

Natural Heritage Advisory Committee

North Carolina Natural Heritage Program

February 6, 2025



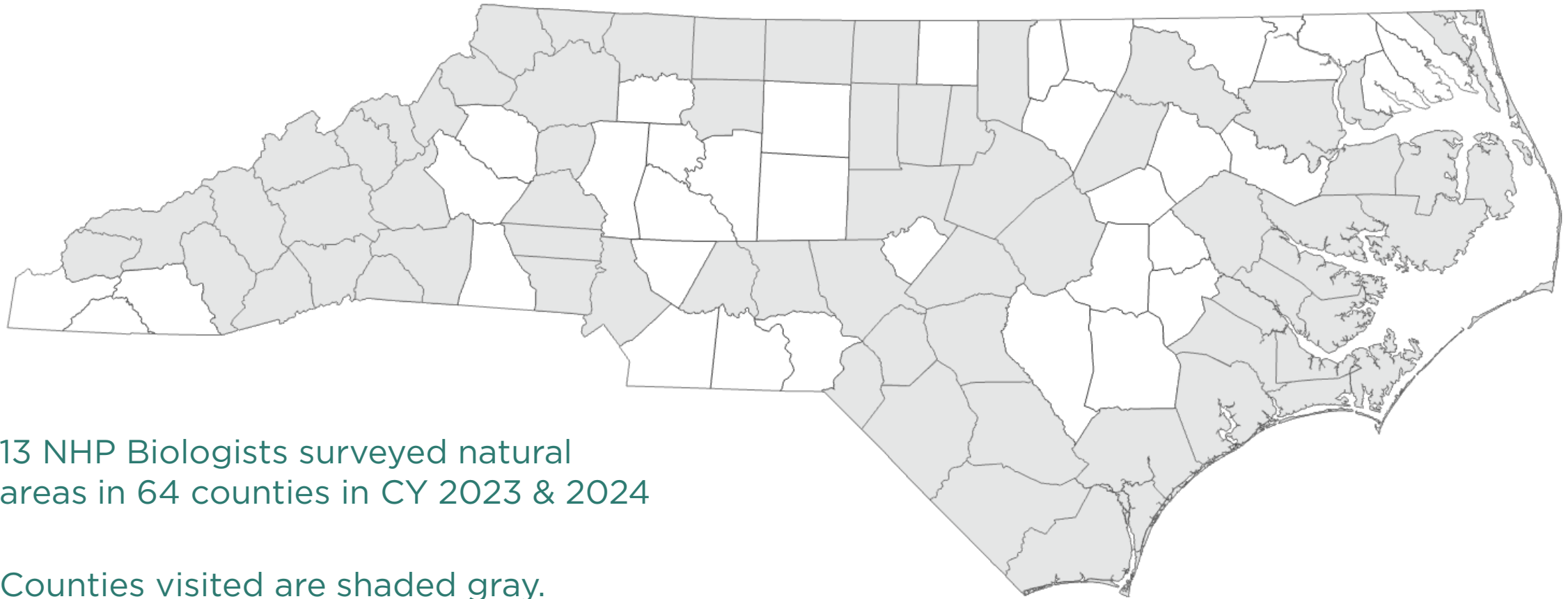
NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Natural Heritage Program

2023-2024 Biennial Report and Program Update



Natural Area Inventories



13 NHP Biologists surveyed natural areas in 64 counties in CY 2023 & 2024

Counties visited are shaded gray.

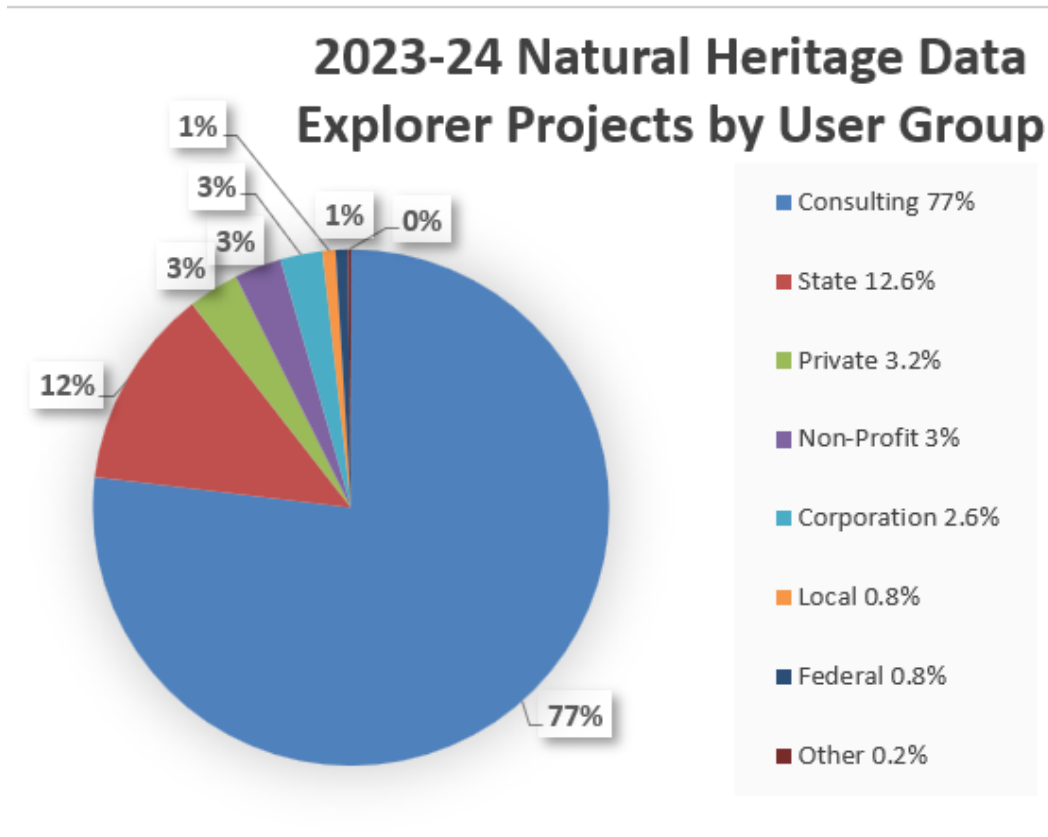
State Nature Preserves



State Nature Preserves	Number	Total Acreage	Acreage Change over 2 years
Registered Heritage Areas	350	757,389	7,766
Dedicated Nature Preserves	214	484,740	18,416
TOTAL	564	1,242,129	26,186

Information Services 2023-2024

8,205 projects were submitted to the Natural Heritage Data Explorer



Natural Heritage Program
SCIENCE SERVING CONSERVATION

Home Map Species/Community Search Terms & Conditions Data Download Requests Help

Welcome to the
North Carolina Natural Heritage Data Explorer
Interactive maps of Natural Heritage resources for North Carolina.

Natural Heritage Data Explorer (NHDE) provides interactive access to maps and data representing Natural Heritage resources and other conservation values in North Carolina. Account holders can generate site-specific project review reports. Subscription accounts allow users to view element occurrences and generate unlimited project review reports. The project review output is a report of the rare species, natural areas, and managed areas found in the specified project footprint and within a one-mile buffer.

Services

User login

E-mail or username *
misty.franklin_13

Password *

[Create new account](#)
[Request new password](#)

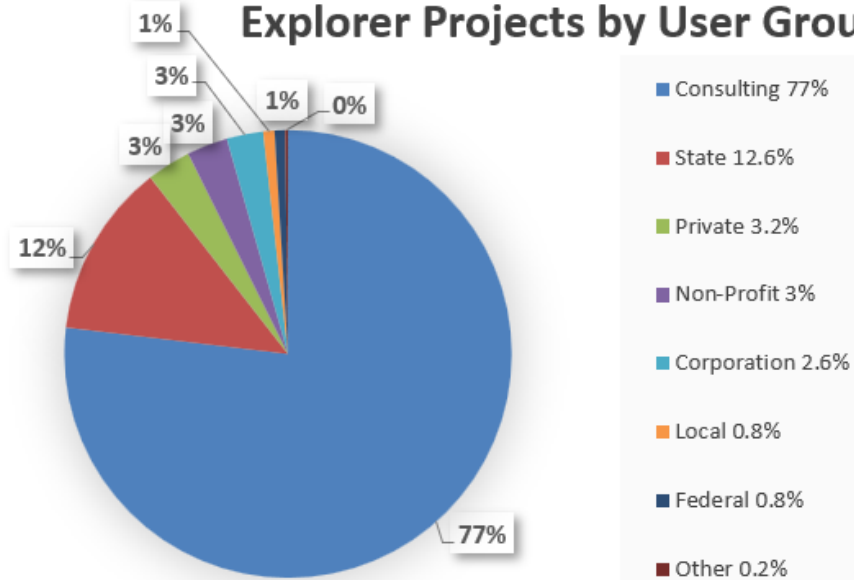
Log in

<https://ncnhde.natureserve.org/>

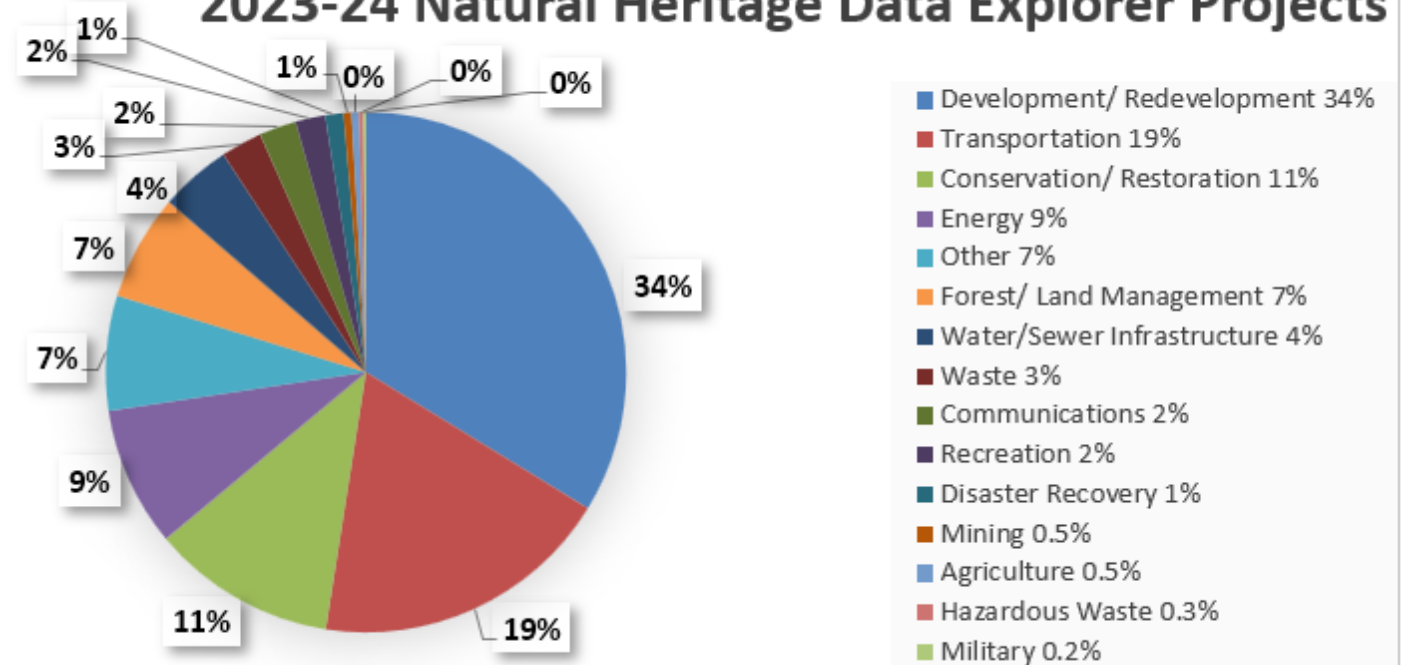
Information Services

During 2023 - 2024, 8,205 projects were submitted to the Natural Heritage Data Explorer

2023-24 Natural Heritage Data Explorer Projects by User Group



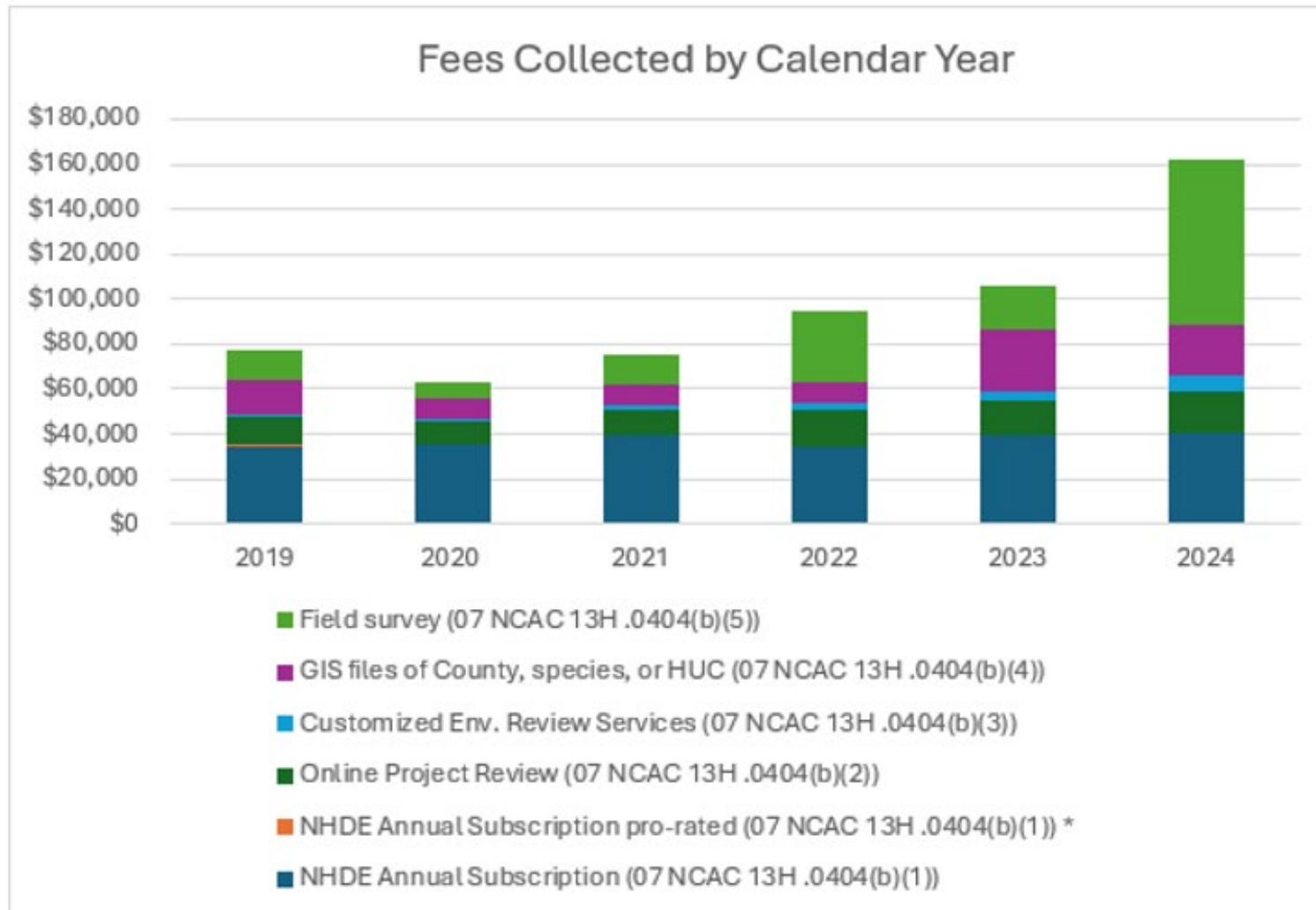
2023-24 Natural Heritage Data Explorer Projects



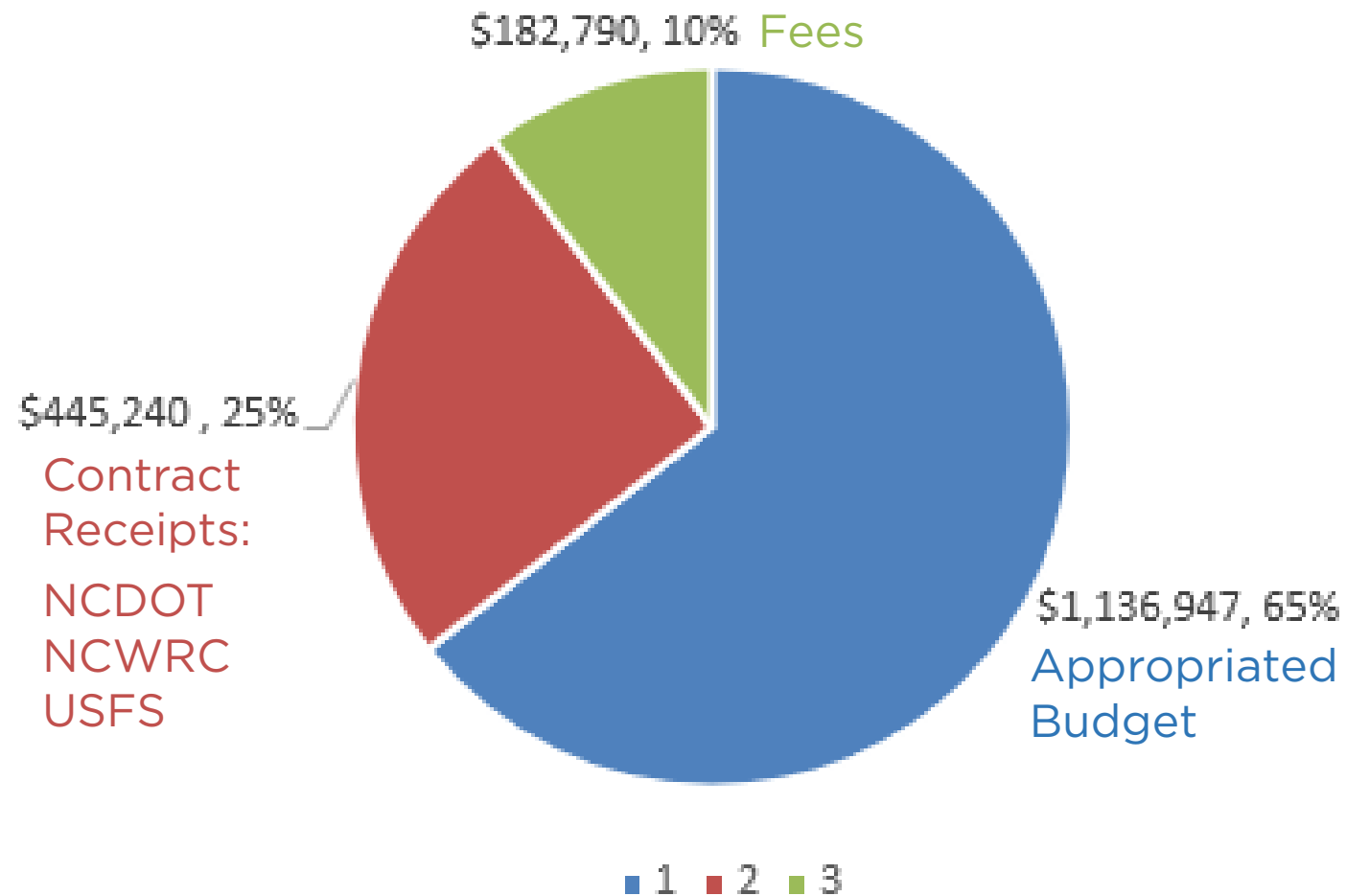
Fees collected by the NCNHP 2023-2024 calendar years.

Fee (Administrative Rule)	2023	2024
NHDE Annual Subscription (\$600)	\$39,600	\$40,500
Online Project Review (\$100)	\$14,900	\$17,900
Customized Env. Review Services (\$65/hour)	\$4,550	\$7,735
GIS files of County, species, or HUC (\$100)	\$27,925	\$21,900
Field survey (\$65/hour)	\$18,776	\$73,691
Gifts	\$200	\$1,586
Total collected	\$105,951	\$163,312

Fees collected through the NHDE website 2019-2024.

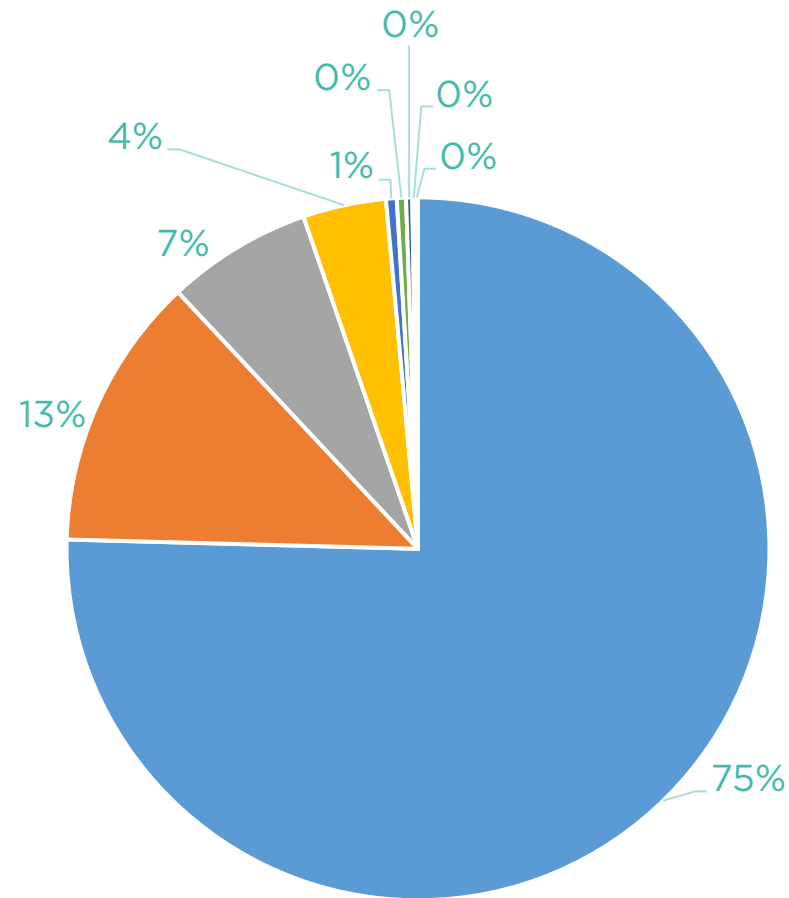


NCNHP Budget 2024-2025



NC NHP Budget FY 2024-2025

- Permanent Staff Salaries & Benefits
- Temp Staff Wages
- Software licenses and maintenance agreements
- Travel
- Tech services - phone, email, server
- Computer Equipment
- Supplies & Equipment
- Fees and Permits



Major Activities Planned 2025

- Natural Area Inventory:
 - Nature Preserve proposals
 - NC Land and Water Fund Grant applications
 - Chatham County
 - Peatlands
 - Green Swamp
 - Hurricane Impacts
- Maintain database of rare species, natural areas, conservation areas
- Respond to information requests and provide technical assistance
- Assess imperilment of pollinators – bees & butterflies

North Carolina Natural Heritage Program

Recommendations for Dedication and Registry

Submitted to the Natural Heritage Advisory Committee

February 6, 2025



NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Dedication

- Agreement is attached to the land
- Agreement cannot be rescinded by the owner
- Requires approval of Council of State and Governor
- Specific management rules



Dedication zones

Primary Area: contains rare species populations, rare communities, and/or high-quality examples of common communities.

Primary (Restoration) Area: contains elements as above, but requires some form of active management to restore. If timber management is allowed within these areas, it is with a specific time-limited objective (e.g., removal of off-site canopy species). Part of the Primary Area.

Special Management Area: a zone which retains some natural features (e.g., rare species population(s)), but is maintained for other purposes (e.g., transmission line right-of-way).

Buffer Area: areas within a tract which contribute to the ecological function of the Primary Area, but which do not qualify as Primary.

