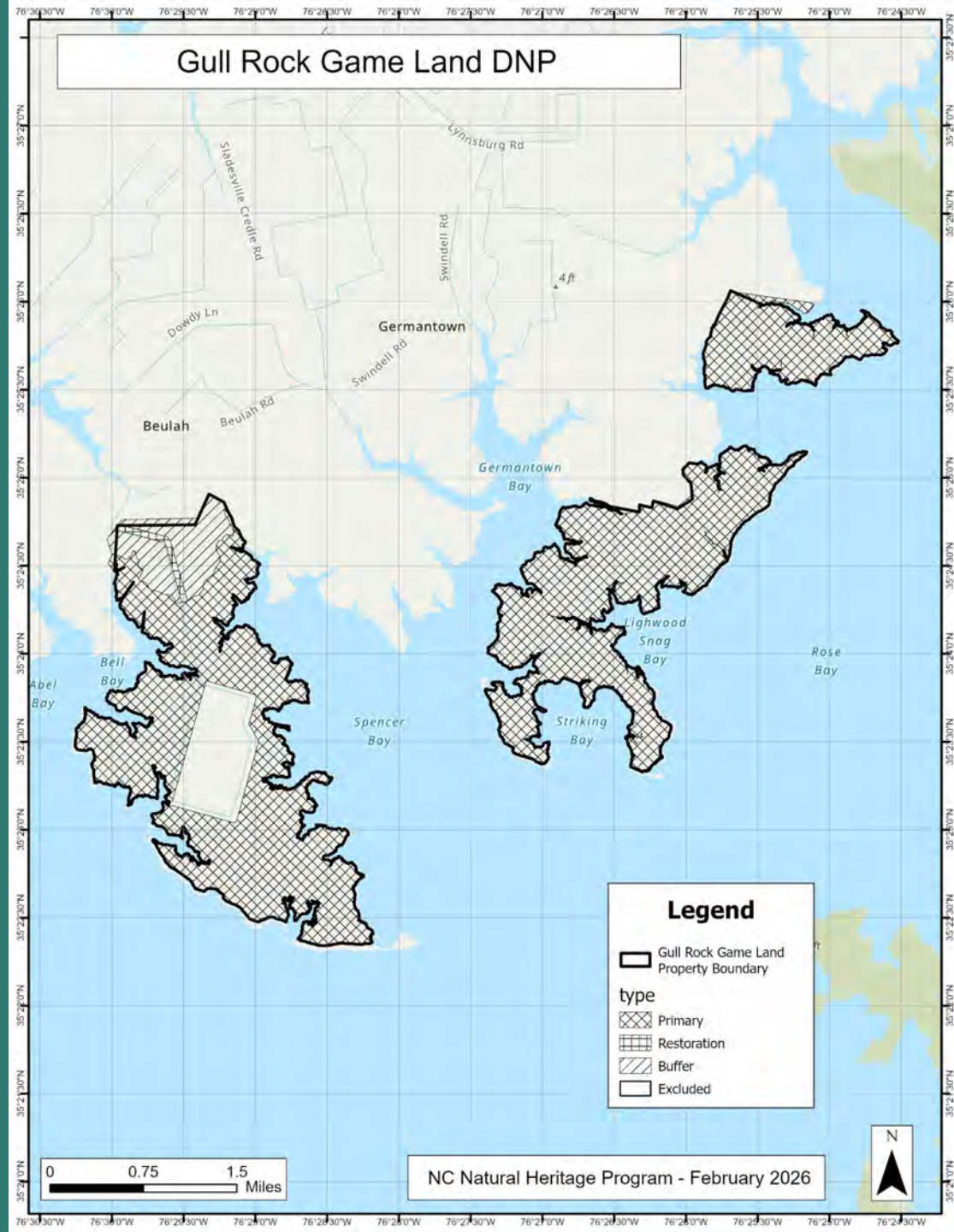


Exhibit A. 7.
Allen Road Restoration Area
Pocosin Lakes National Wildlife Refuge
Registered Natural Heritage Area



Gull Rock Game Land DNP





Gull Rock Game Land DNP

Amendment to add tract and fulfill terms of NCLWF grant agreement 2022-060 (Spencer Bay)