Municipal and Private land dedications

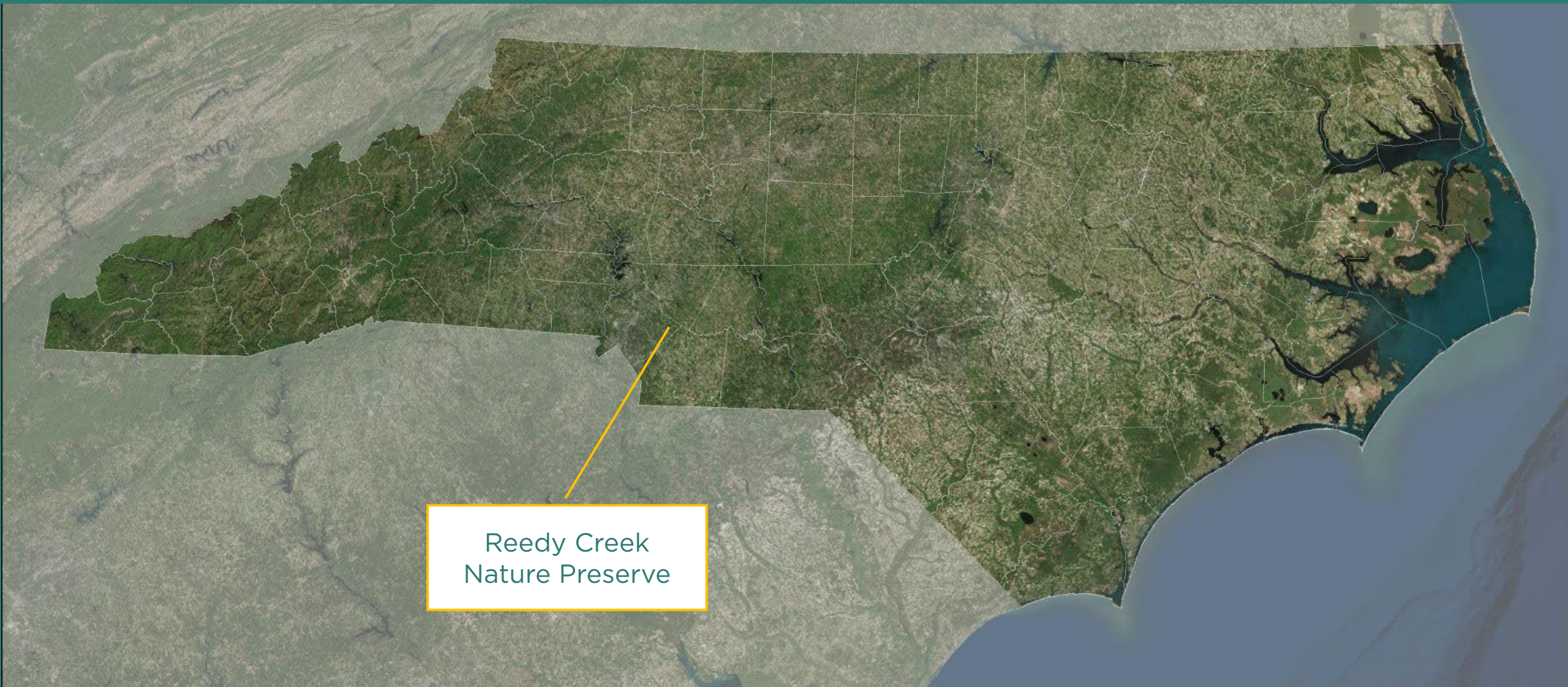
- State versus non-state dedications: Non-state dedications more closely resemble conservation easements – recorded with deed
- Work with State Property Office. Property interest is transferred to the state.
- Require legal description – metes and bounds
- The Nature Conservancy's Nags Head Woods was the first dedicated nature preserve in North Carolina (July 1986)

Reedy Creek Preserve Dedicated Nature Preserve



Basic Mesic Forest at Reedy Creek Nature Preserve
Photo Courtesy of Lenny Lampel

Reedy Creek Preserve DNP



Reedy Creek
Nature Preserve

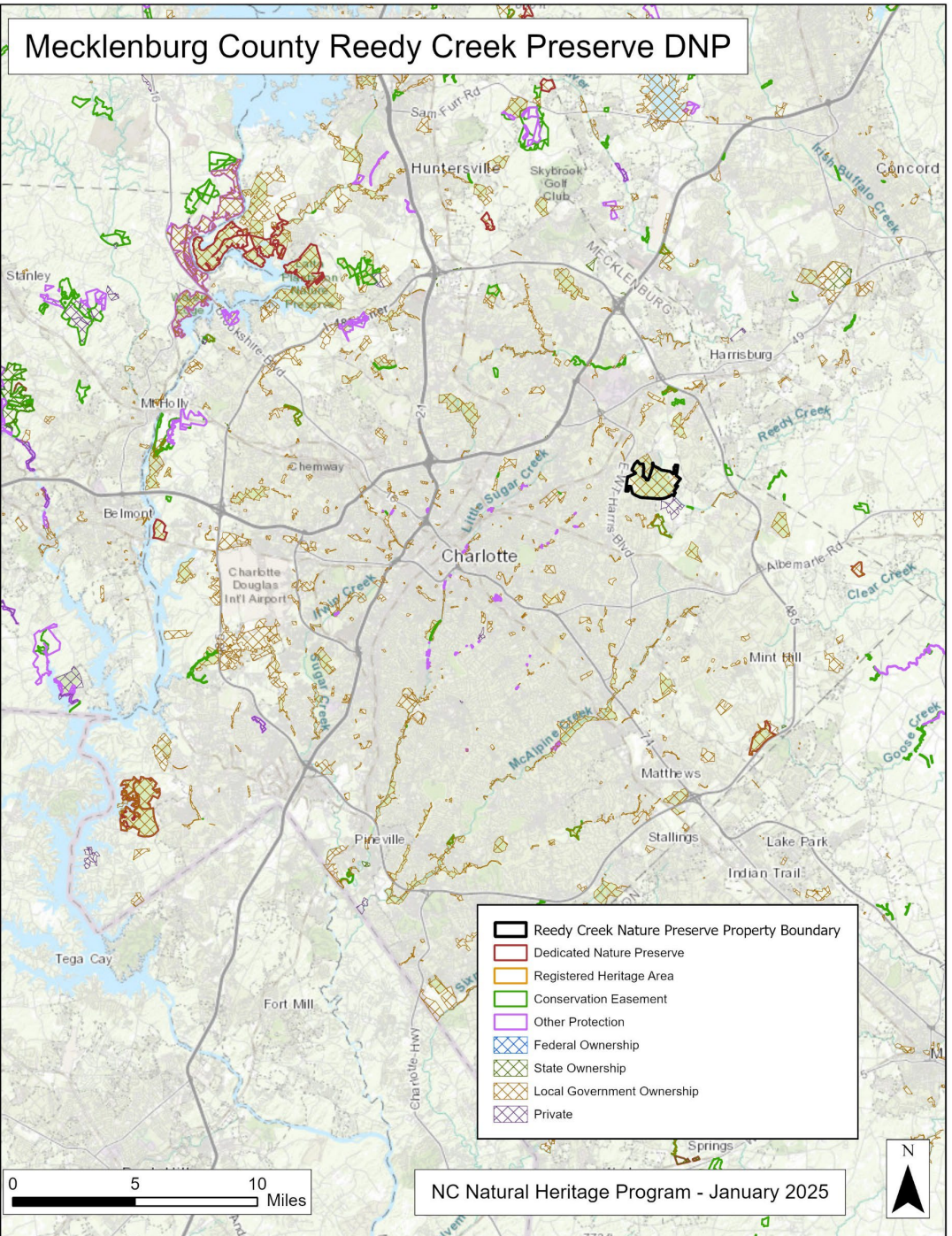
Mecklenburg County

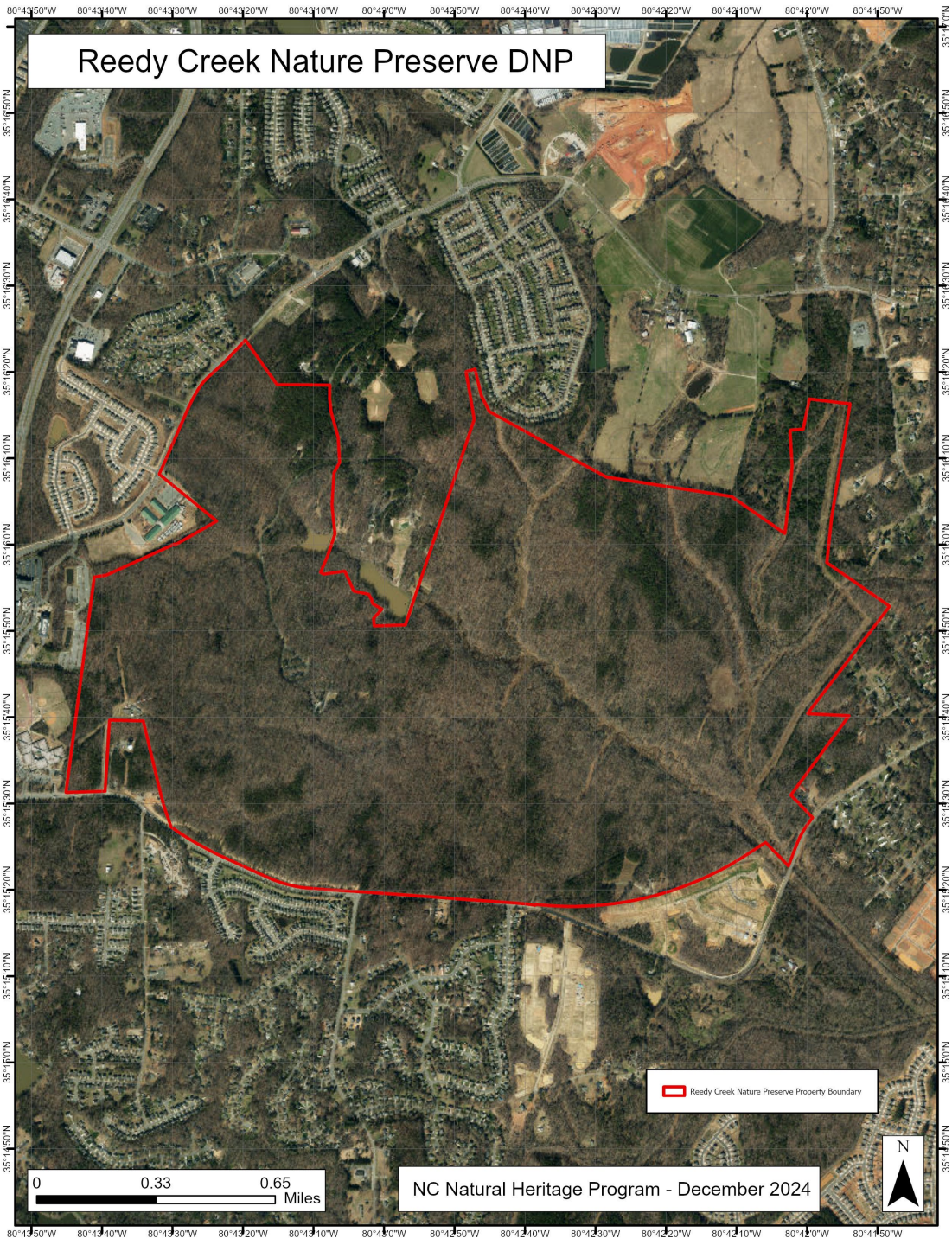
Cheraw, Catawba

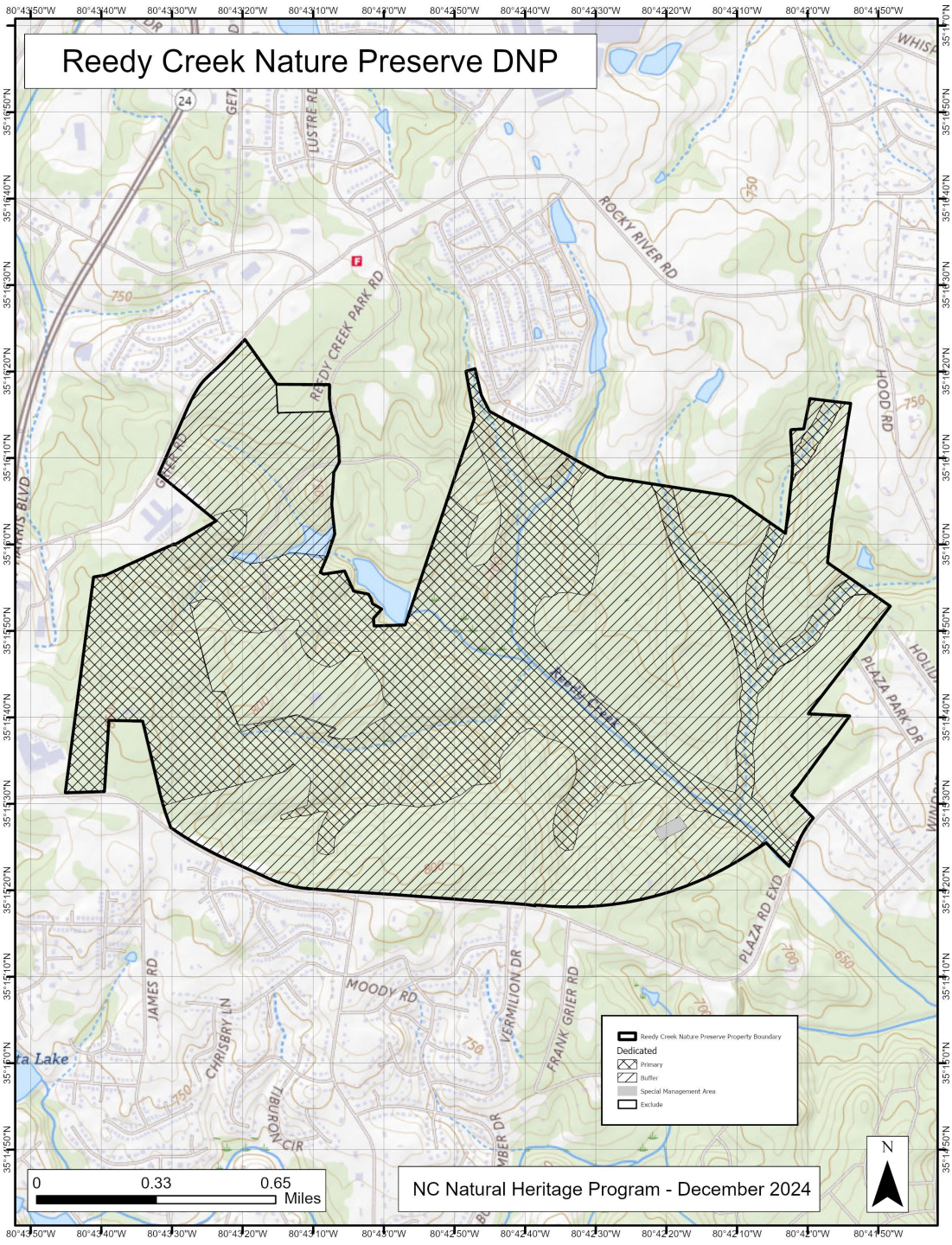


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Mecklenburg County Reedy Creek Preserve DNP







Mecklenburg County Reedy Creek Nature Preserve

Dedicated Nature Preserve

- New voluntary dedication
- 924 acres
 - 404 acres Primary; 520 acres Buffer, including one acre special management area
- Element occurrences include:
 - Dry-Mesic Basic Oak--Hickory Forest (Piedmont Subtype) S3G3
 - Basic Mesic Forest (Piedmont Subtype) S3G3
 - Dry-Mesic Oak—Hickory Forest (Piedmont Subtype) S4G4
 - Piedmont Alluvial Forest S4G4
 - Mesic Mixed Hardwood Forest (Piedmont Subtype) S4G3
 - Georgia Aster (*Symphyotrichum georgianum*) S3G3
 - Georgia Holly (*Ilex longipes*) S1G4
- Most of Reedy Creek Nature Preserve Forests natural area – R3C4

State land dedications

- Dedication of qualifying portions required when lands were acquired with NC Land and Water Fund grants.
- Dedication is done by Letter of Allocation



Aquatic Standards for State Land Dedication

- 100 ft riparian zone on all perennial streams
 - Minimum standard
- 300 ft riparian zones along perennial streams with NHP Aquatic Habitat
 - If Aquatic Habitat has federally listed species, add 200 ft riparian zone on all perennial tributary streams to the Aquatic Habitat
 - If Aquatic Habitat does not have federally listed species, add 100 ft riparian zones on all perennial tributary streams
- NHP maintains a dataset with these parameters
 - Updated annually
 - Based on National Hydrography Dataset (NHD) maintained by USGS and NC Stream Mapping Project

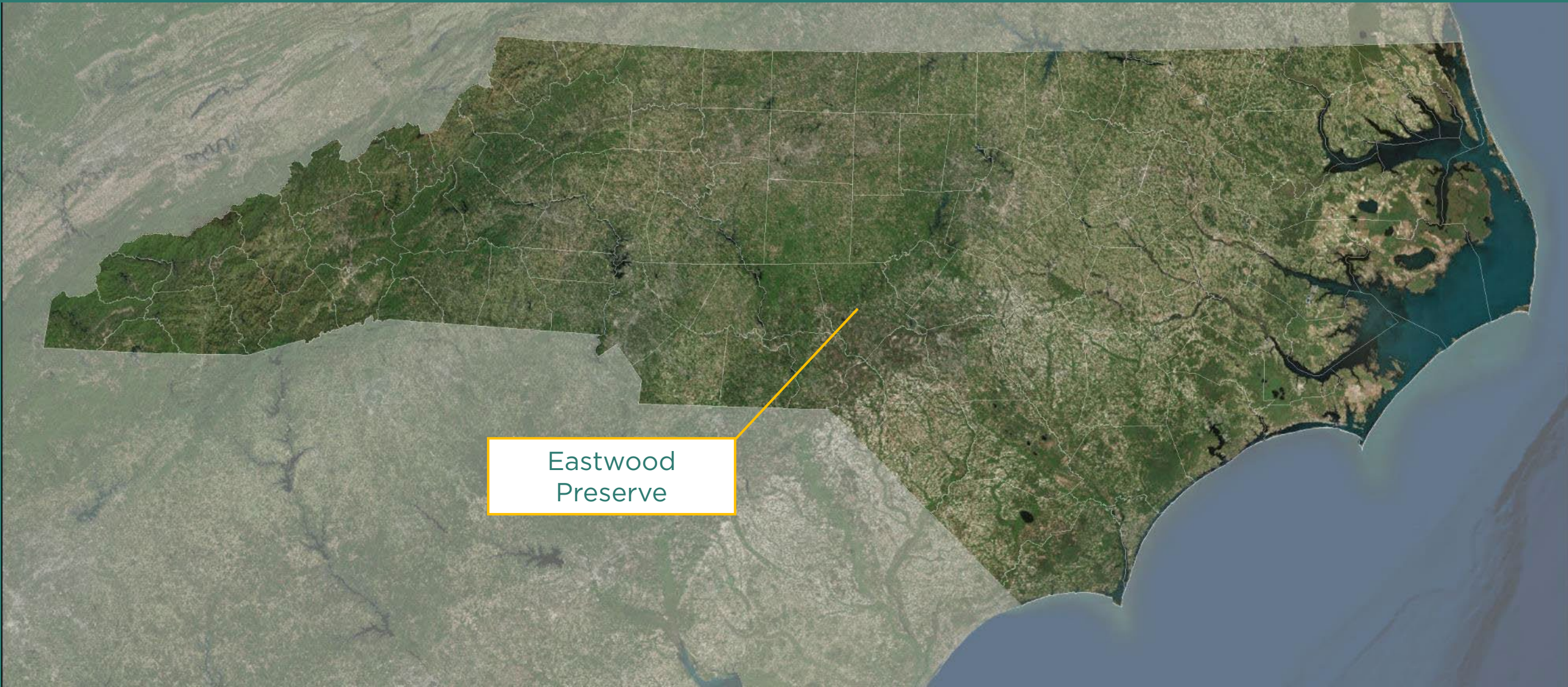
Eastwood Plant Conservation Preserve

Dedicated Nature Preserve



Harris Tract Photo courtesy of NCLWF presentation to Board

Eastwood Plant Conservation Preserve DNP



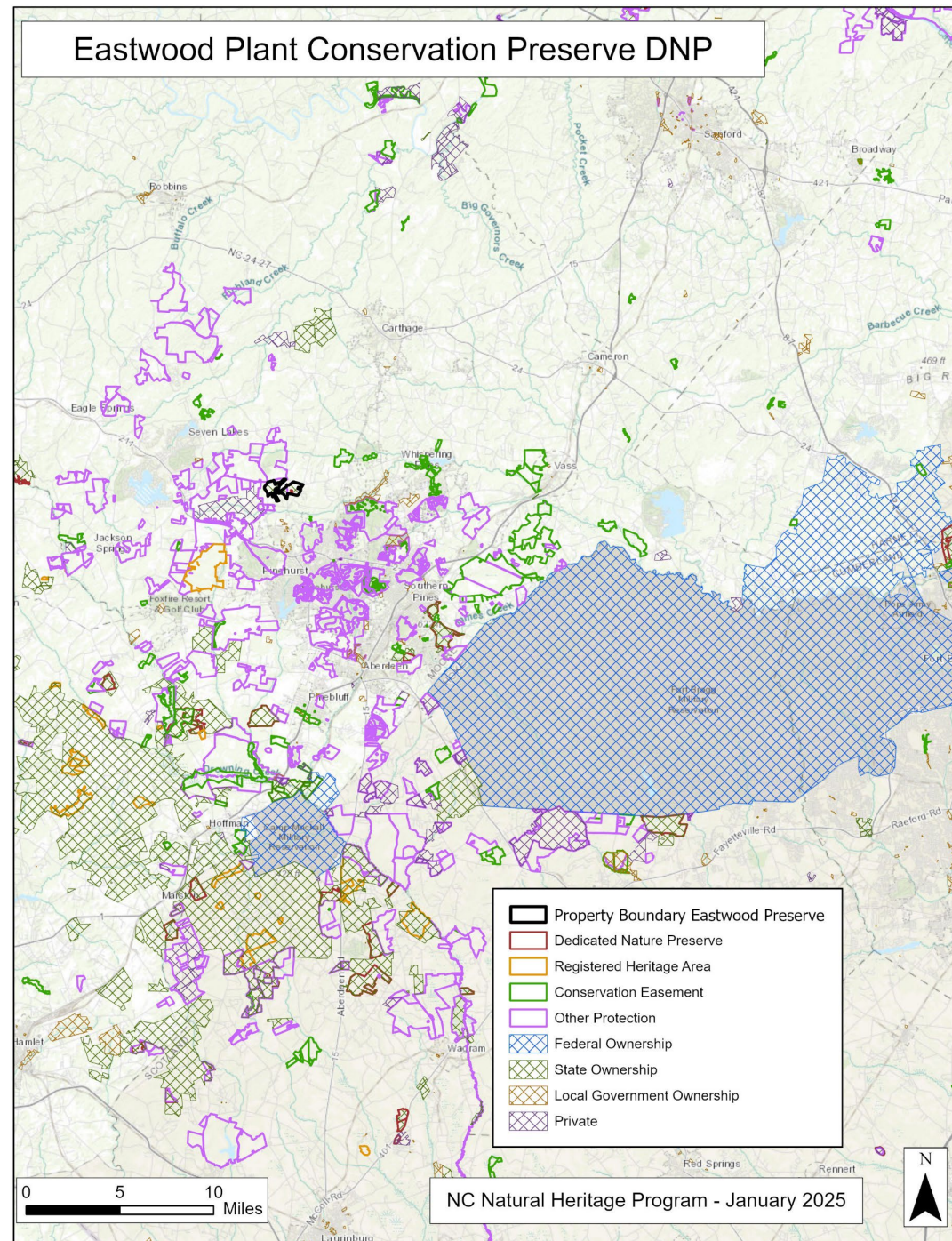
Moore County

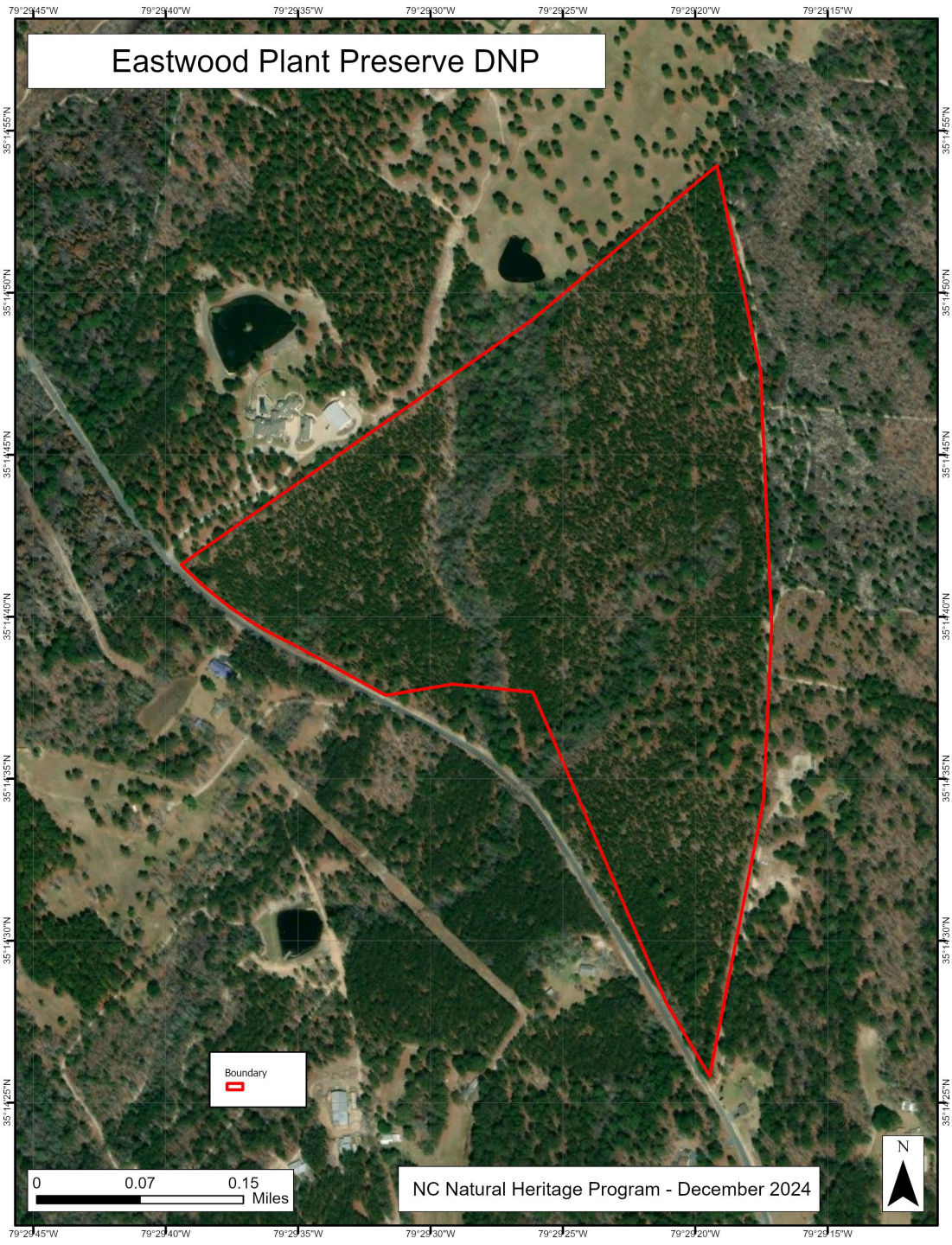
Skaruhreh/Tuscarora, Lumbee



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Eastwood Plant Conservation Preserve DNP





Eastwood Plant Preserve DNP

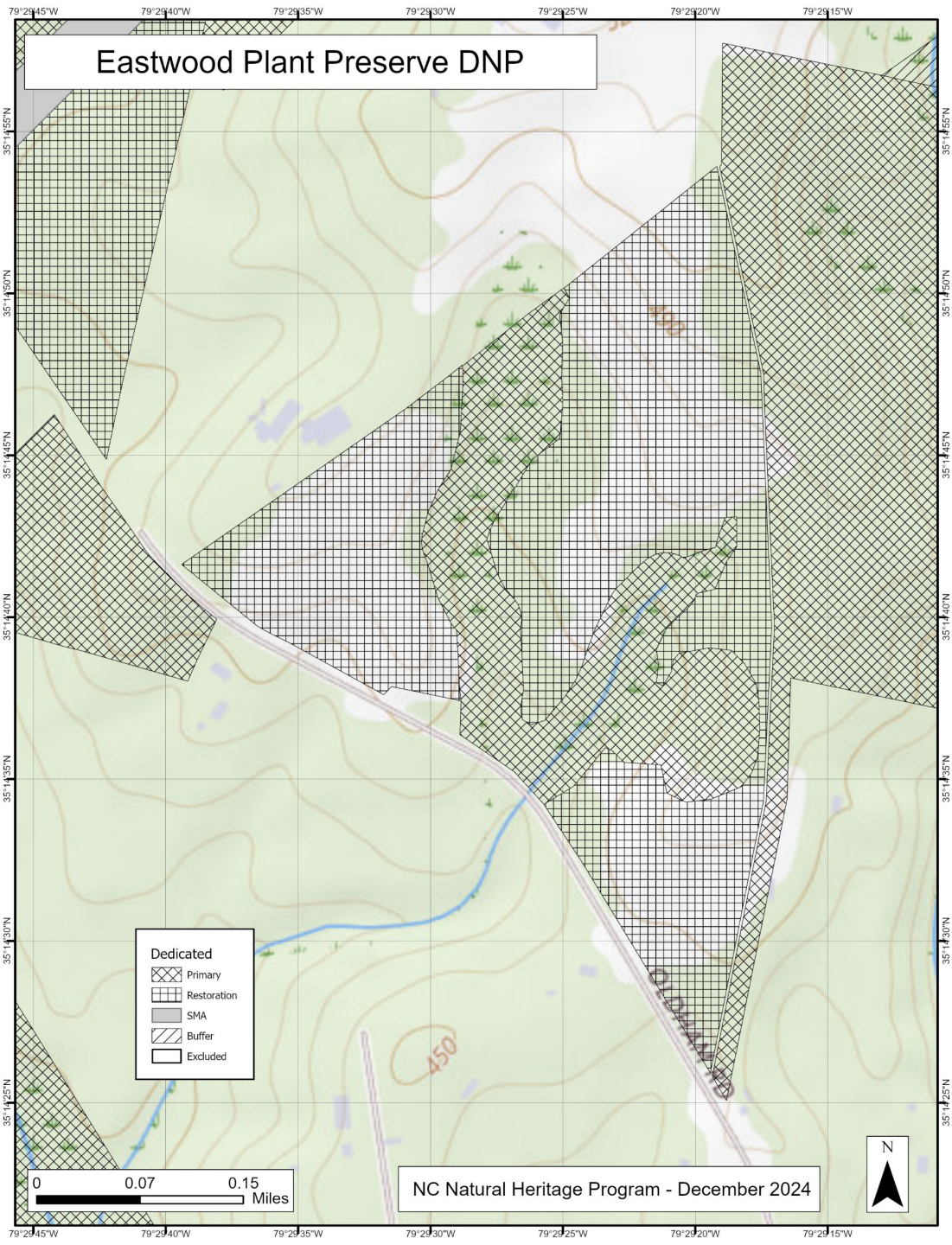
Boundary



0 0.07 0.15
Miles

NC Natural Heritage Program - December 2024

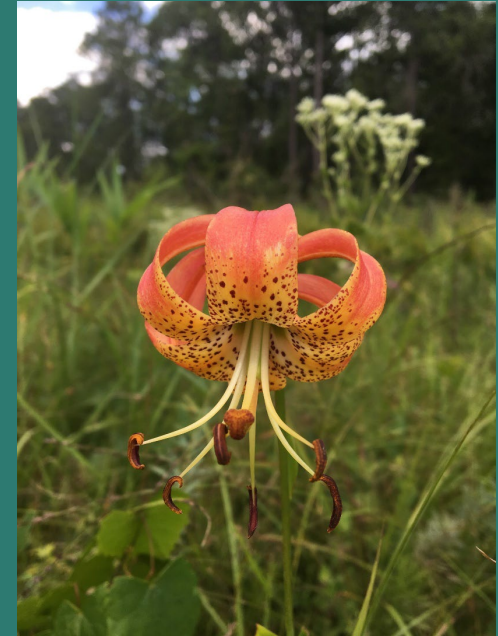




Eastwood Plant Conservation Preserve

Dedicated Nature Preserve

- Amendment to add property (NCLWF #2022-122)
- Adds 99 acres to DNP
 - 99 acres primary, including 38 acres restoration
- Total DNP acres: 441 acres
 - 386 acres primary
 - includes 62 acres of restoration and 17 acres of special management area
 - 55 acres buffer
- Element occurrences include:
 - Streamhead Pocosin S4G4
 - Xeric Sandhill Scrub (Typic Subtype) S3G3
- Additional areas of 100-foot riparian zones
- Part of Nicks Creek/Eastwood Sandhills natural area R1C2
- Plan for careful removal of red maple and sweetgum in drains (Primary Area) to allow fire to penetrate, and restore conditions for Sandhills lily, Pine Barrens treefrog.



Sandhills Lily at
previously dedicated
area

North Carolina Zoo Dedicated Nature Preserve



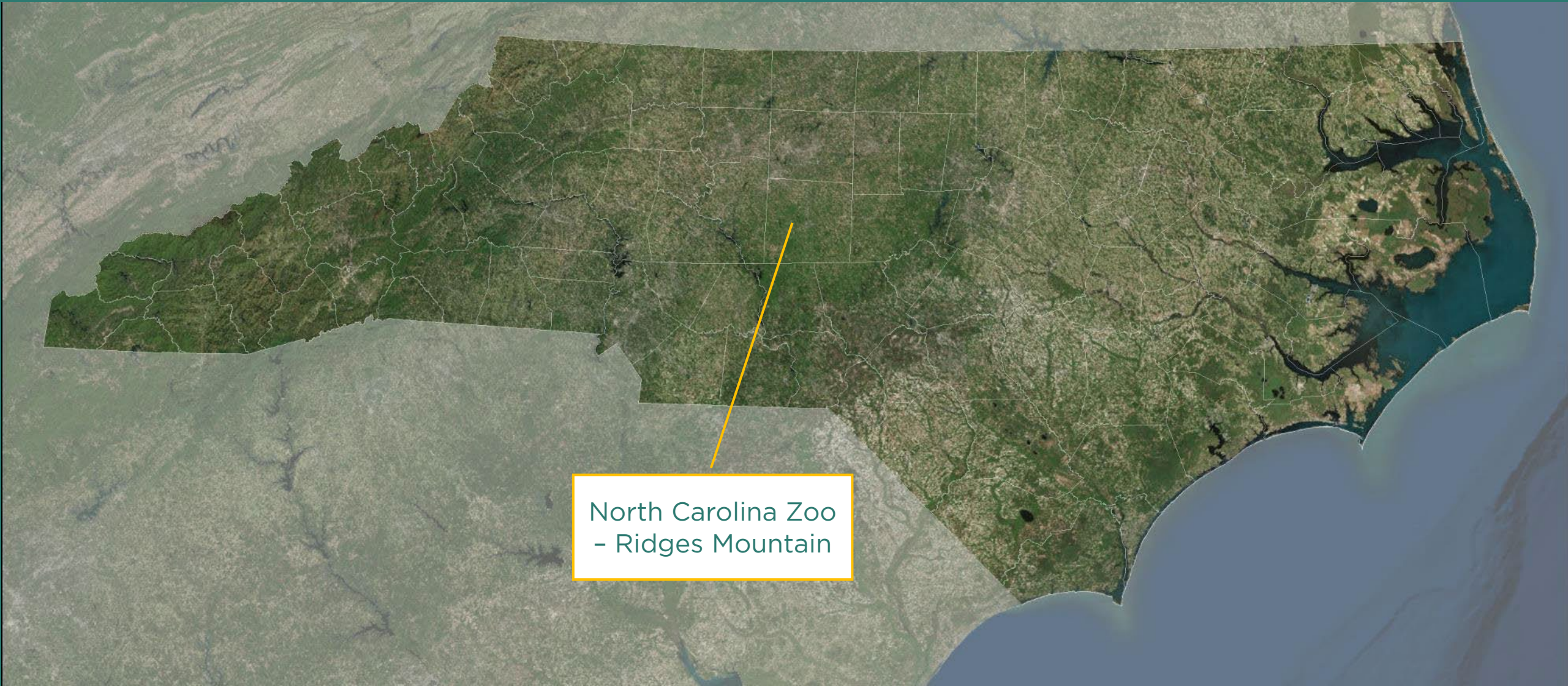
Southern Anemone (*Anemone berlandieri*)
Photo courtesy David Siripoonsup

NC Endangered Plant



Southern Anemone (*Anemone berlandieri*) at Ridges Mountain
Photo courtesy of Nell Allen

North Carolina Zoo Dedicated Nature Preserve



North Carolina Zoo
- Ridges Mountain

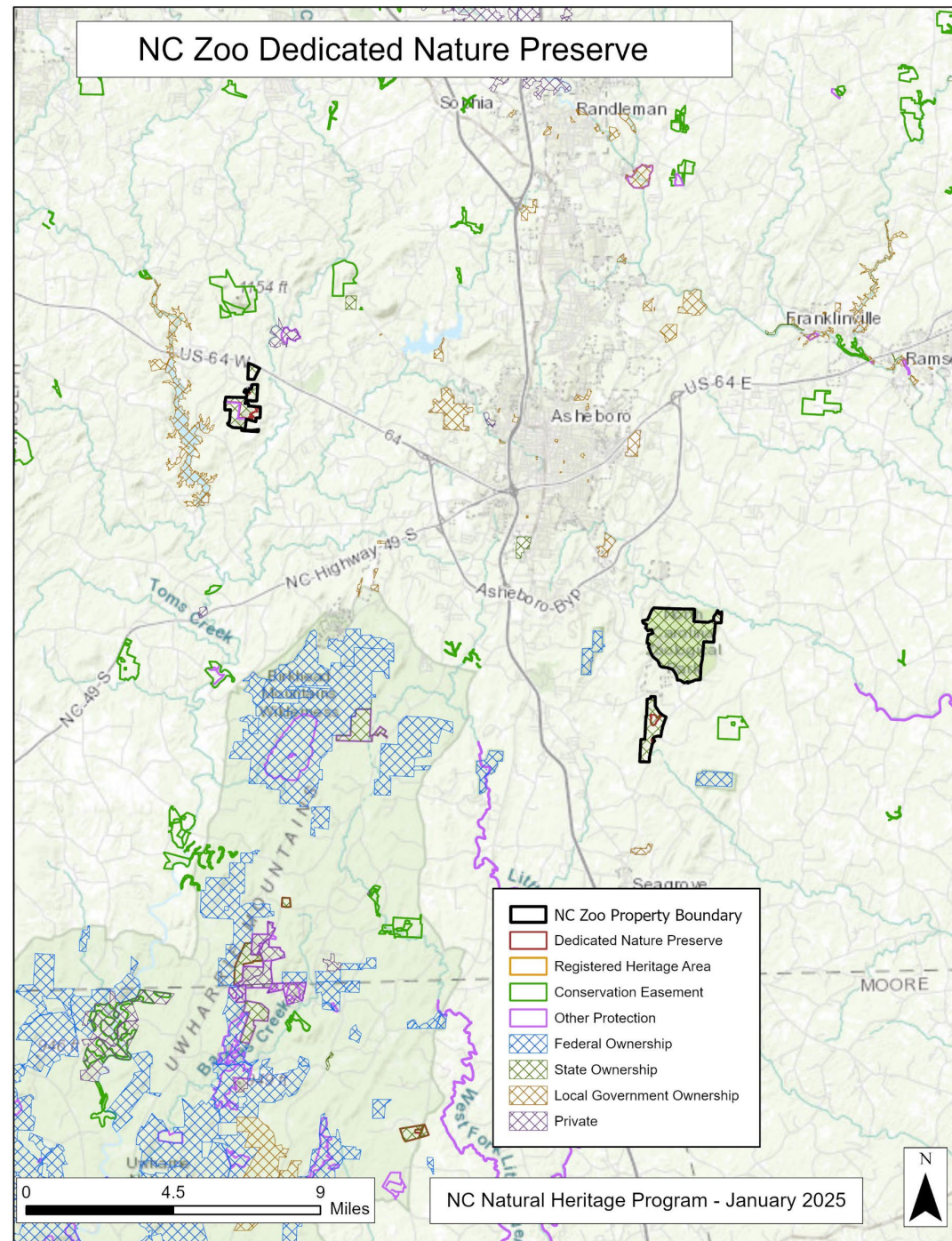
Randolph County

Occaneechi, Catawba, Cheraw



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NC Zoo Dedicated Nature Preserve



NC Zoo Dedicated Nature Preserve

The map displays the following features and designations:

- NC Zoo Property Boundary:** Indicated by a thick black line.
- Dedicated Nature Preserve:** Indicated by a red outline.
- Registered Heritage Area:** Indicated by an orange outline.
- Conservation Easement:** Indicated by a green outline.
- Other Protection:** Indicated by a purple outline.
- Federal Ownership:** Indicated by a blue cross-hatch pattern.
- State Ownership:** Indicated by a green cross-hatch pattern.
- Local Government Ownership:** Indicated by a brown cross-hatch pattern.
- Private:** Indicated by a grey cross-hatch pattern.

Geographical features include Toms Creek, Little Back Creek, and the Uwharrie River. Major roads shown are US-64 W, US-64 E, NC-49 S, and NC-49 N. Nearby towns include Asheboro, Franklinville, and Ramoth. The map also shows the Uwharrie Mountain and the Uwharrie River.

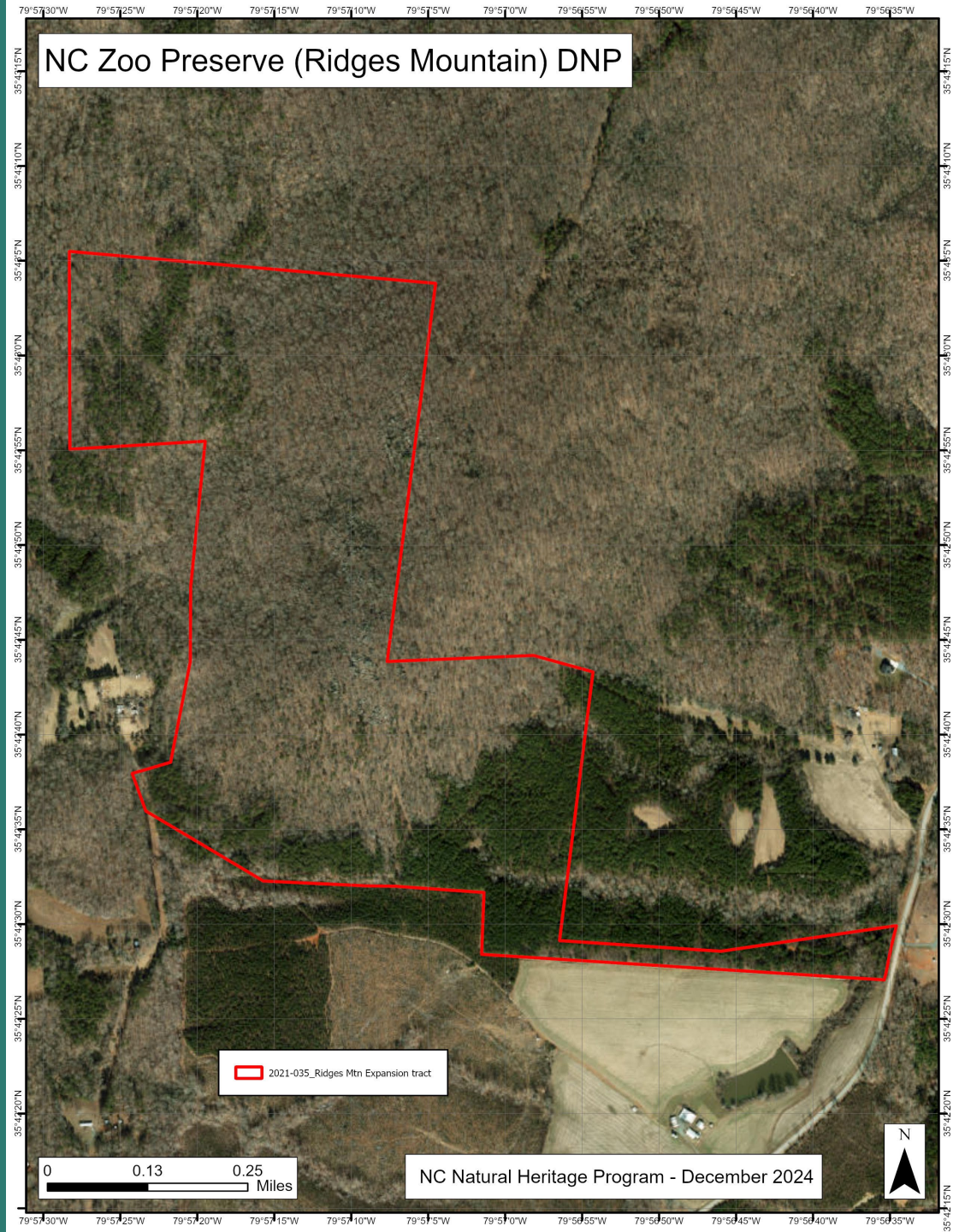
Scale: 0 to 9 Miles.