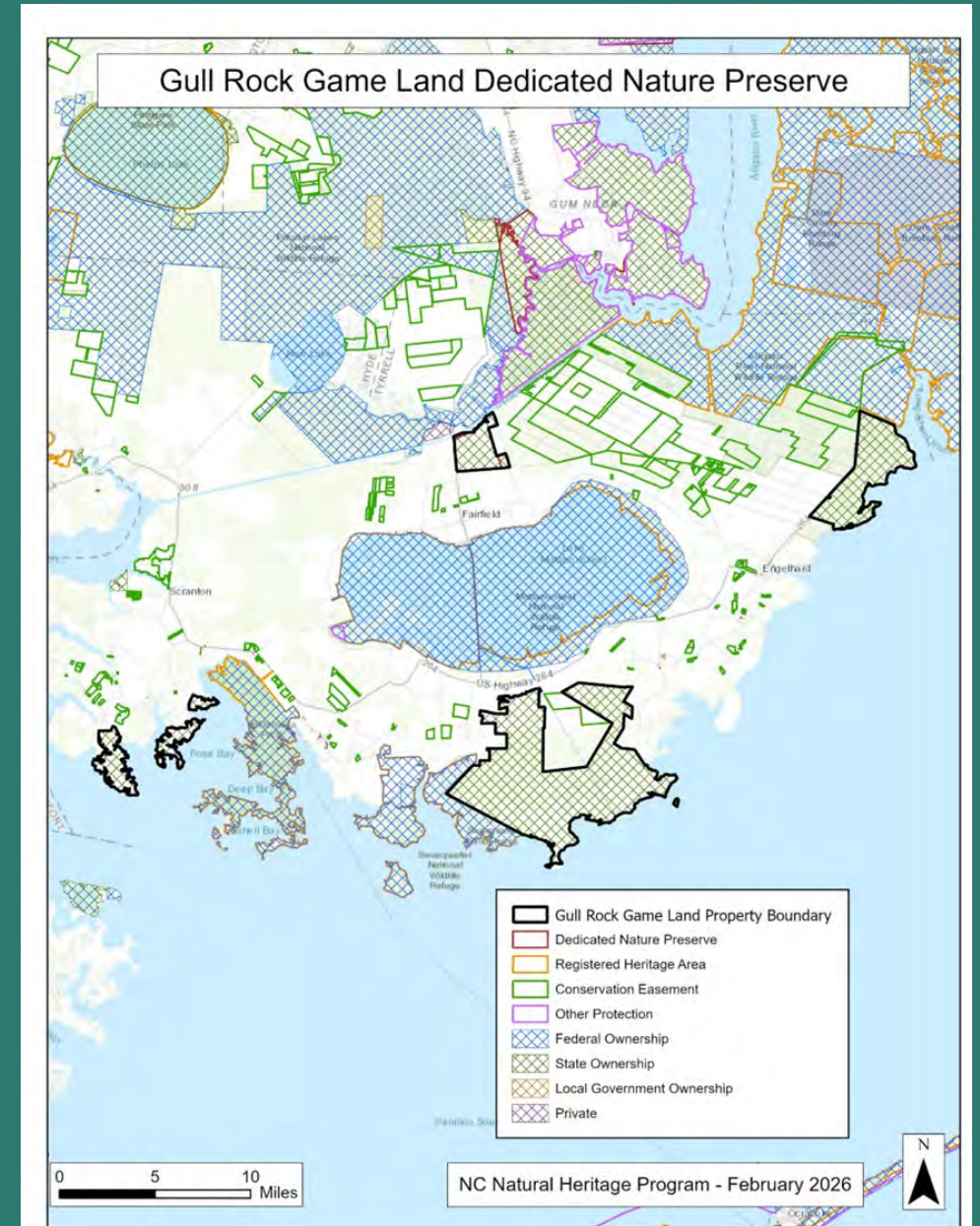
- Adds 2,736 acres to DNP
 - 2,554 acres Primary, including 18 acres Restoration
 - 182 acres Buffer
- Total DNP 10,420 acres:
 - Primary Area 7,308 acres, including 18 acres Restoration
 - Buffer Area 3,112 acres

Element Occurrences include:

- Brackish Marsh (Needlerush Subtype) – S5/G5
 - Brackish Marsh (Salt Meadow Cordgrass Subtype) – S4/GNR
 - Little-spike Spikerush (*Eleocharis parvula*) – S1/G5
 - Bald Eagle (*Haliaeetus leucocephalus*) – S3/G5
 - Marsh Hammock – S2/G3
-
- Protections portions of Swanquarter/Gull Rock Wetlands natural area – R2/C1
-
- Separate potential amendment of the dedication to allow non-emergency pumping of water onto the Alligator River segment of the preserve

Gull Rock Game Land DNP

- Request for temporary construction easement and permanent easement, Alligator River segment
- Burrus Canal Project, associated with Lake Mattamuskeet Watershed Restoration Plan



Burrus Canal Project

- Proposes to redirect drainage water from Lake Mattamuskeet
 - Pumping water into Burrus Canal to flow northward, then pumping it over the dike into the portion of Burrus Canal on Gull Rock Game Land Dedicated Nature Preserve
 - The water would then move north to the Intracoastal Waterway through swamps and marshes on the game land

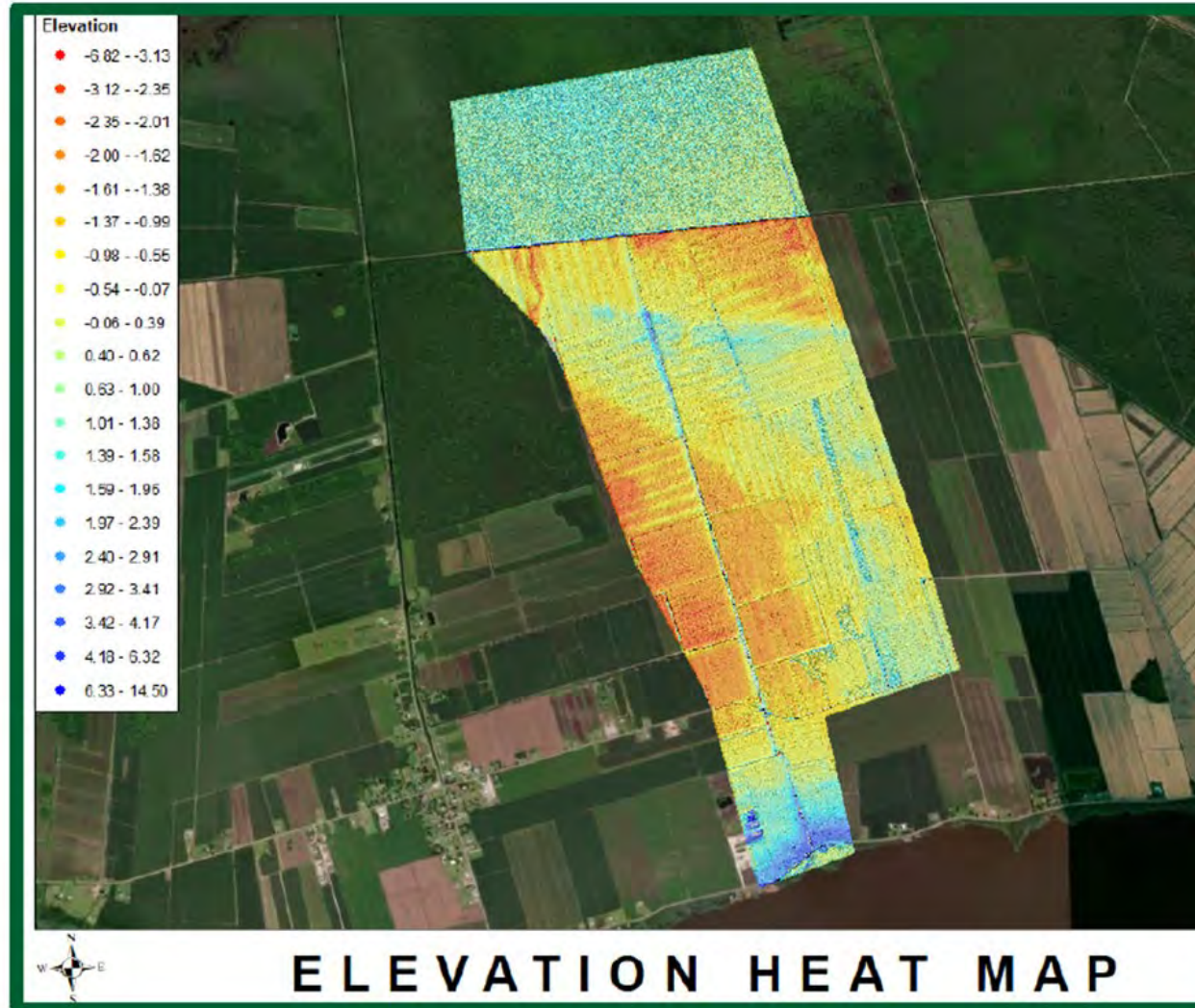
Gull Rock Game Land



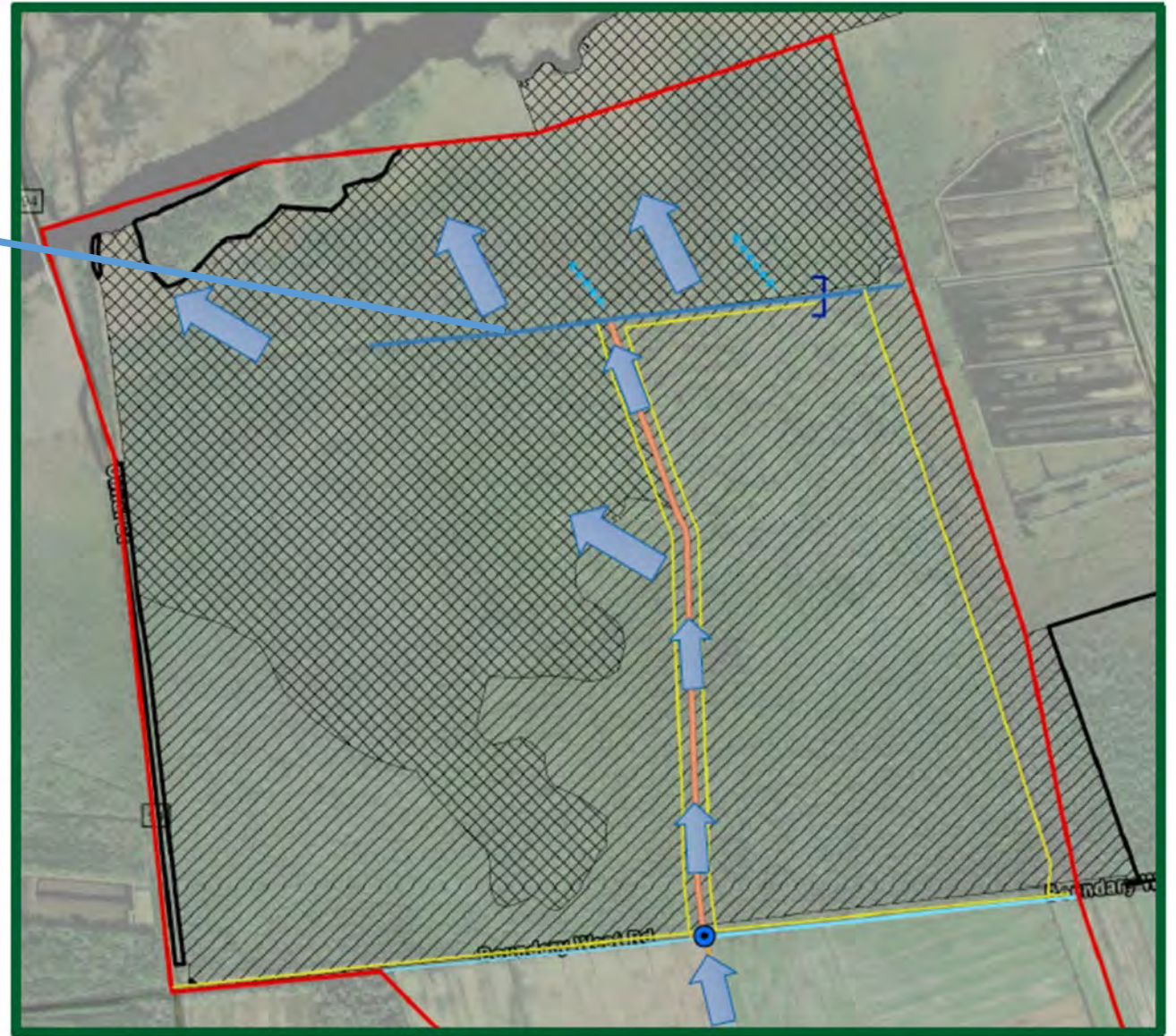
0 1,500 3,000 Feet

AERIAL IMAGERY
BURUS CANAL PROJECT

Burrus Canal Project