NC Natural Heritage Program - January 2025

0 4.5 9 Miles



NC Zoo Preserve (Ridges Mountain) DNP

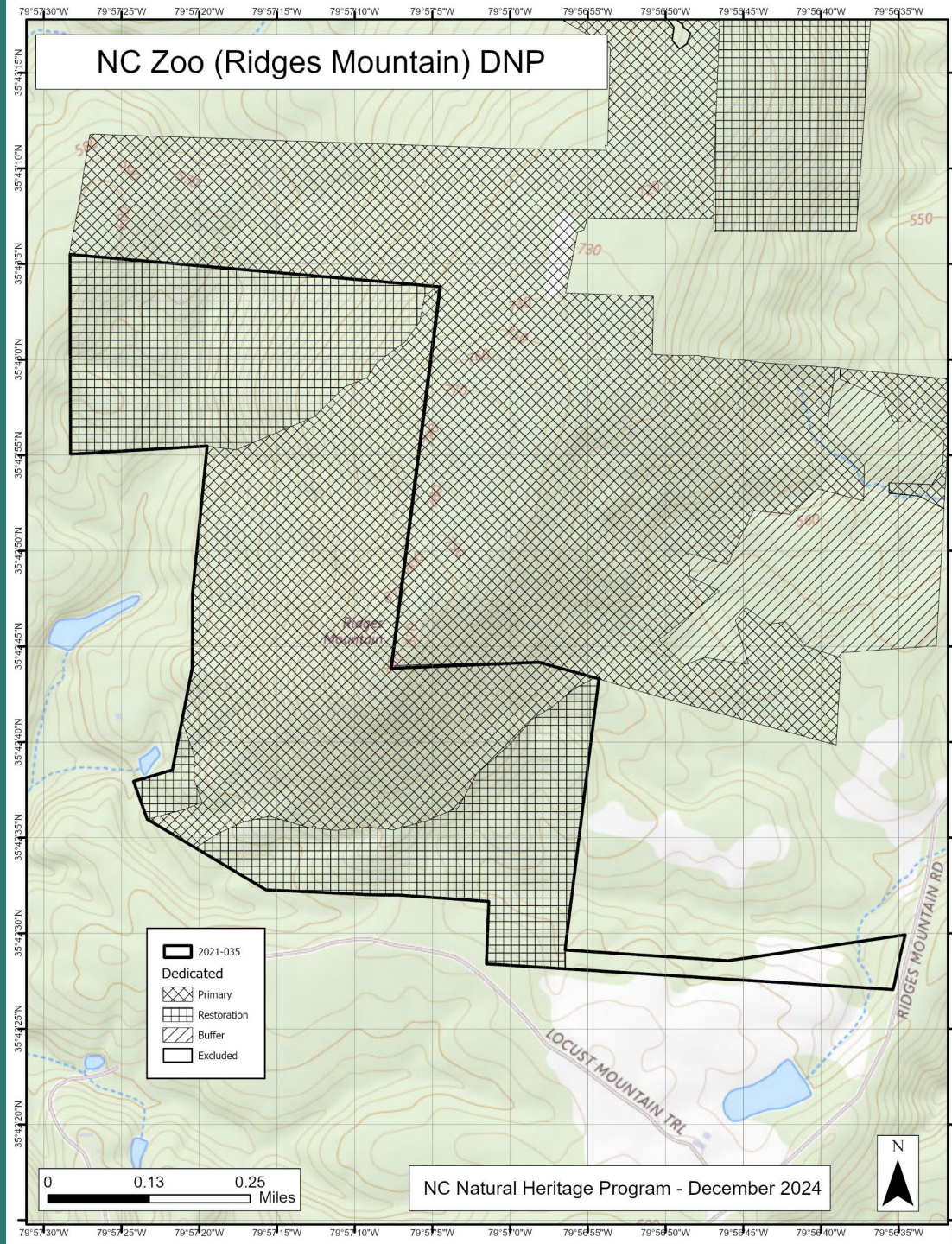


2021-035_Ridges Mtn Expansion tract

0 0.13 0.25
Miles

NC Natural Heritage Program - December 2024





North Carolina Zoo Dedicated Nature Preserve Ridges Mountain expansion

Amendment to add property at Ridges Mountain (NCLWF2021-035)

- Adds 170 acres to DNP
 - 144 acres Primary, including 97 restoration; 26 acres Buffer
- Total DNP acres: 731 acres
 - 705 acres primary, includes 97 acres of restoration
 - 26 acres buffer –previously excluded area in DNP
- Element occurrences include:
 - Piedmont Basic Glade (Typic Subtype) S2G2
 - Piedmont Monadnock Forest (Typic Subtype) S3G3
 - Dry Basic Oak--Hickory Forest S2G2
 - Dry-Mesic Basic Oak--Hickory Forest (Piedmont Subtype) S3G3
 - Crested Coralroot (*Hexalectris spicata*) S2G5
 - Southern Anemone (*Anemone berlandieri*) S1G4, NC Endangered
- Part of Ridges Mountain natural area (R1C3)



Crested Coralroot (*Hexalectris spicata*)
Photo courtesy of Crystal Cockman

NHP Project Review Policy

Amendments to boundary – Changes to the spatial boundary of an agreement.

1. Amendments to accommodate public works projects (i.e. roads, bridges, sewer and water lines or associated infrastructure) may be approved at staff level without review by the Natural Heritage Advisory Committee if the following conditions are met:

a. The amendment would affect less than 1 acre or 5% of the Preserve, whichever is smaller.

AND

b. The project would not impact a natural heritage element occurrence.

New River State Park Dedicated Nature Preserve



New River State Park, Elk Shoals area

New River State Park DNP

New River
State Park



Ashe, Alleghany Counties

Cherokee, Tutelo, Yuchi, Cheraw, Moneton



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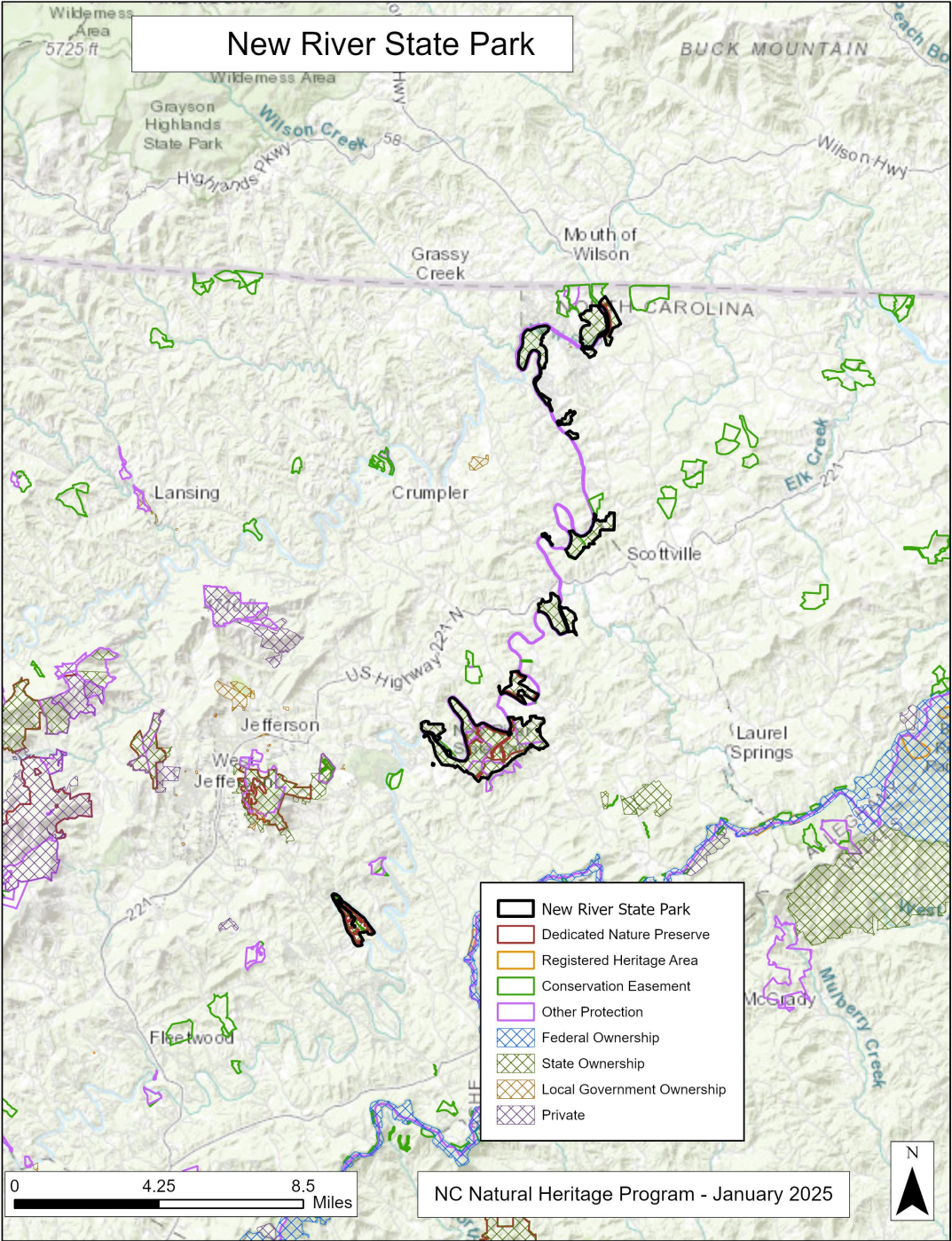
New River State Park Dedicated Nature Preserve Bridge Replacement HB-0054, South Fork New River

- Replace a bridge damaged by Hurricane Helene in September 2024

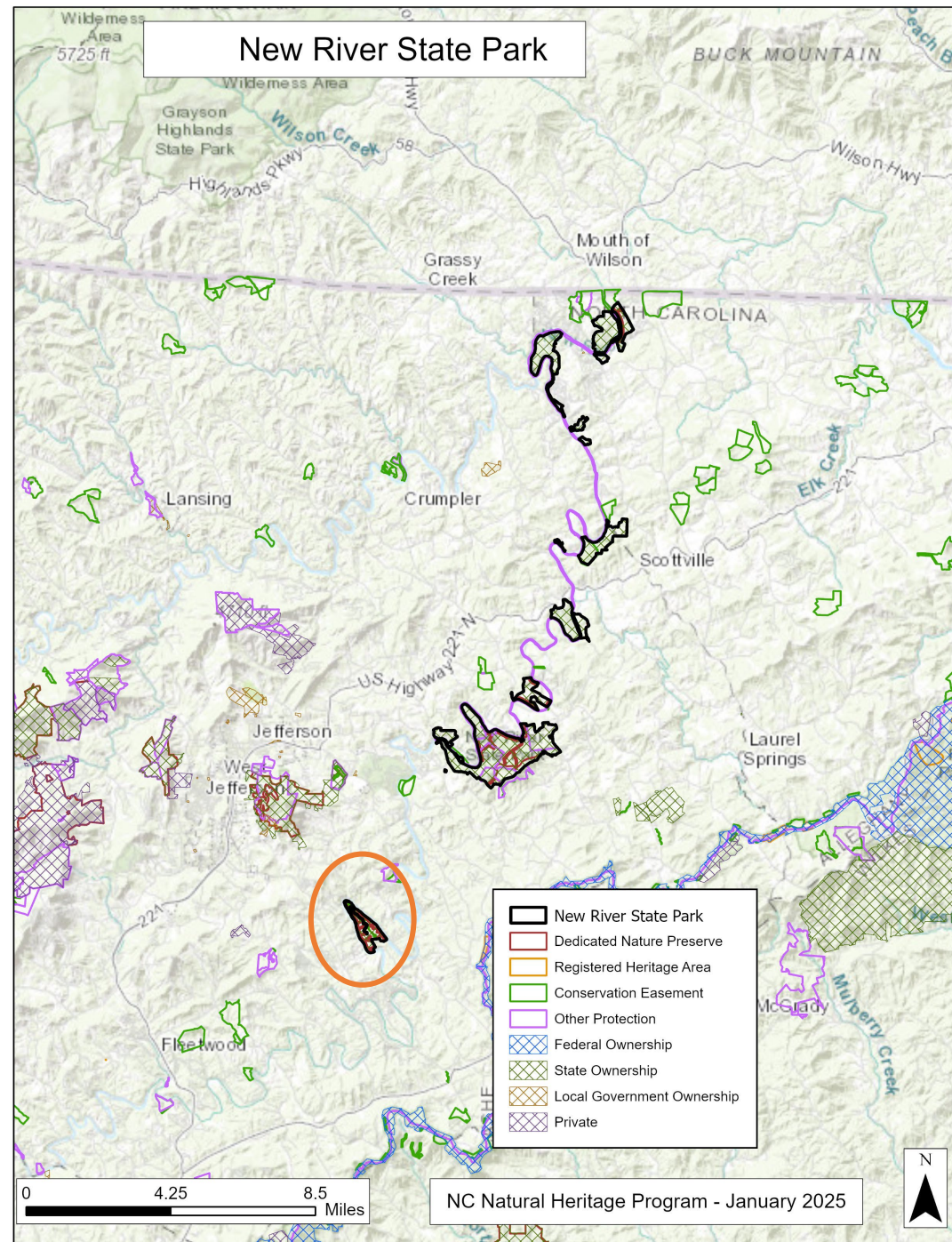


Photo from
highcountrync.com

New River State Park

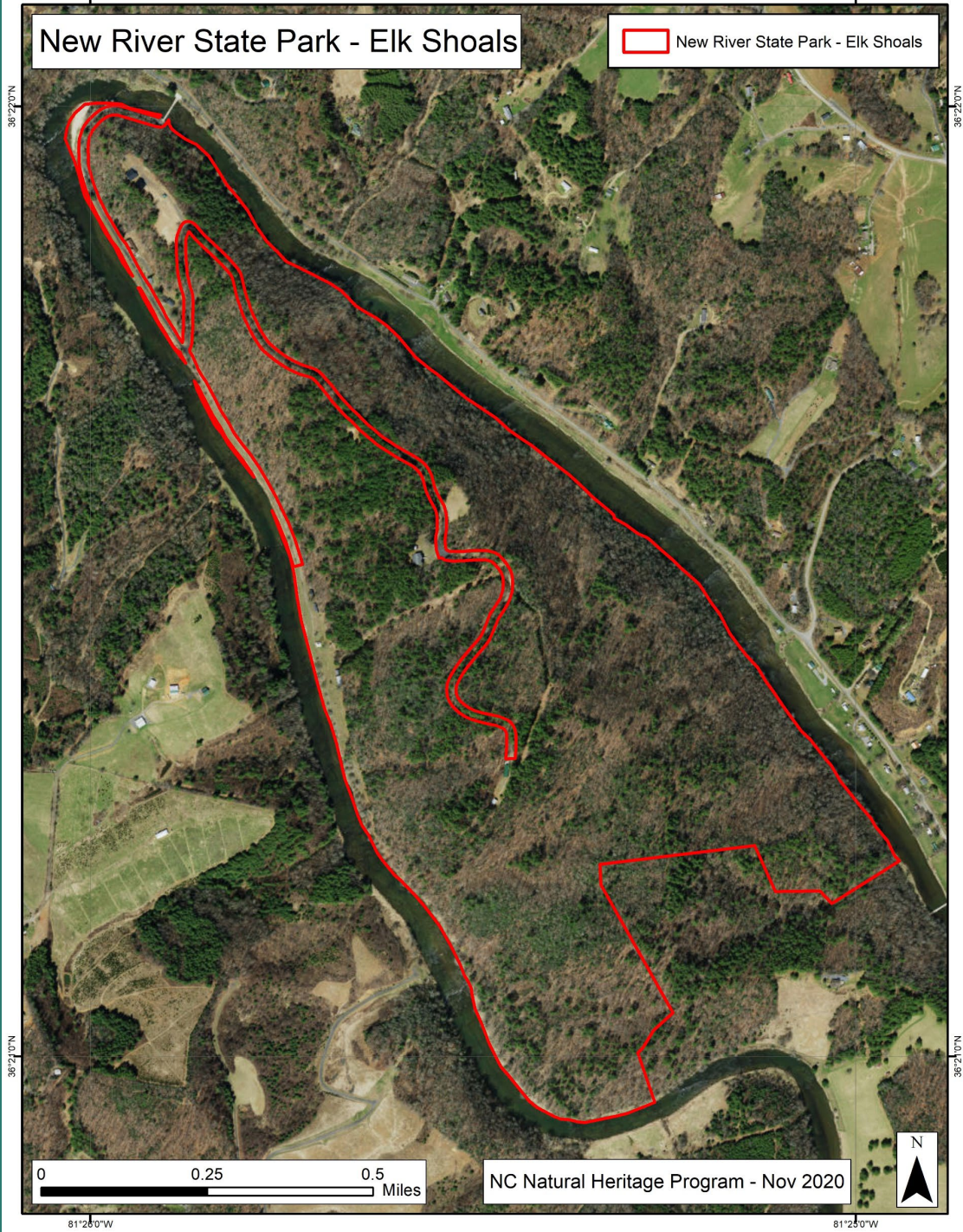


New River State Park



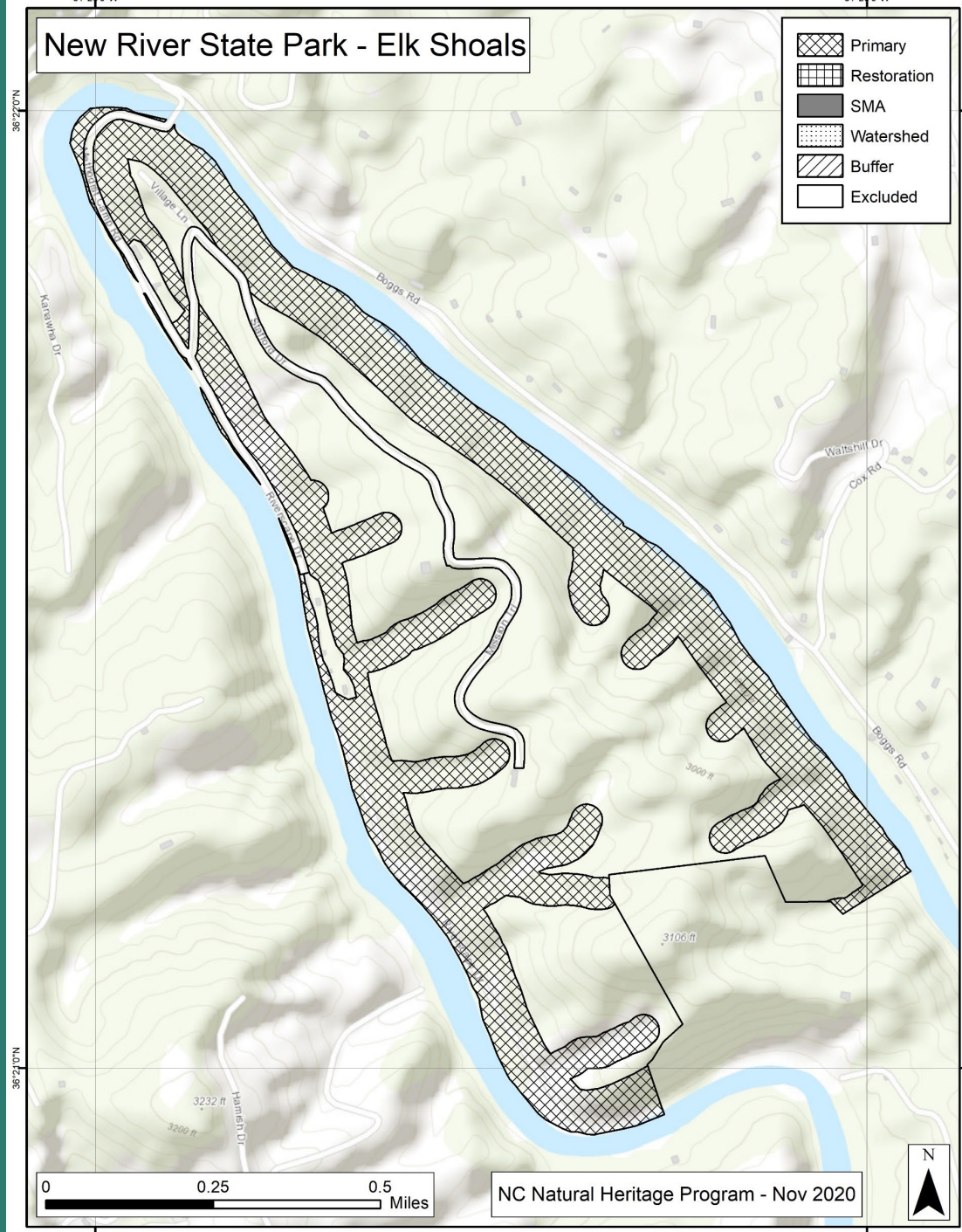
New River State Park - Elk Shoals

New River State Park - Elk Shoals



New River State Park - Elk Shoals

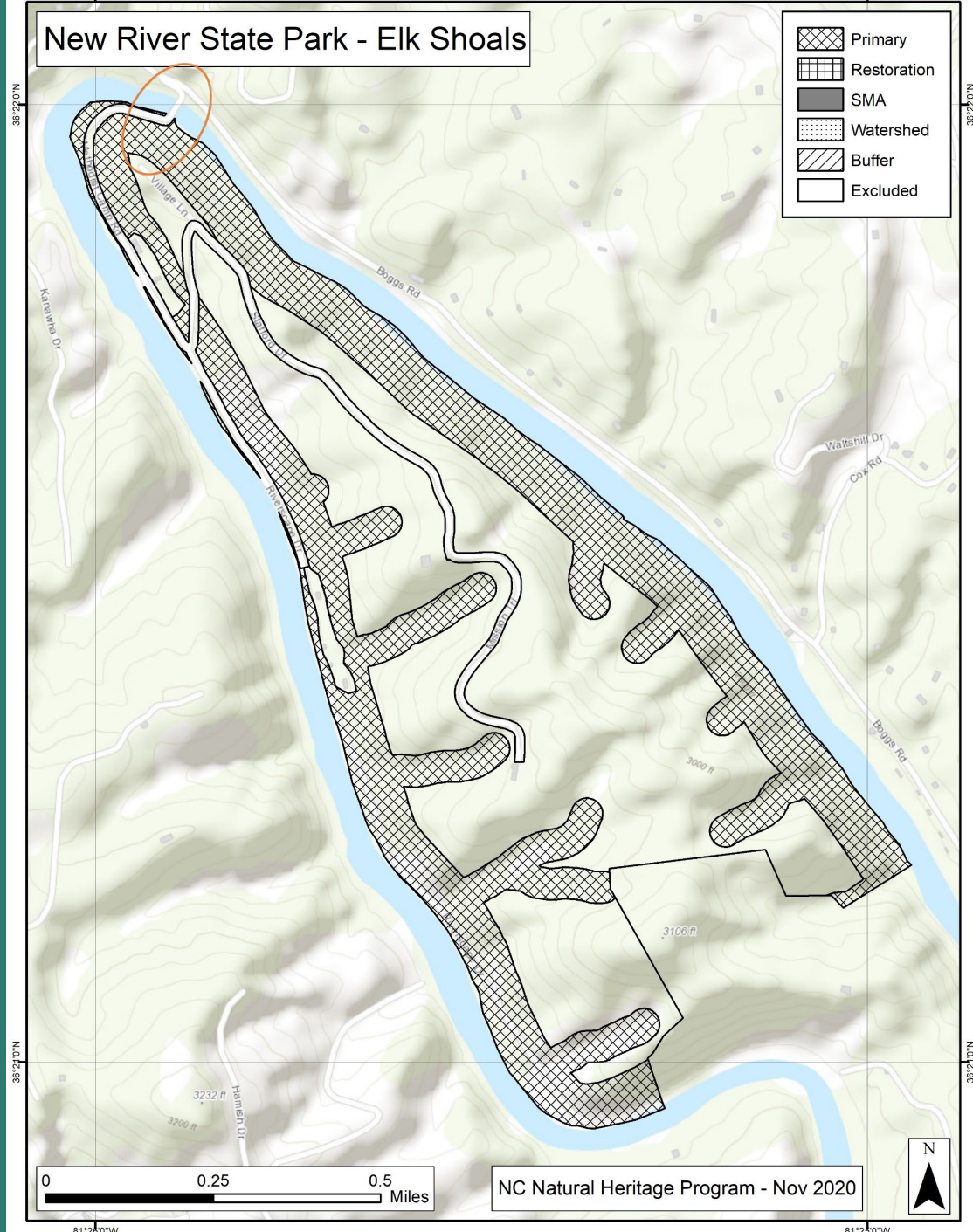
- Primary
- Restoration
- SMA
- Watershed
- Buffer
- Excluded



NC Natural Heritage Program - Nov 2020

New River State Park - Elk Shoals

- Primary
- Restoration
- SMA
- Watershed
- Buffer
- Excluded

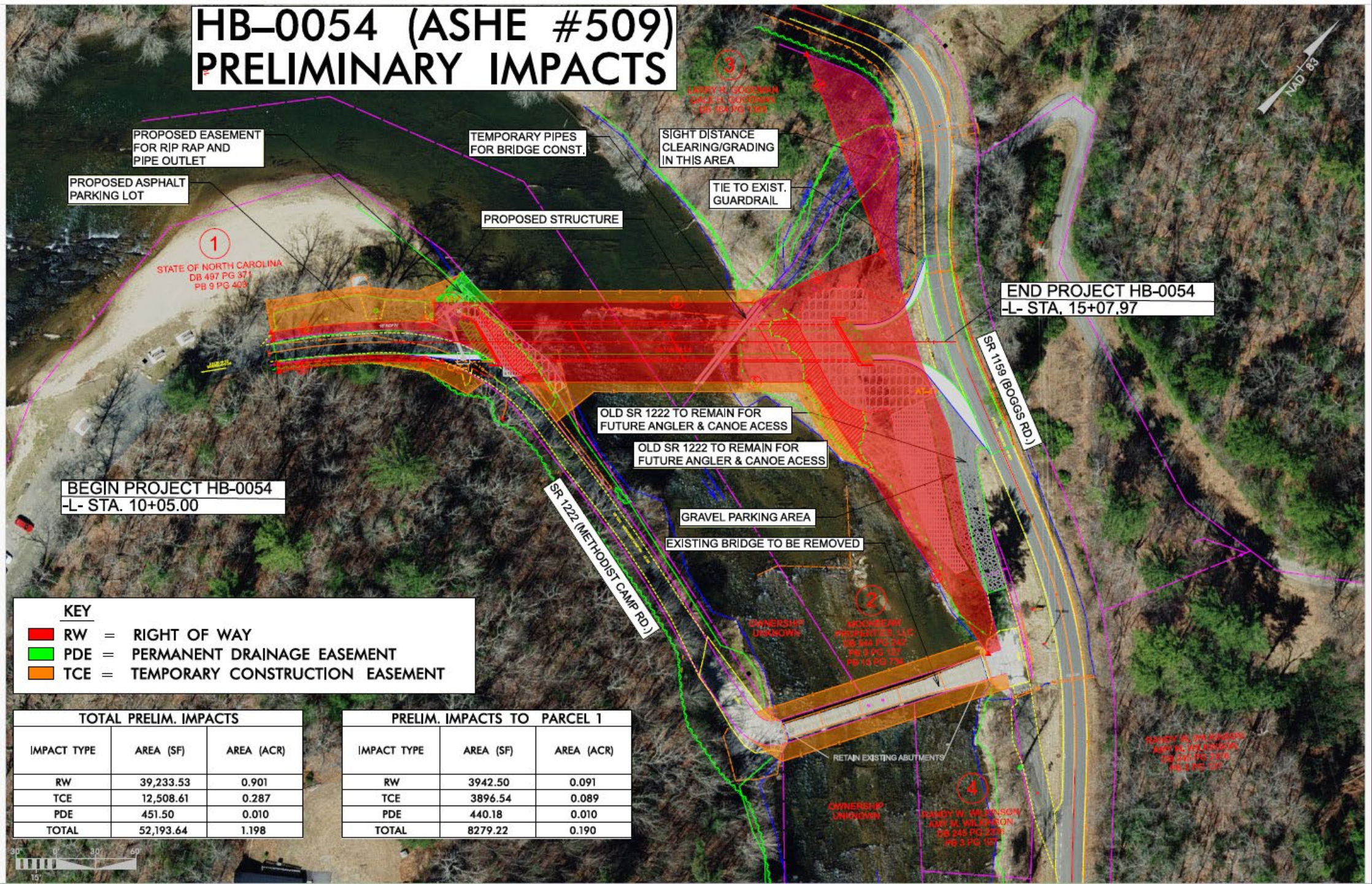


NC Natural Heritage Program - Nov 2020





HB-0054 (ASHE #509) PRELIMINARY IMPACTS



New River State Park Dedicated Nature Preserve

- Acquisition of subject property funded by NC Land and Water Fund Grant (NCLWF #2016-055 Elk Shoals)
 - Dedication of qualifying portions was a grant condition



New River State Park

Potential dedicated area impacted

- 0.043 acre permanent right of way
- 0.011 acre permanent drainage easement
- 0.060 acre of temporary construction easement

Natural Heritage resources intersecting with HB-0054, New River State Park DNP

Scientific Name	Common Name	Rank	NC Status	US Status
<i>Cryptobranchus alleganiensis alleganiensis</i>	Eastern Hellbender	S3G2T2	Species of Concern	Proposed Endangered
<i>Percina gymnocephala</i>	Appalachia Darter	S2G4	Significantly Rare	
<i>Phenacobius teretulus</i>	Kanawha Minnow	S3G3	Species of Concern	
<i>Elliptio dilatata</i>	Spike	S2G5	Species of Concern	
<i>Leptoxis dilatata</i>	Seep Mudalia	S3G3	Species of Concern	
<i>Etheostoma kanawhae</i>	Kanawha Darter	S3G4	Significantly Rare	

Bridge Replacement HB-0054

NHP project review

- There will be temporary impacts from both demolition and construction, but they are confined to a short distance of the riverbank and instream habitat.
- Primary Custodian (DPR) has indicated support
- NHP staff concur that the removal of the bridge damaged in Hurricane Helene is necessary, and the design of the replacement bridge is a substantial improvement over the former bridge.
- Need Natural Heritage Advisory Committee consideration for amendment.
- Public hearing will be scheduled.
- Review by Land and Water Fund Staff and/or Board and DNCR Secretary.

NCDOT Avoidance and Minimization Measures

- Designed to confine impacts to existing DOT right-of-way to the extent possible.
- Number of piers in water were reduced from four to two.
 - Span lengths increased as much as practical to achieve FEMA compliance.
- Removal of the impervious area along existing SR 1222 (Methodist Camp Road) from the new bridge to the existing will allow more of the natural bank area to be restored.
- NCDOT will coordinate the bridge demolition timeframe with NC Wildlife Resources Commission.
- NCDOT will utilize BMPs during construction, including erosion and sediment control measures.

Temporary Construction Easement

- Temporary construction easements to tie in fill slopes, provide a temporary work pad for construction, and to properly tie-in the parking lot.
- In previous amendments to dedications, Temporary Construction Easement areas have remained in dedicated area (with amendment).

Amendment Considerations (from Project Review Policy)

1. Clearly serve the public interest and provide a public or community benefit.
2. Have a net beneficial or neutral effect on the relevant conservation values protected by the nature preserve.
3. Comply with all applicable federal, state and local laws.
4. Not result in private benefit other than the benefit inherent to the conservation agreement.
5. Must be consistent with the conservation purpose(s) and intent of the nature preserve.
6. Must be consistent with the documented intent of the donor(s), other grantors and any direct funding source.
7. Demonstrate that no practicable alternatives exist and that the impacts have been minimized.

DOT/DNCR public hearing to be scheduled

- If amendment is required, NHAC would make recommendation to DNCR Secretary.
- Review by NC LWF Staff and Board, as necessary.

Yadkin River Game Land



Piedmont Levee Forest and Floodplain Pool photos courtesy of Nathan Shepard

Yadkin River Game Land DNP

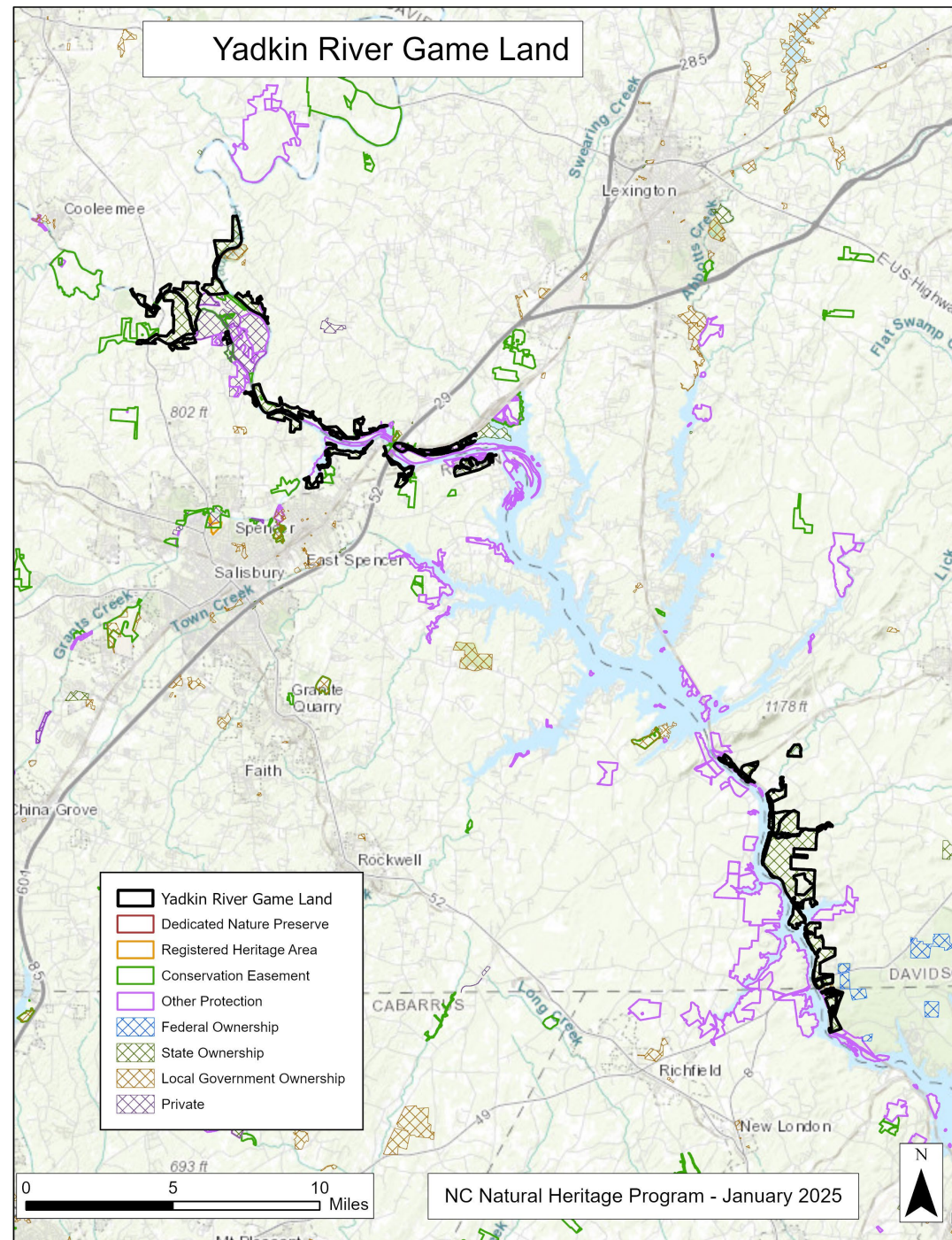


Davidson, Davie, Montgomery, Rowan Counties Catawba, Cheraw, Keyauwee, Occaneechi

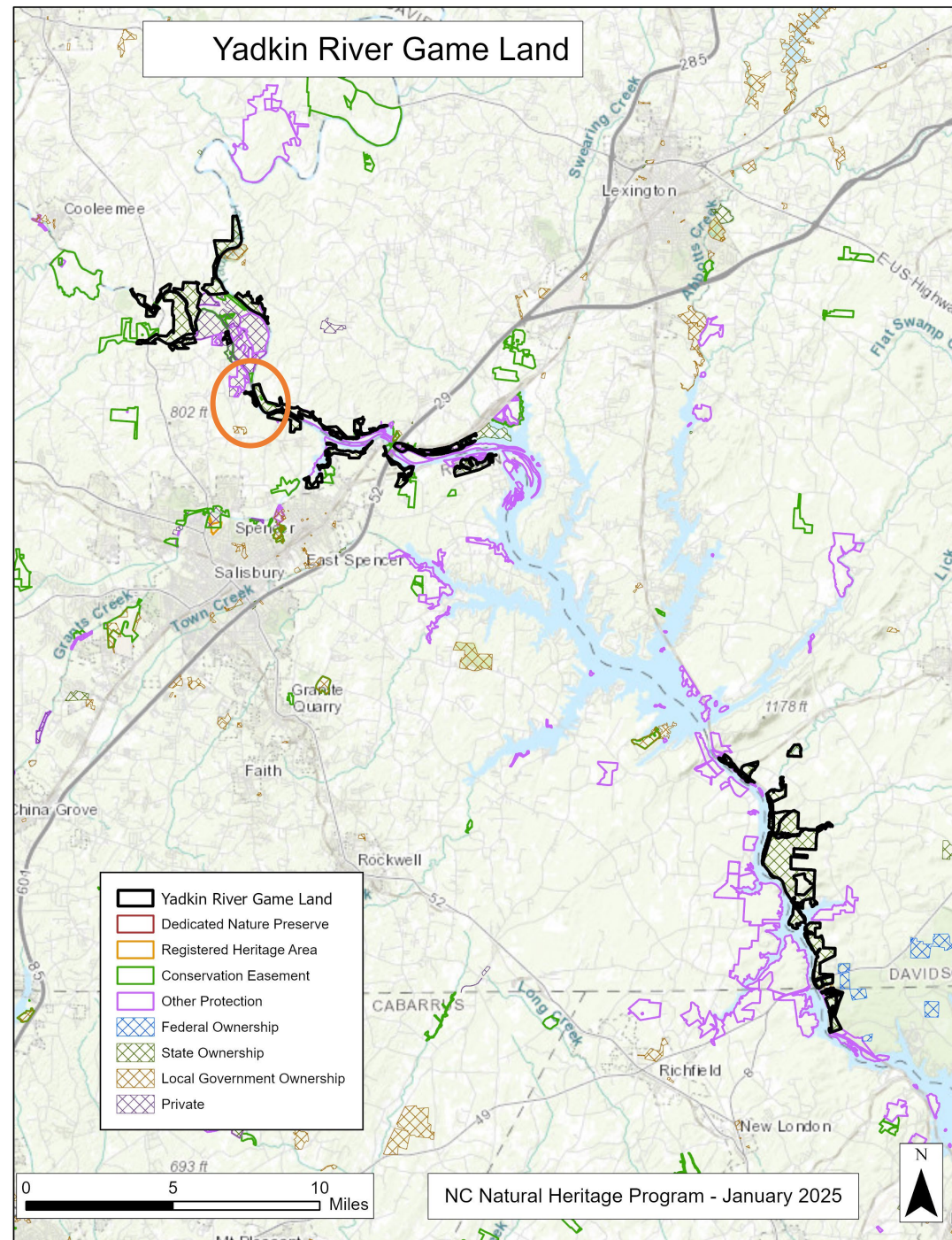


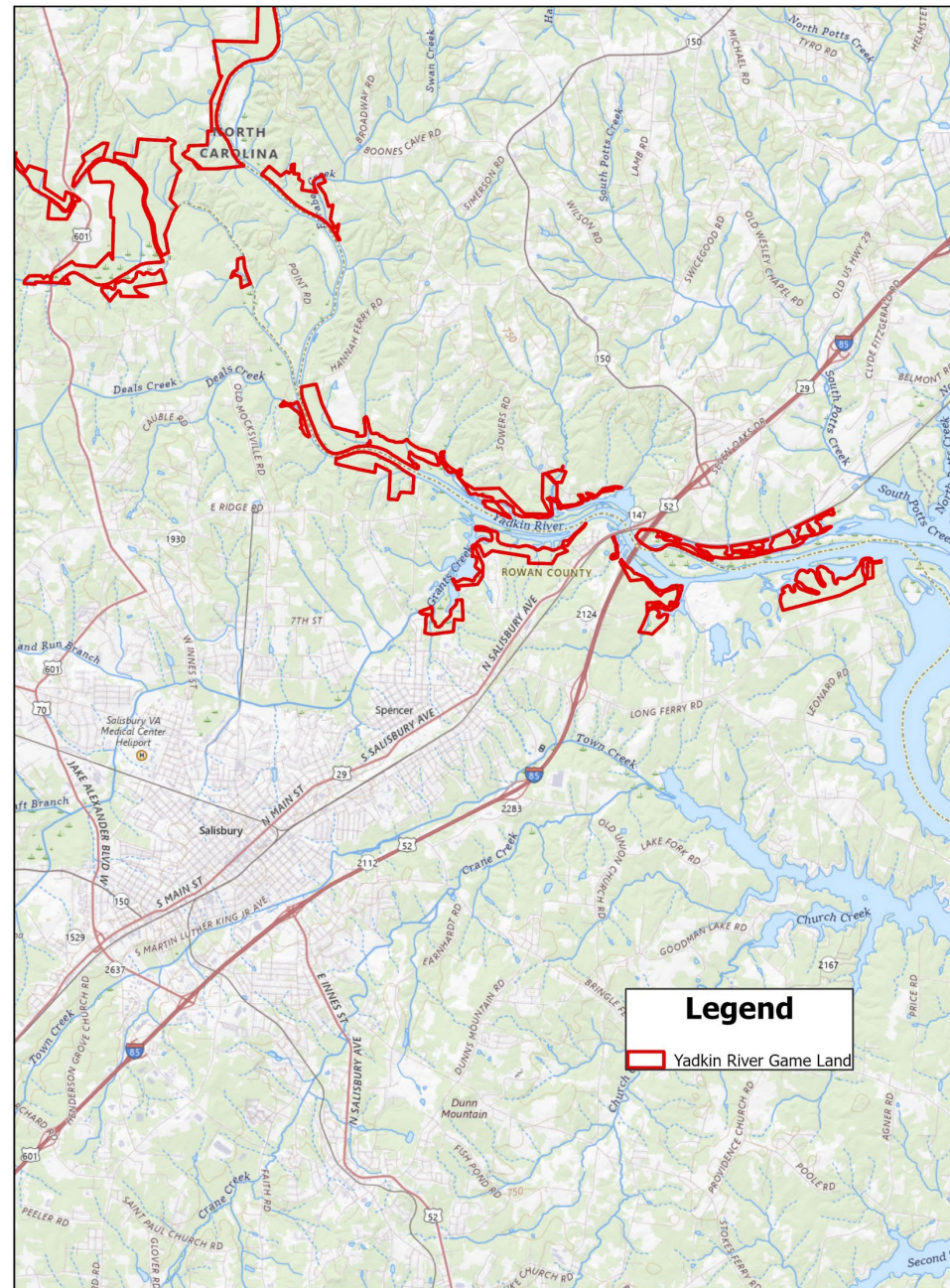
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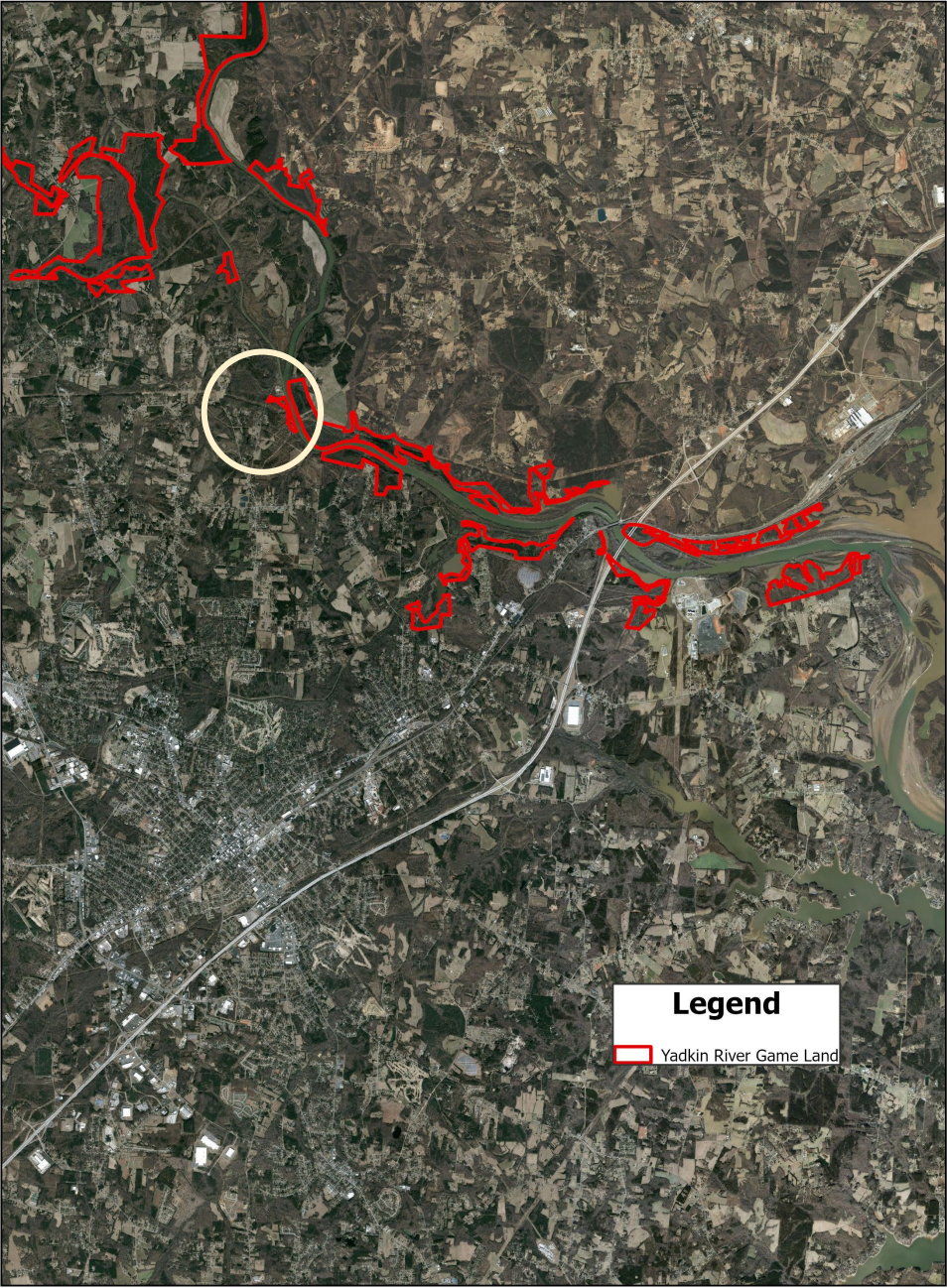
Yadkin River Game Land



Yadkin River Game Land

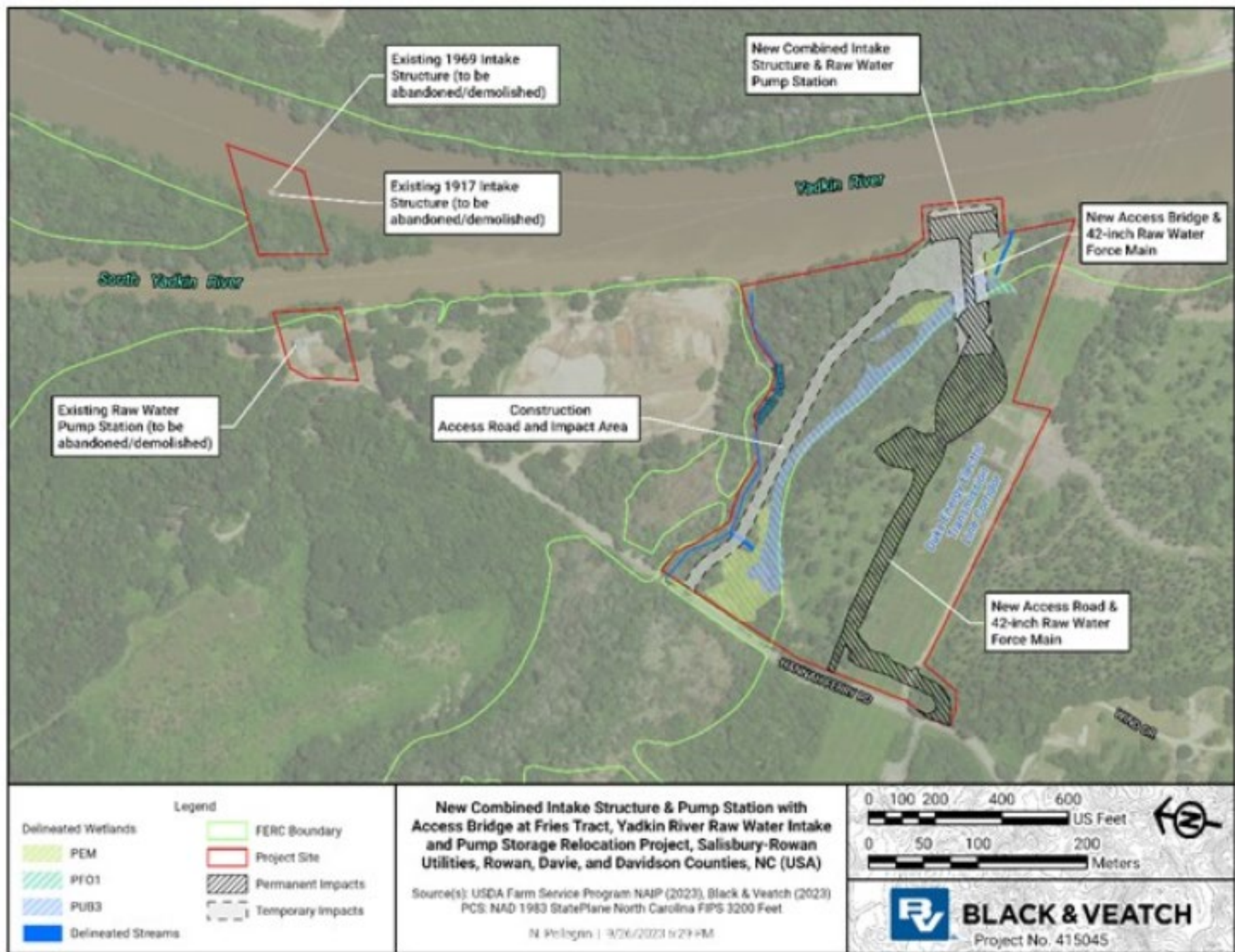






Yadkin River Game Land

- Acquired in part with NCLWF grants #2017-033, #2017-068, 2020-047
 - Qualifying portions to be dedicated under Nature Preserves Act
 - NHP proposal for DNP Jan 2024
 - Full extent of property not known during inventory, including 15-acre tract
- City of Salisbury May 2024 request for 10 acres for water intake facility to draw water from Yadkin River
 - Existing infrastructure dates to 1917, with modification in 1968, and subject to flooding