Revised proposal would add structures within the northern road to allow more drainage through it northward, while having less water flow westward.



Cross-hatching is Dedicated Primary Area, single hatching is Buffer Area

- Initial dedication of the property allowed emergency pumping of water onto the game land, to “be used only in the event of extreme rainfall, such as a named storm.”
- WRC received easement requests to implement the project, including for non-emergency pumping of water:
 - The NC Coastal Federation requests a temporary construction easement
 - Fairfield Drainage District #7 requests a permanent easement to maintain the canals, dikes, and infrastructure, and, additionally, to pump water across Commission property
- Any easement would be subordinate to Articles of Dedication

Revised Dedication language to allow non-emergency pumping

A location for an emergency pumping station for the Hyde Drainage District, discharging onto the Game Land within the preserve Buffer Area, has been requested. The location has previously had significant hydrological alteration, and is shown in Exhibit B Alligator River Segment map. If constructed, the pumping station will be operated according to a written plan ("Plan") ~~and will be used only in the event of extreme rainfall, such as a named storm.~~ To the extent practicable, efforts will be made to locate the intake for the pumping station so as to avoid known sources of contamination. Wildlife Resources Commission, or their assigns, shall install and maintain sufficient modifications to the roads to allow water added by pumping a more natural and diffuse flow northward and westward where appropriate. The Wildlife Resources Commission, or their assigns, shall be responsible for drafting the Plan and the Plan shall be subject to final approval of the NC Natural Heritage Program before finalizing or modification The NC Natural Heritage Program or the NC Wildlife Resources Commission may require that pumping schedules be modified or pumping cease if it is determined by either party that such action is necessary because of undue stress to the preserve or to safeguard environmental resource values in the preserve, or based on other criteria as may be deemed appropriate to NHP.

Registry

- Recognizes a natural area for its natural heritage resource values
- Voluntary agreement to protect and manage the natural area
- Agreement between Secretary and landowner
 - Can be rescinded by either party
- Management recommendations provided by NHP