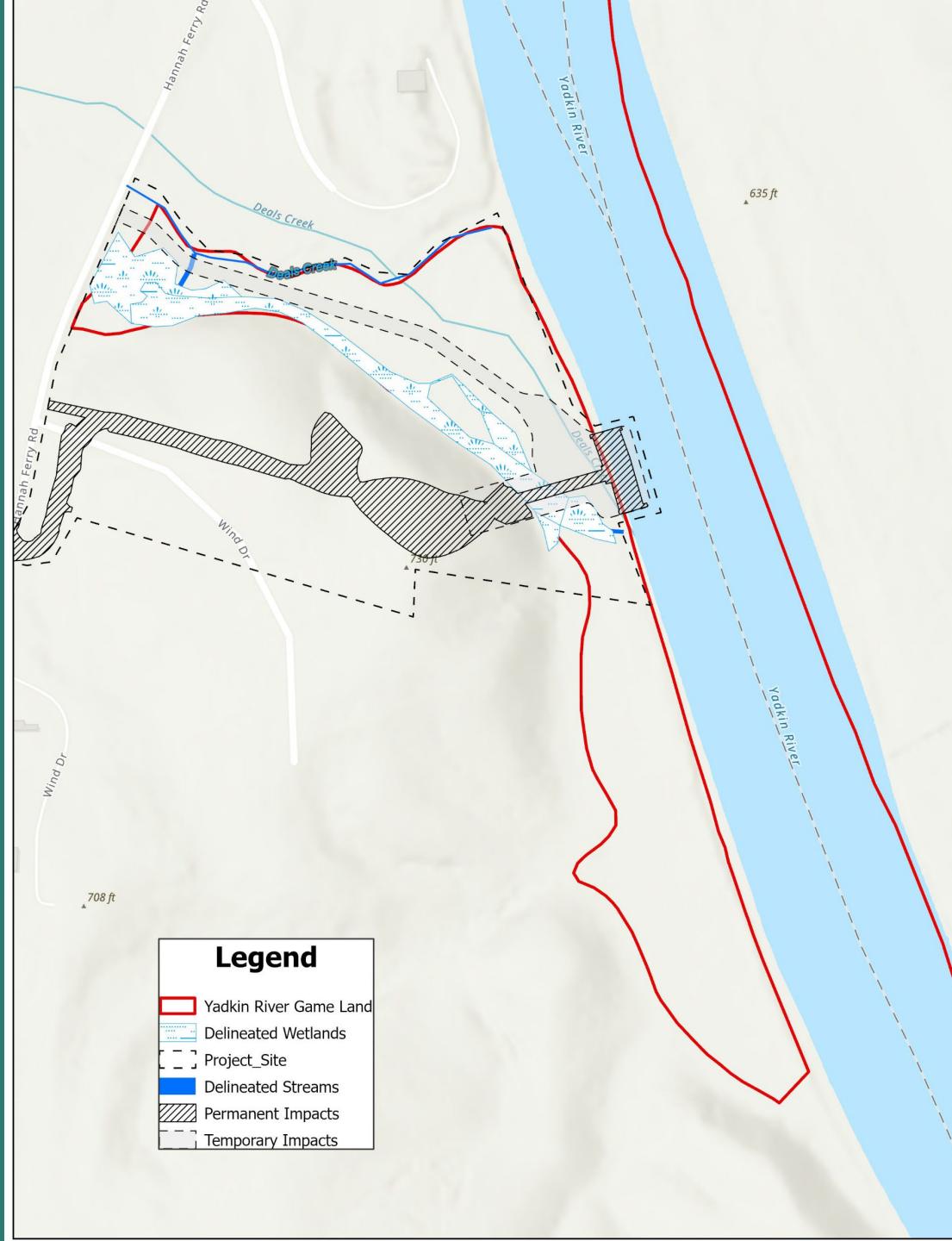




Legend

 Yadkin River Game Land





Legend

-  Yadkin River Game Land
-  Delineated Wetlands
-  Project_Site
-  Delineated Streams
-  Permanent Impacts
-  Temporary Impacts



Figure 2-2 Aerial View Showing Project Site Elevation Differences and Simulated Project Infrastructure

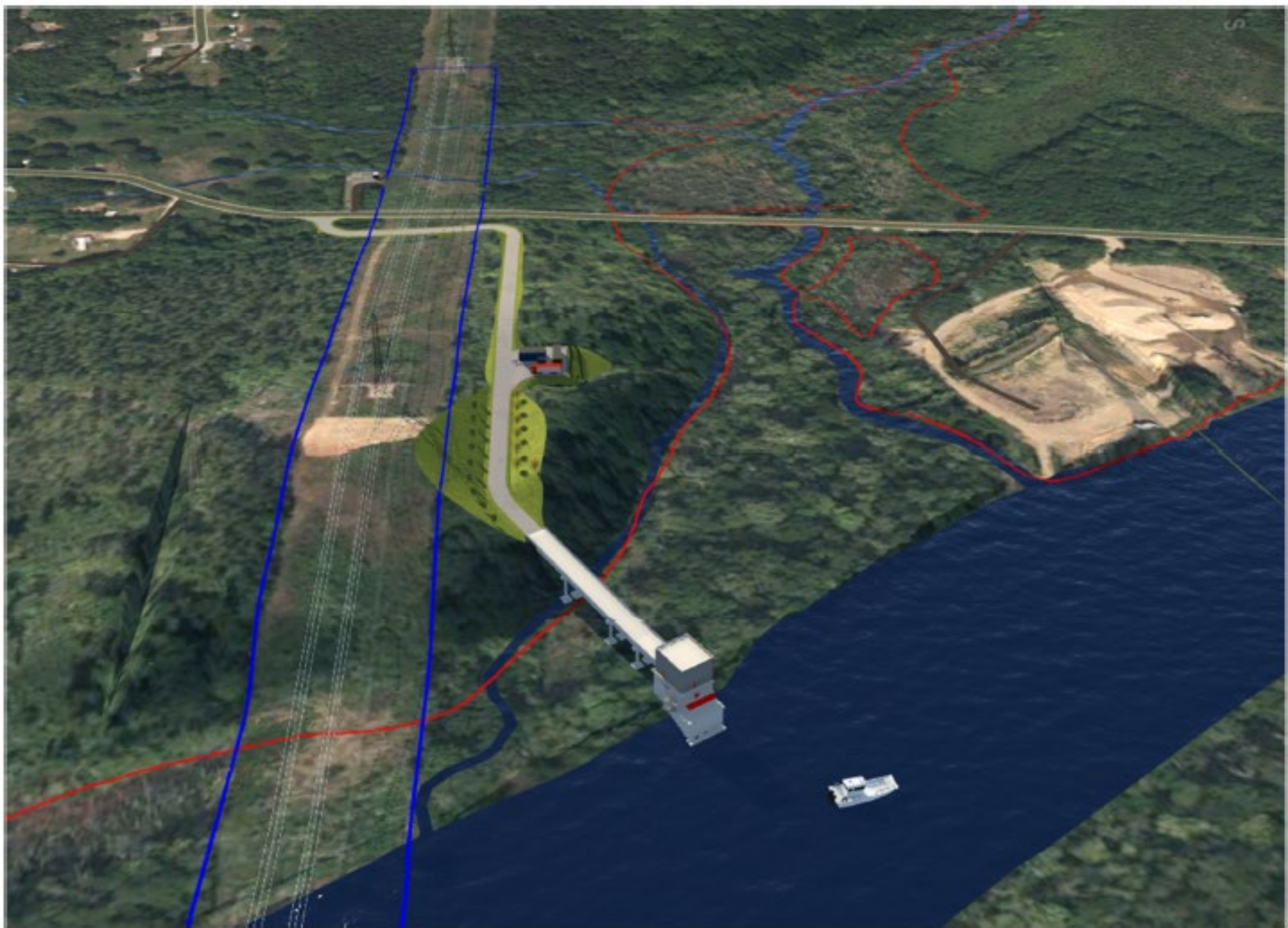


Figure 2-3 Aerial Perspective of Project Site Elevations and Simulated Project Infrastructure

Yadkin River Game Land

- Acquired in part with NCLWF grants #2017-033, #2017-068, 2020-047
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Yadkin River Game Land

- Acquired in part with NCLWF grants #2017-033, #2017-068, 2020-047
 - Qualifying portions to be dedicated under Nature Preserves Act
 - NHP proposal for DNP Jan 204
 - Full extent of property not known during inventory, including 15-acre tract
- City of Salisbury requesting 10 acres for water intake facility to draw water from Yadkin River
 - Existing infrastructure dates to 1917, with modification in 1968, and subject to flooding
- Excluding the utility right-of-way, parcel would qualify for dedication as primary, but it is not dedicated
 - Piedmont Levee Forest and Floodplain Pool habitats extensive enough for element occurrences, Mesic Mixed Hardwood Forest did not meet minimum mappable threshold, but good quality
 - No rare aquatic species in this reach of the Yadkin River
- Potential land exchange with City of Salisbury, but details on exchange property not available in time
 - WRC staff is working with City of Salisbury at direction of Commission, and seems supportive, but has not confirmed support for exchange.

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

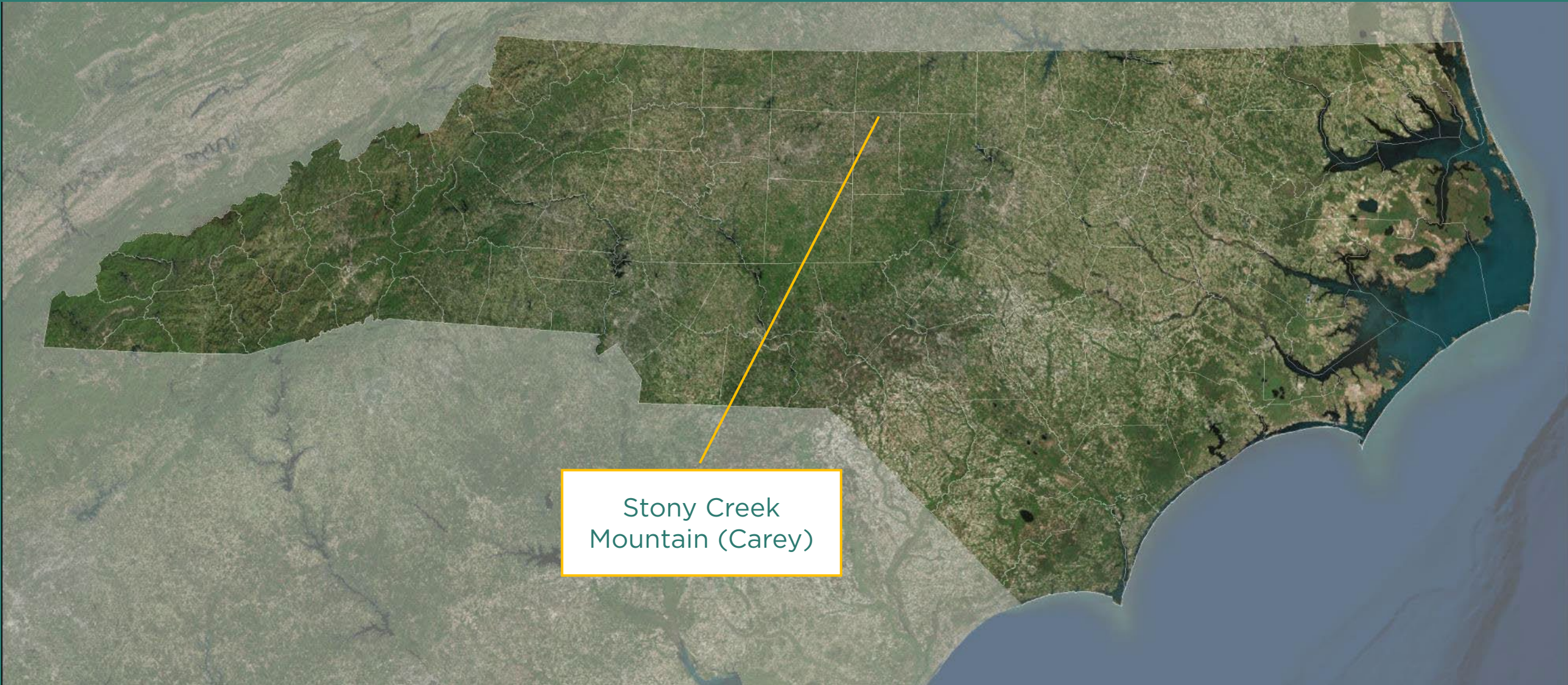


Stony Creek Mountain Registered Heritage Area



Dry Basic Oak-Hickory Forest, Stony Creek Mountain

Stony Creek Mountain (Carey) RHA



Stony Creek
Mountain (Carey)

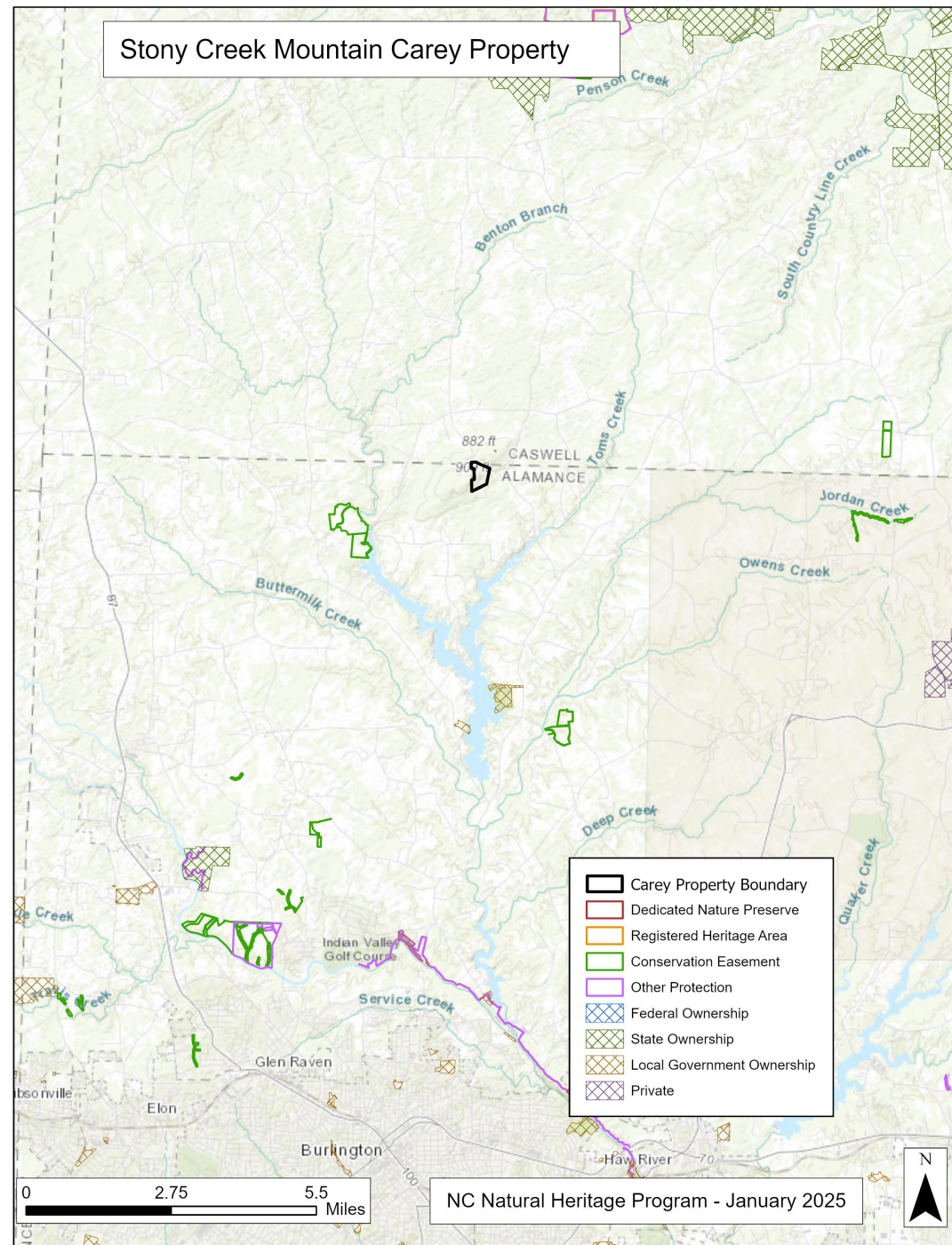
Alamance County

Eno, Shakori, Occaneechi, Saponi,
Cheraw, Catawba, Miccosukee

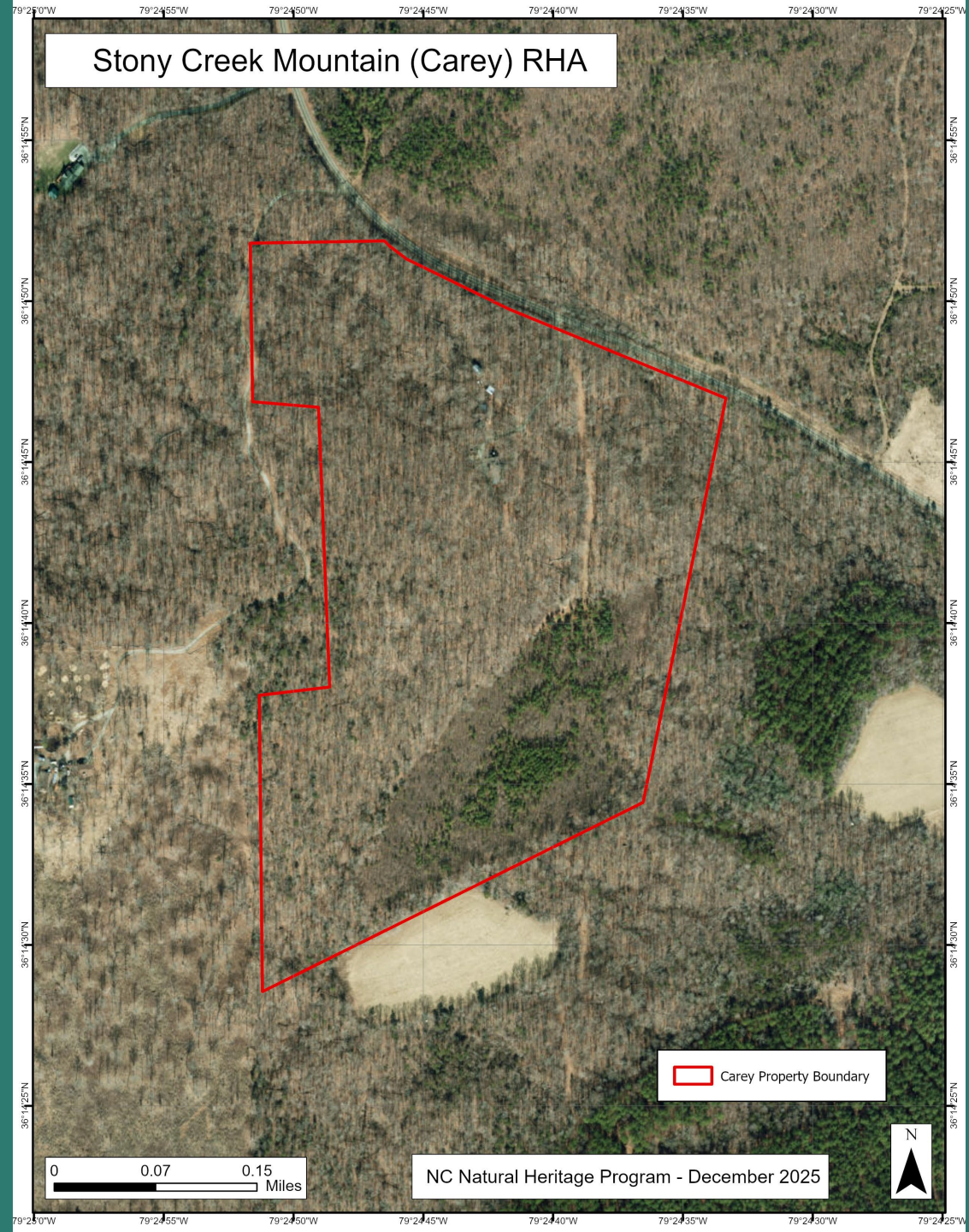


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Stony Creek Mountain Carey Property



Stony Creek Mountain (Carey) RHA

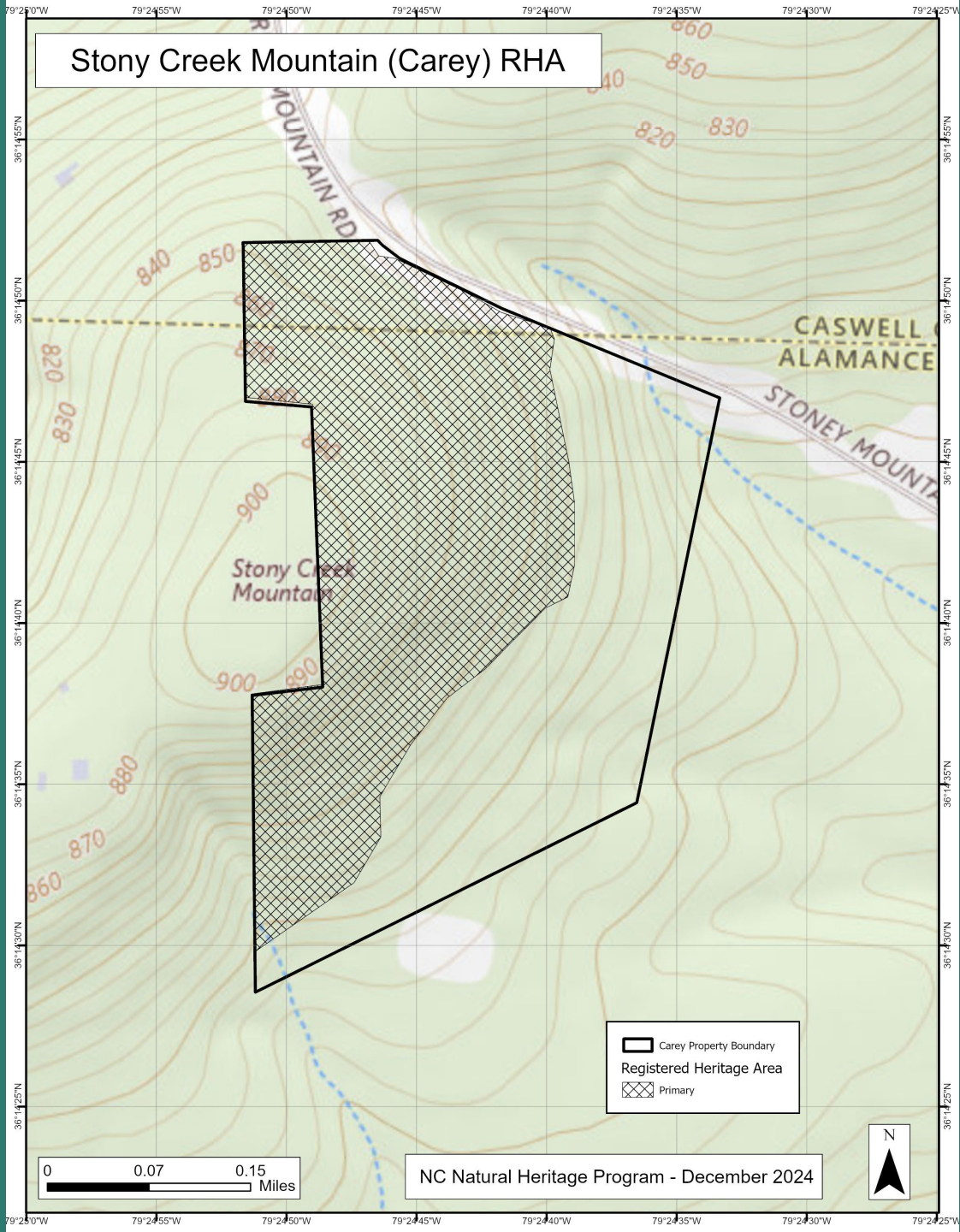


Carey Property Boundary

0 0.07 0.15
Miles

NC Natural Heritage Program - December 2025

Stony Creek Mountain (Carey) RHA



Stony Creek Mountain Registered Heritage Area

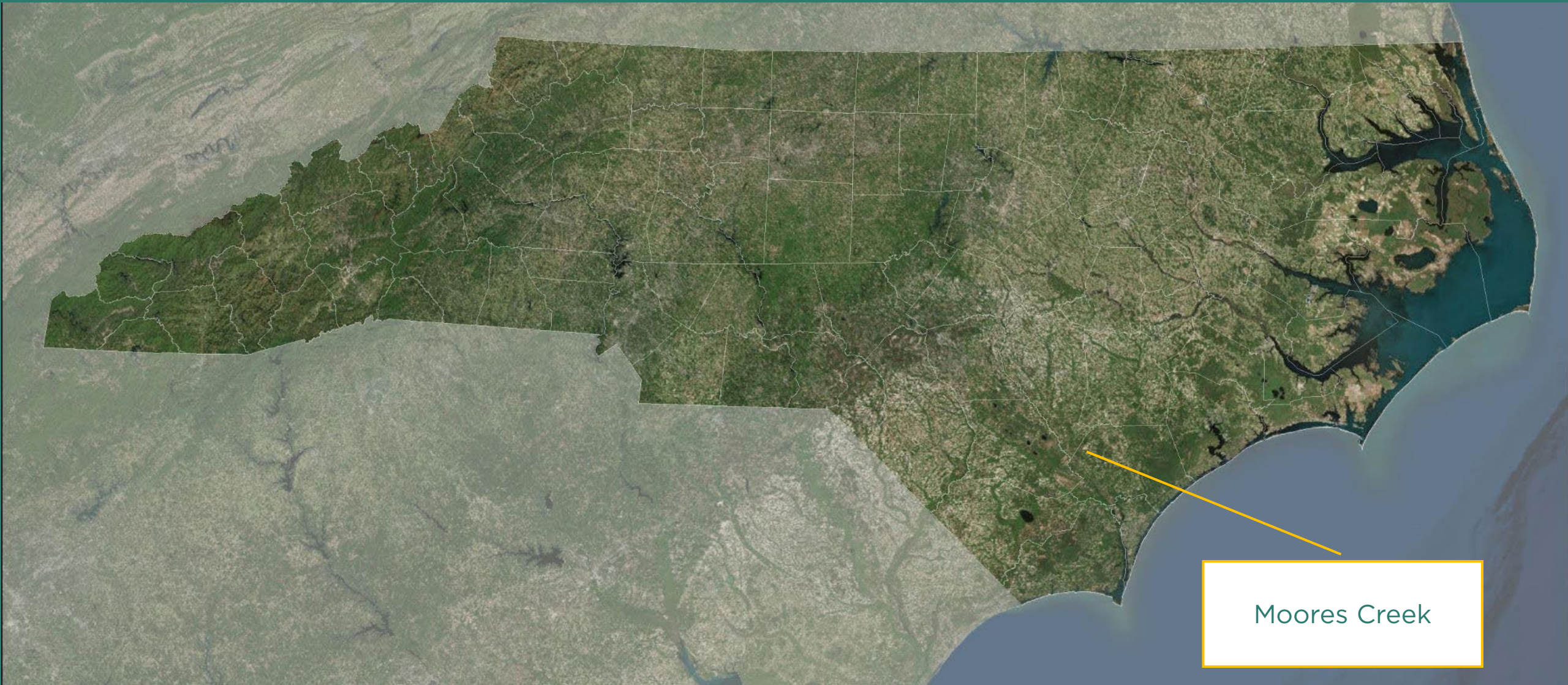
- New voluntary registry
 - 31 acres, all Primary
- Element occurrences include:
 - Dry Basic Oak-Hickory Forest S2G2
- Part of Stony Creek Mountain natural area (R4C5)

Moores Creek – Deer Valley and Moores Creek National Battlefield RHA



Moores Creek – Deer Valley RHA, Photo courtesy of Hauser

Moore's Creek – Deer Valley and Battlefield RHA

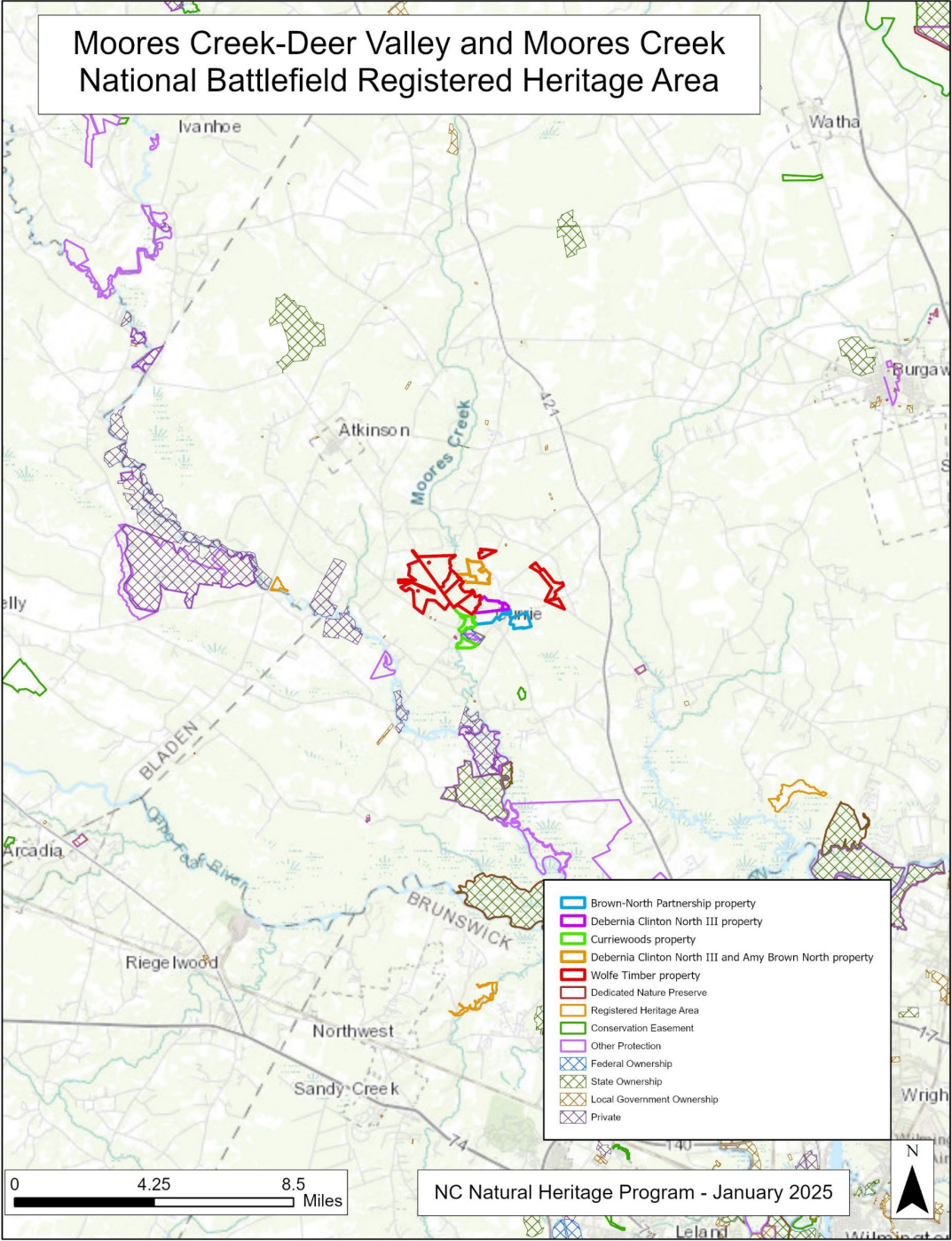


Moore's Creek

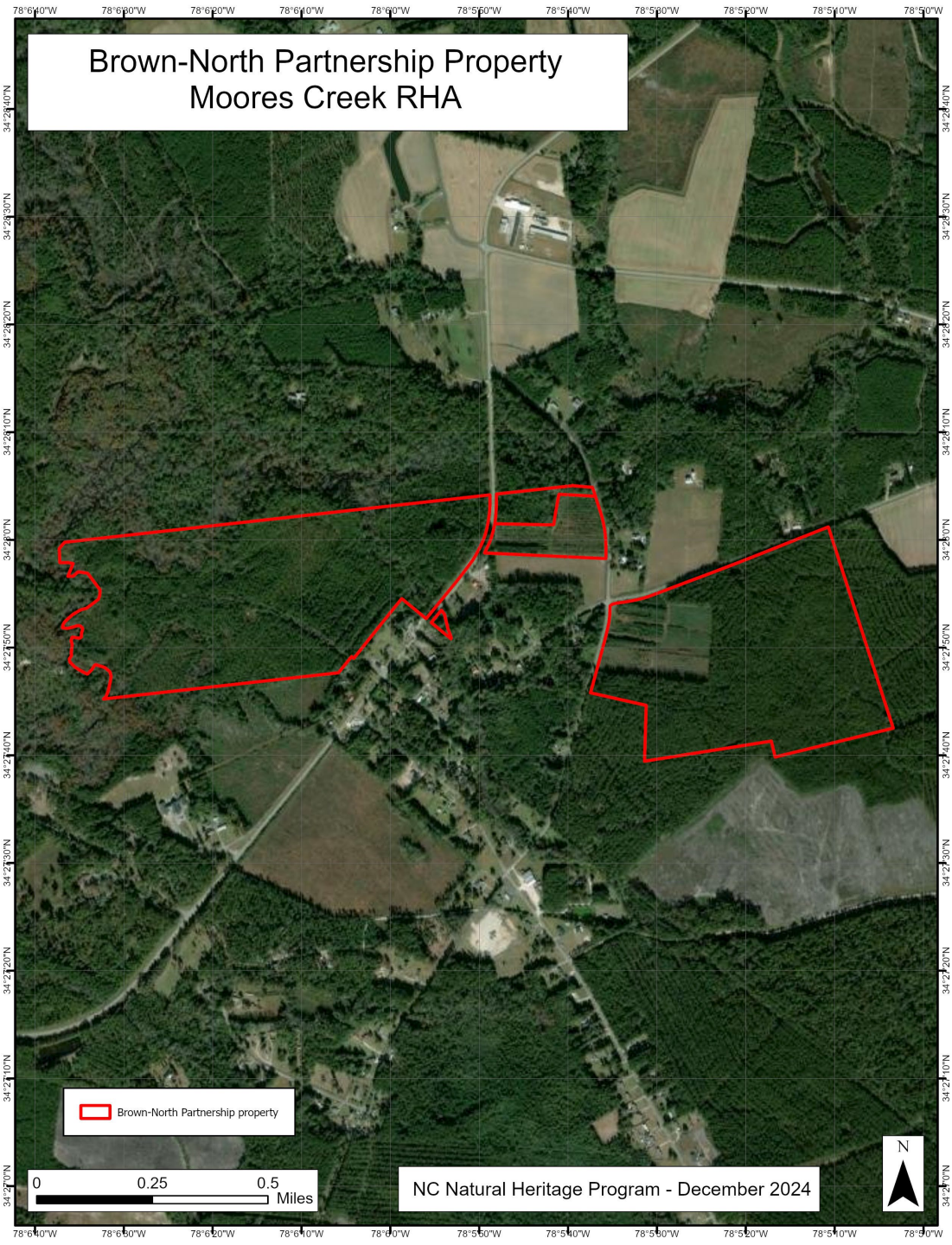
Pender County

Waccamaw, Lumbee, Catawba

Moore's Creek-Deer Valley and Moore's Creek
National Battlefield Registered Heritage Area



Brown-North Partnership Property
Moore's Creek RHA



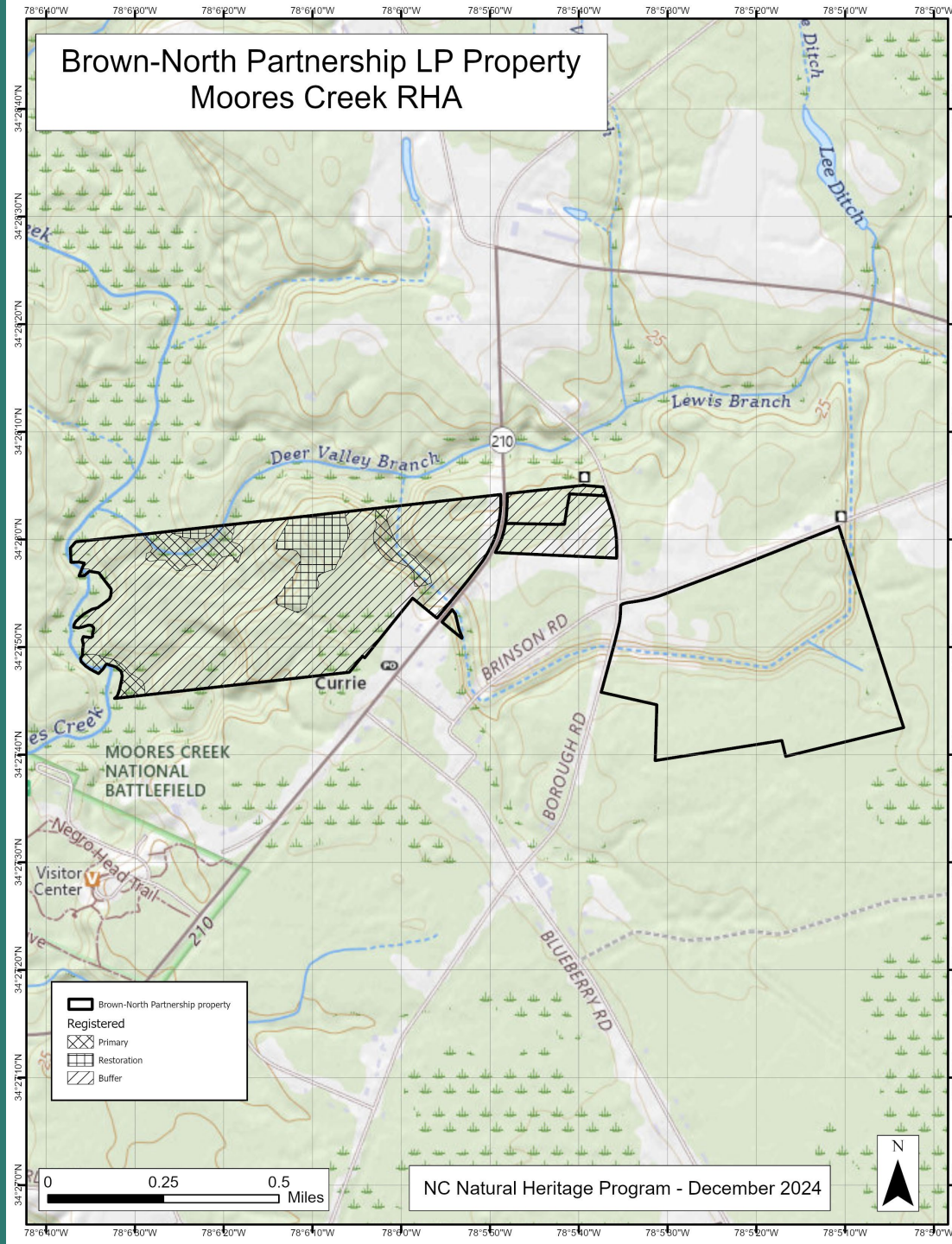
 Brown-North Partnership property

0 0.25 0.5
Miles

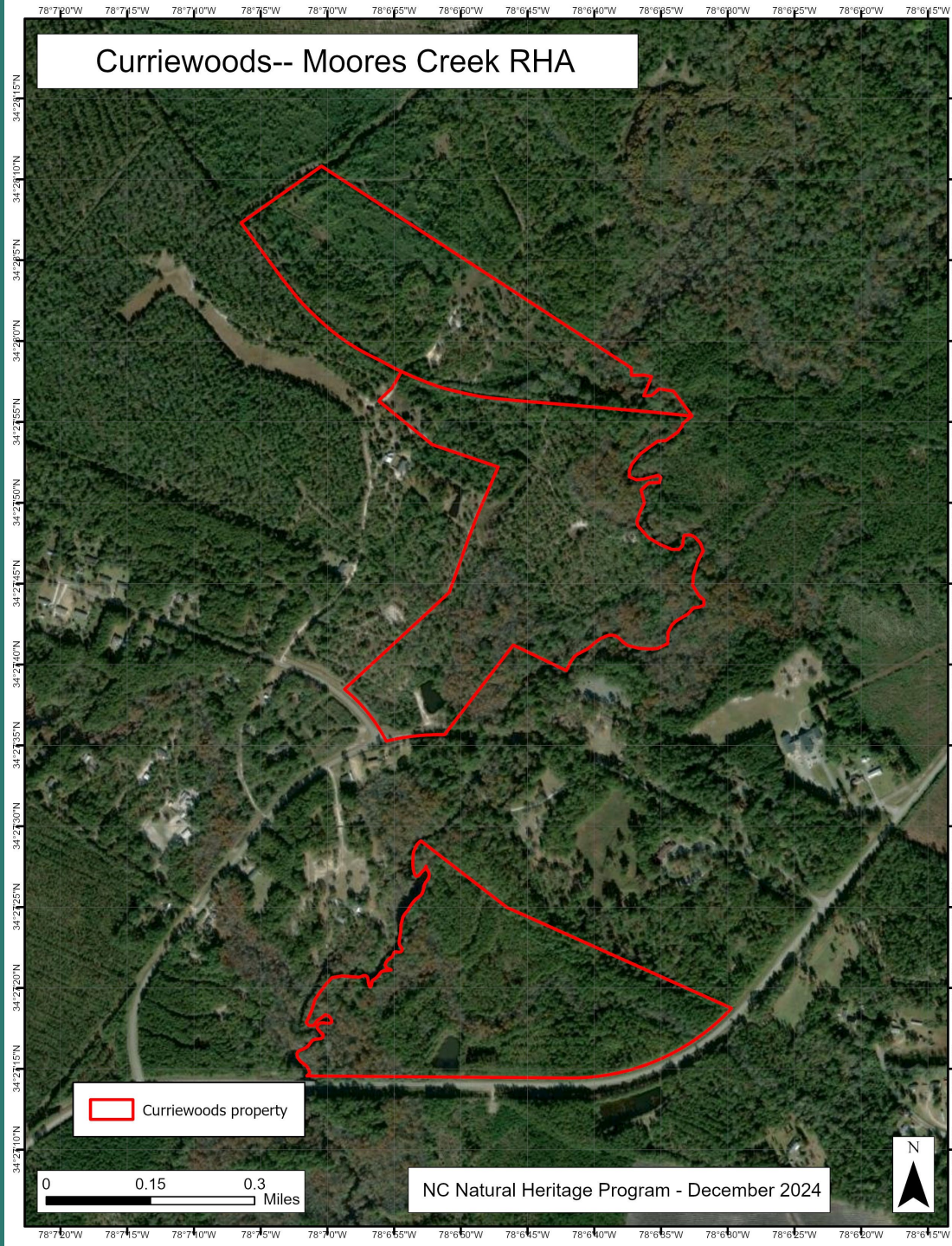
NC Natural Heritage Program - December 2024



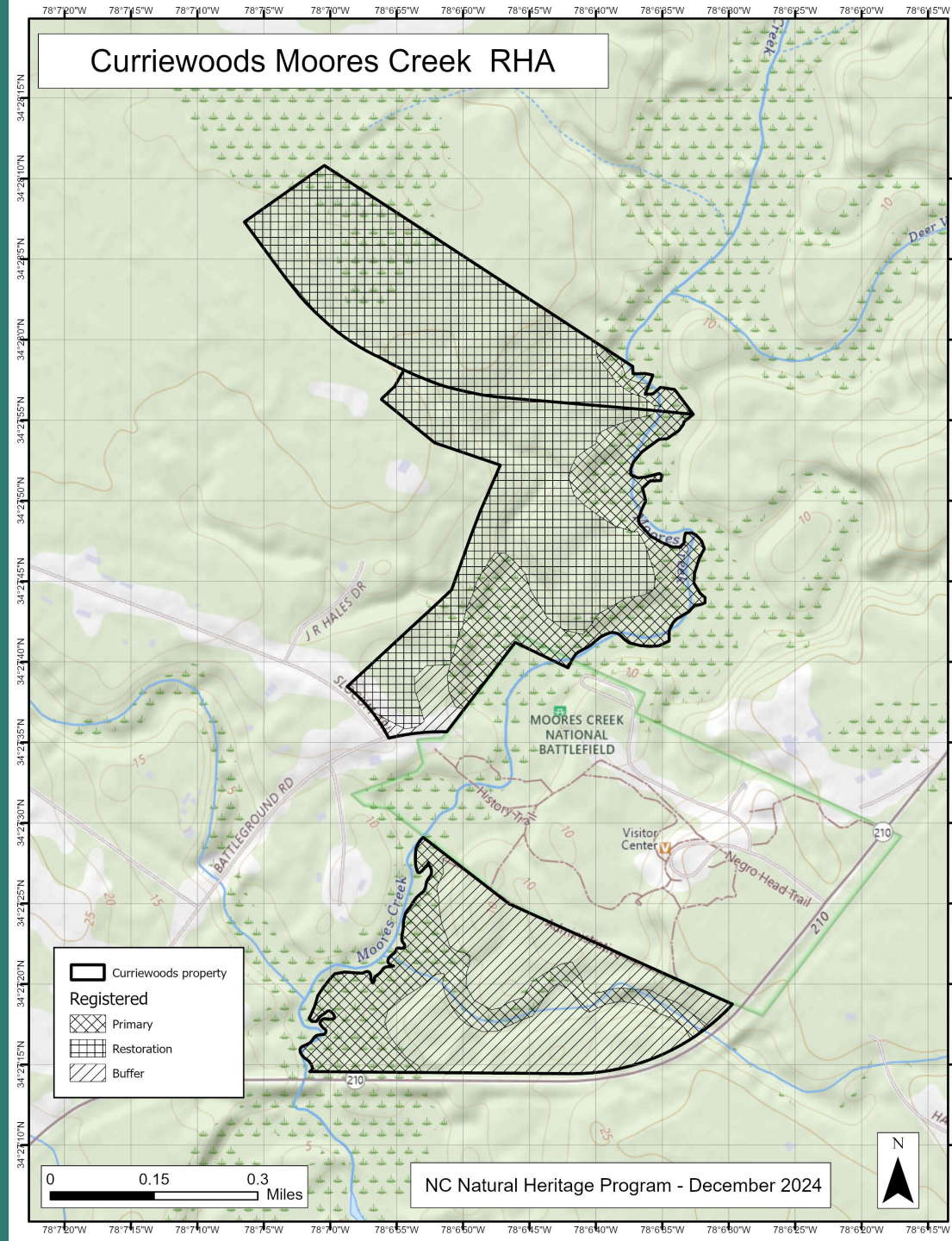
- Brown-North 216 acres
 - 58 primary
 - 20 restoration
 - 138 buffer