Pocosin Lakes National Wildlife Refuge

Registered Heritage Area



Burned Pond Pine Woodland Pocosin Lakes NWR, Photo Courtesy of Mike Schafale

Pocosin Lakes National Wildlife Refuge RHA

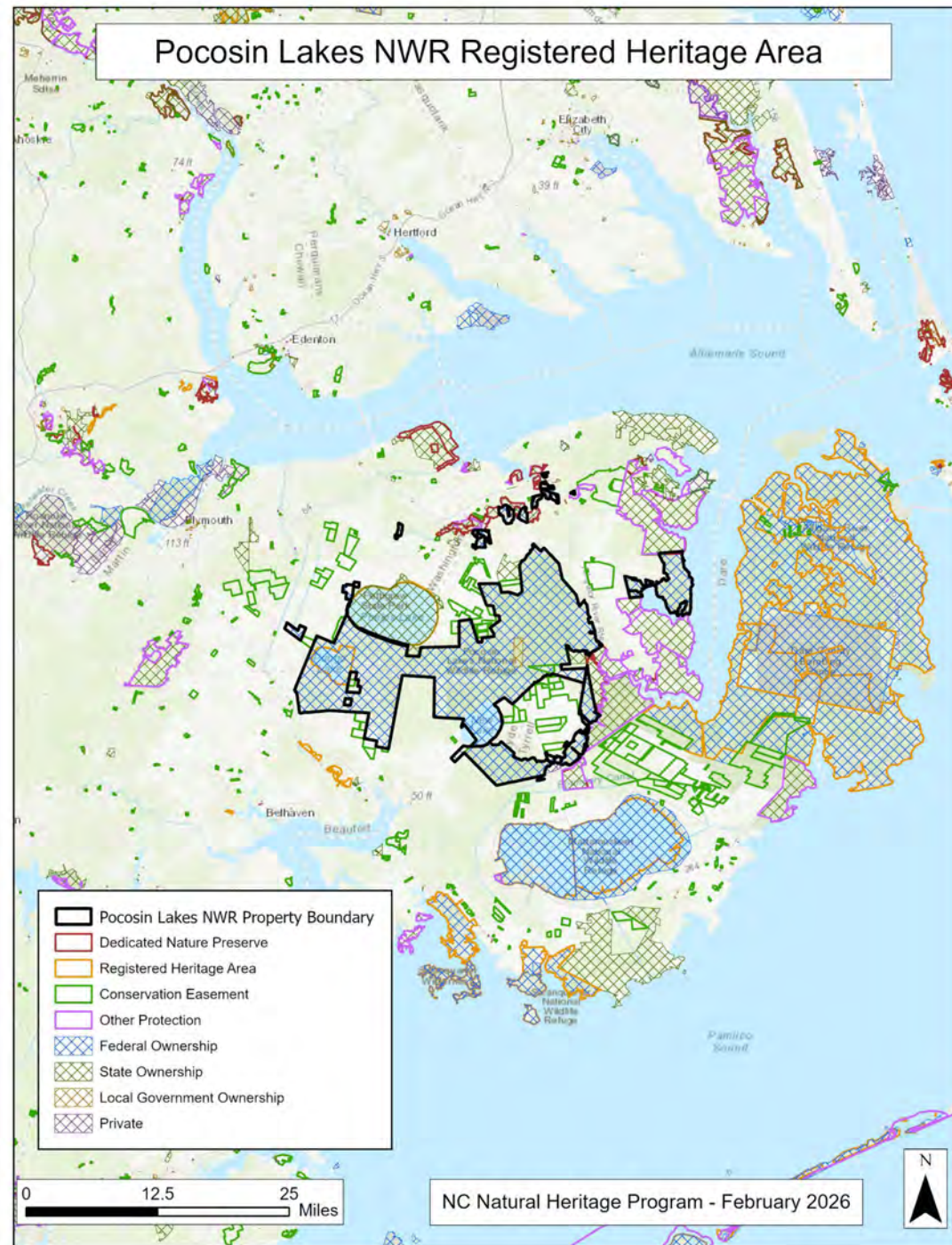


Pocosin Lakes
National Wildlife
Refuge

Washington, Tyrrell, and Hyde Counties

Secoatan, Lumbee

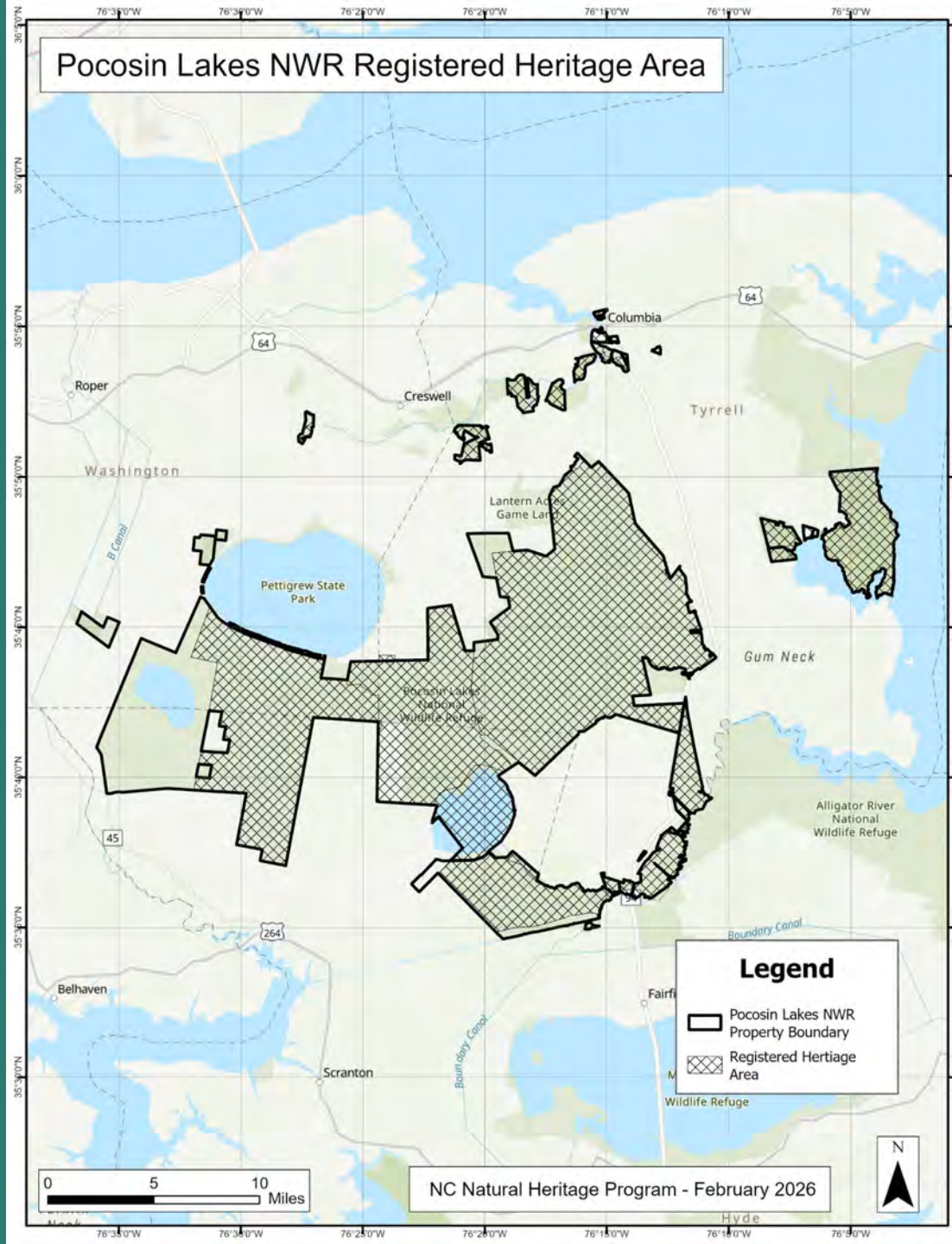
Pocosin Lakes NWR Registered Heritage Area



Pocosin Lakes NWR RHA



Pocosin Lakes NWR Registered Heritage Area



Pocosin Lakes National Wildlife Refuge

Registered Heritage Area

Voluntary Registry Agreement with US Fish and Wildlife Service

- 101,413 acres

Protects much or all of multiple natural areas:

- Upper Alligator River Pocosin – R1/C1 (42,087 acres)
- Scuppernong River Swamp Forest – R2/C2 (2,660 acres)
- Upper Alligator River Marshes and Forests – R1/C1 (2,581 acres)
- New Lake Fork Pocosin and New Lake – R1/C3 (11,377 acres)
- Harvester Road Tall Pocosin – R2/C5 (15,498 acres)
- Frying Pan Swamps – R5/C5 (7,093 acres)

Also includes Allen Road Restoration Area (20,104 acres)

Pocosin Lakes National Wildlife Refuge

Registered Heritage Area - Continued

Element Occurrences include:

- Berry's Skipper (*Euphyes berryi*) – S1/G3
- Floating Bog – S1/G1
- High Pocosin (Evergreen Subtype) – S3/G3
- Low Pocosin (Gallberry-Fetterbush Subtype) – S2/G2
- Natural Lake Shoreline Swamp (Sweetgum Subtype) – S1/G1
- Nonriverine Swamp Forest (Mixed Subtype) – S3/G3
- Nonriverine Swamp Forest (Sweetgum Subtype) – S2/G2
- Peatland Atlantic White Cedar Forest – S1/G2
- Pond Pine Woodland (Typic Subtype) – S3/G3
- Red Wolf (*Canis rufus*) – S1/G1
- Red-cockaded woodpecker (*Leuconotopicus borealis*) – S2/G3
- Tidal Swamp (Cypress--Gum Subtype) – S4/G3
- Tri-colored bat (*Perimyotis subflavus*) – S3/G3 ...