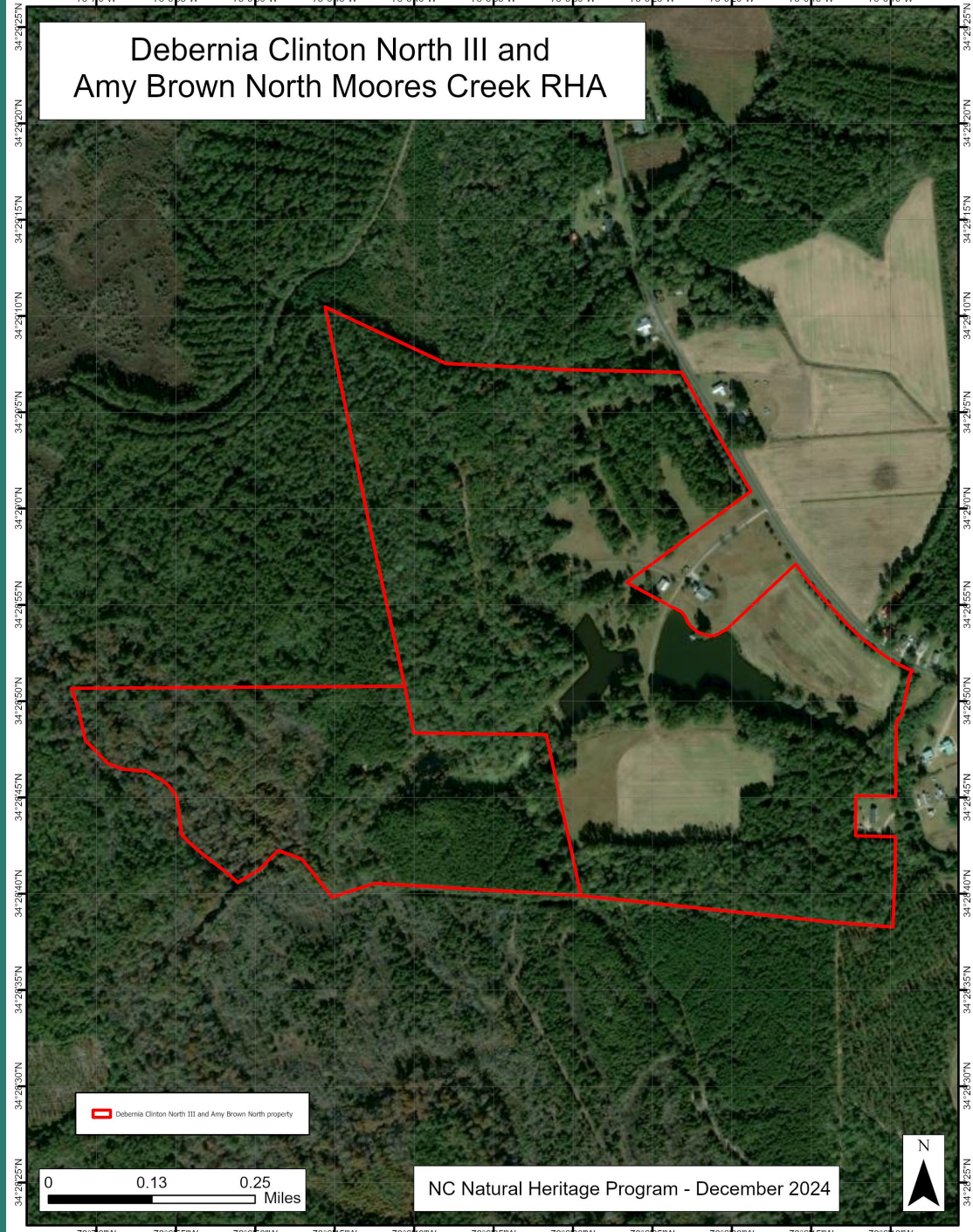
Curriewoods-- Moores Creek RHA



- Curriewoods 147 acres
 - 40 primary
 - 74 restoration
 - 33 buffer



Debernia Clinton North III and Amy Brown North Moores Creek RHA



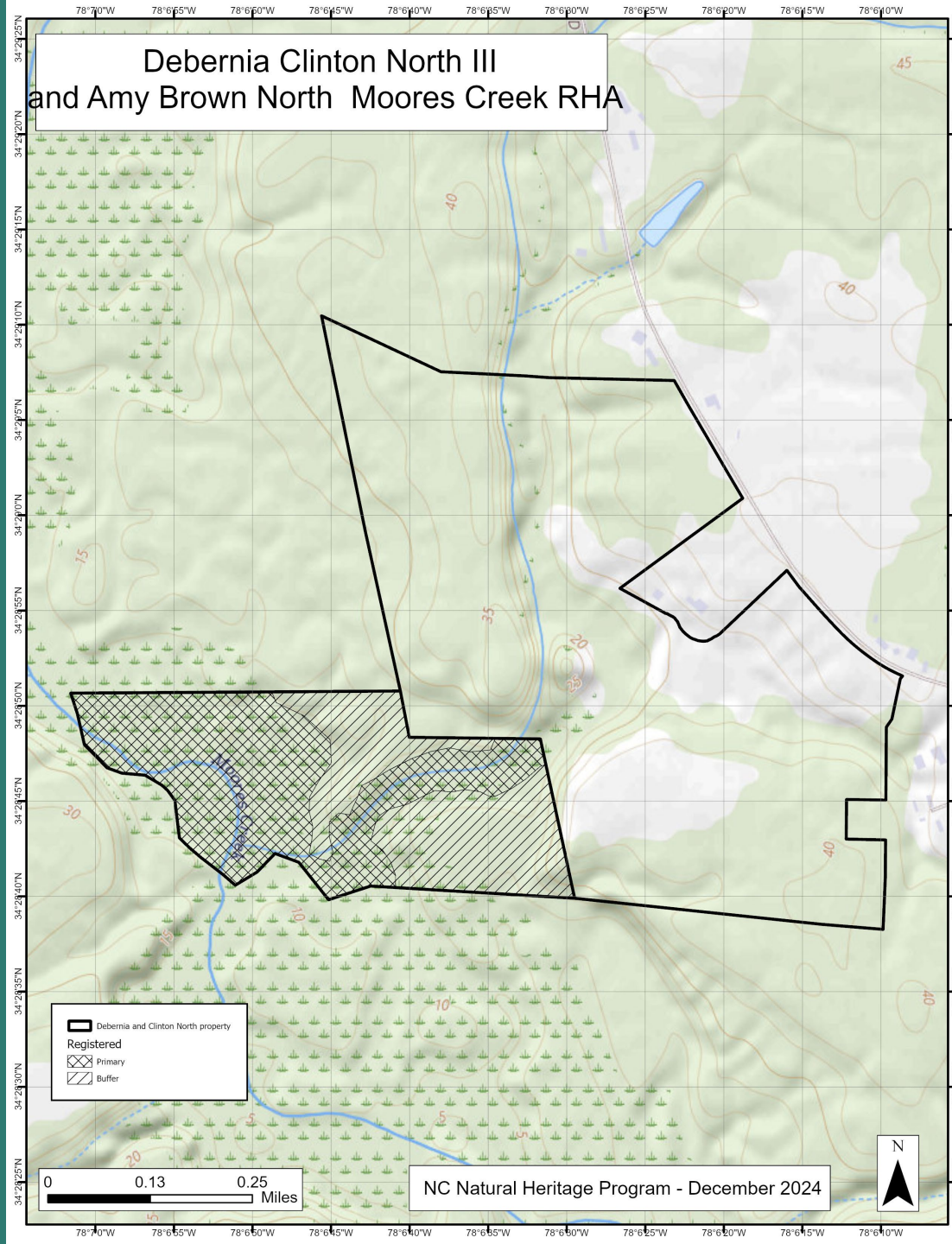
Debernia Clinton North III and Amy Brown North property

0 0.13 0.25 Miles

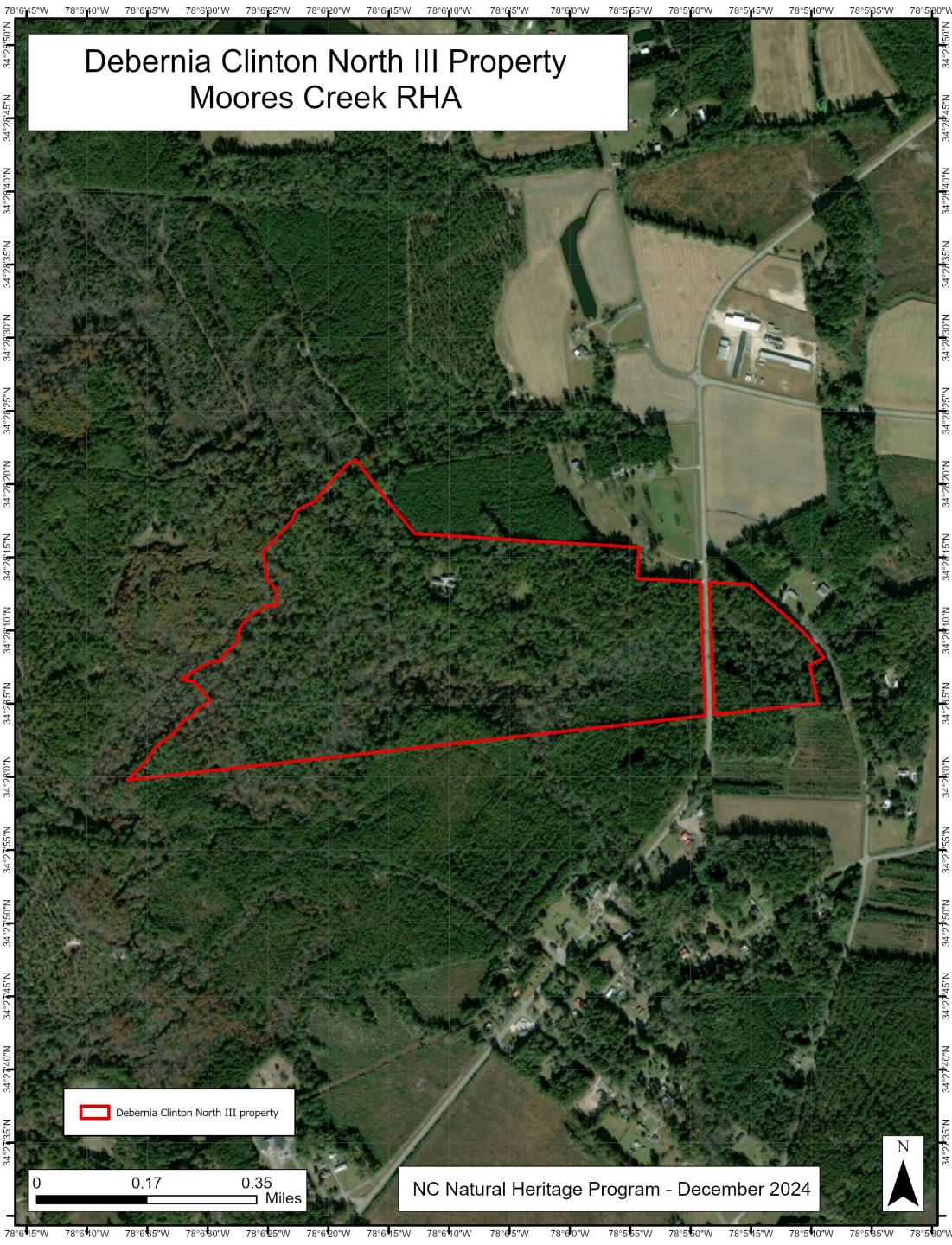
NC Natural Heritage Program - December 2024



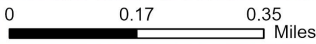
- North and North 47 acres
 - 28 primary
 - 19 buffer



Debernia Clinton North III Property
Moore's Creek RHA



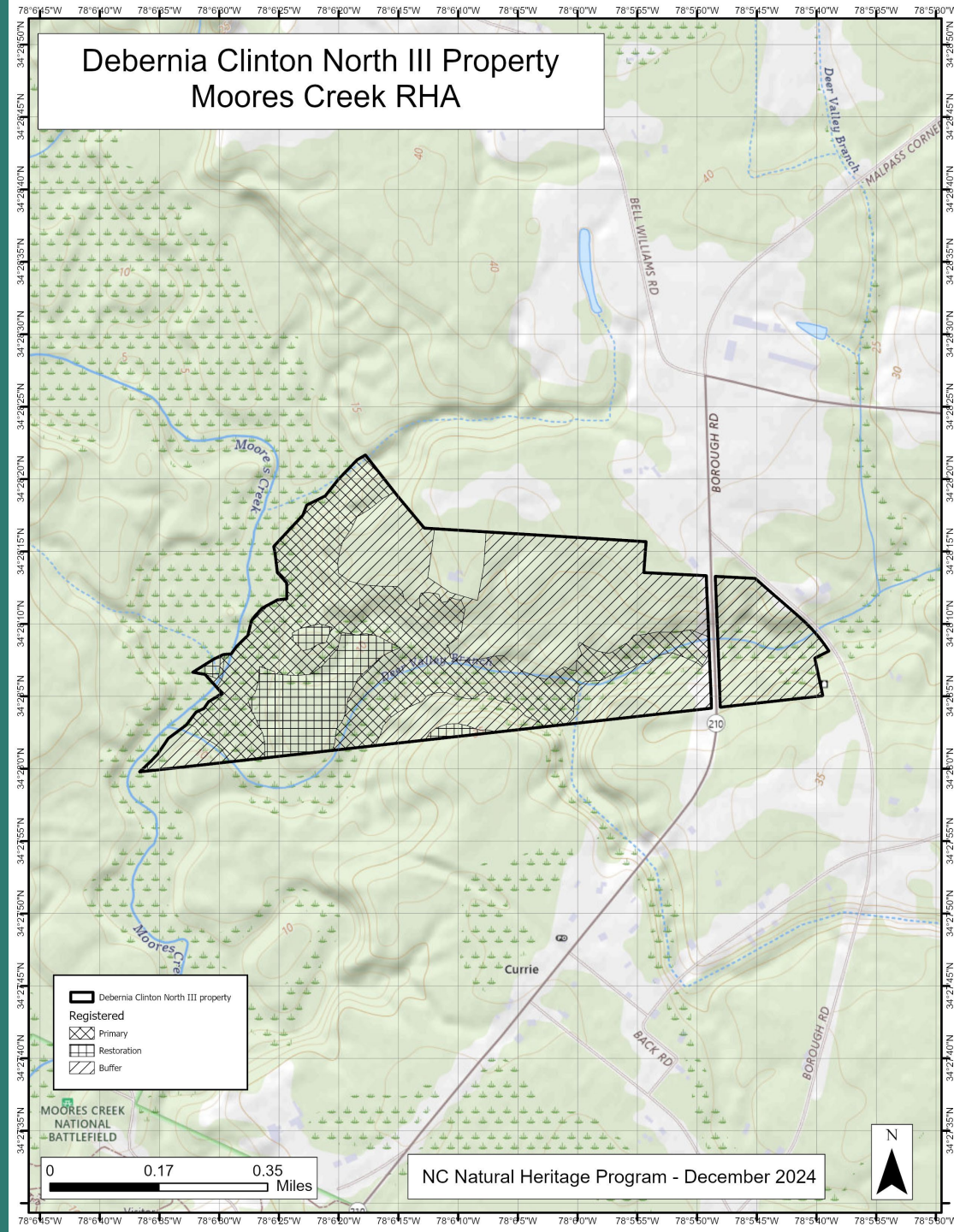
Debernia Clinton North III property



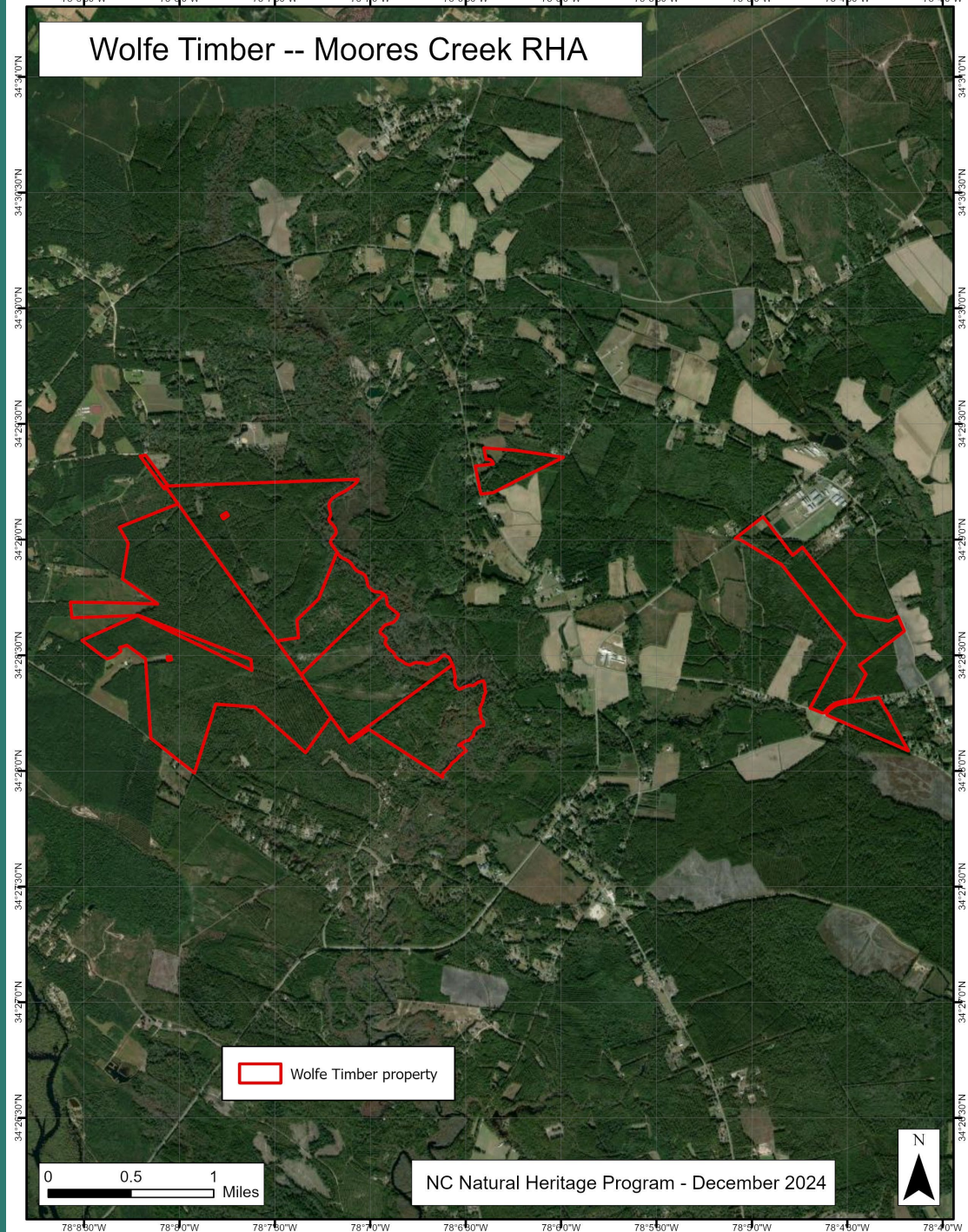
NC Natural Heritage Program - December 2024




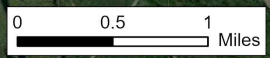
- Debernia Clinton North III
 - 542 acres
 - 61 primary
 - 317 restoration
 - 164 buffer



Wolfe Timber -- Moores Creek RHA



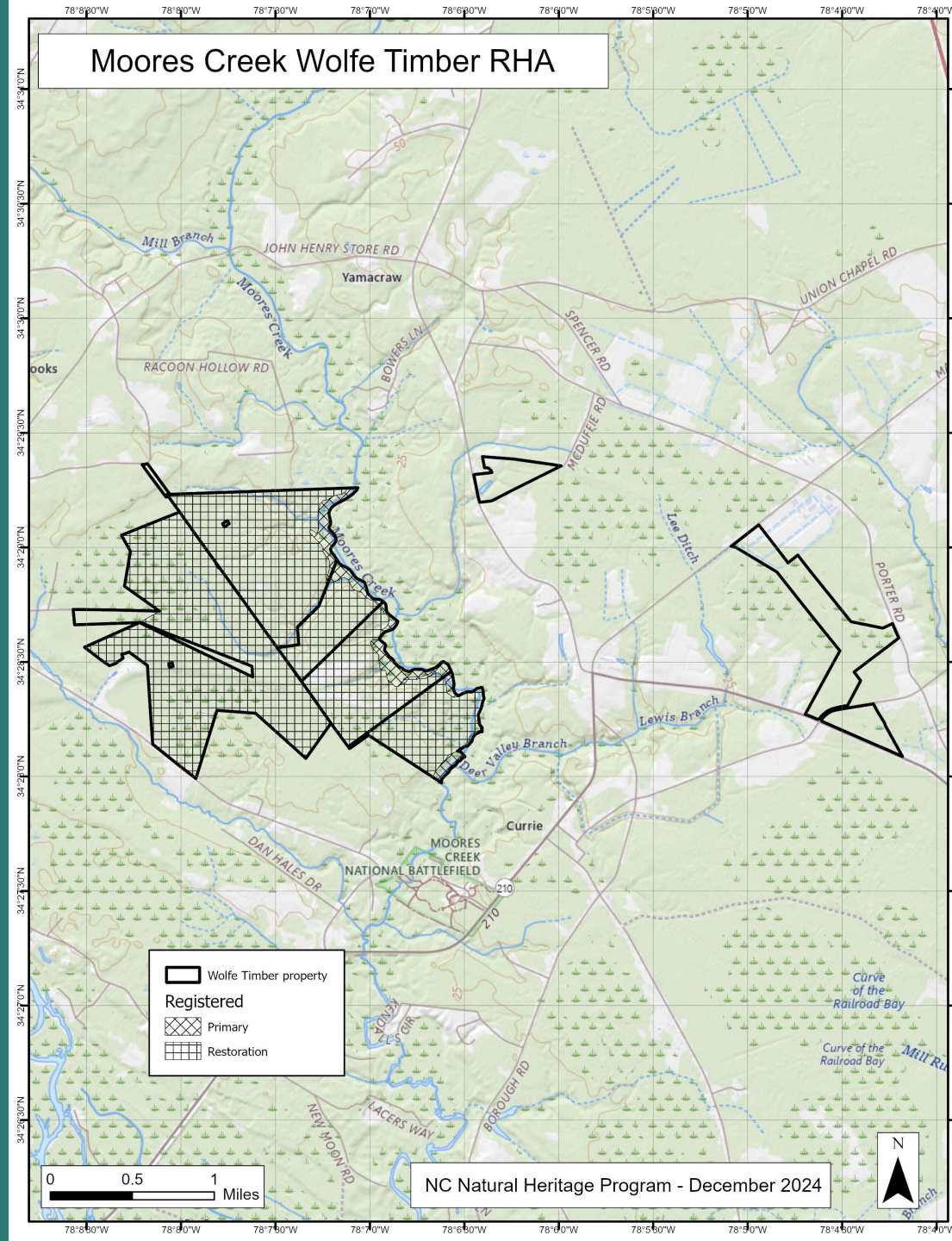
 Wolfe Timber property



NC Natural Heritage Program - December 2024



- Wolfe Timber 1,036 acres
 - 56 primary
 - 980 restoration



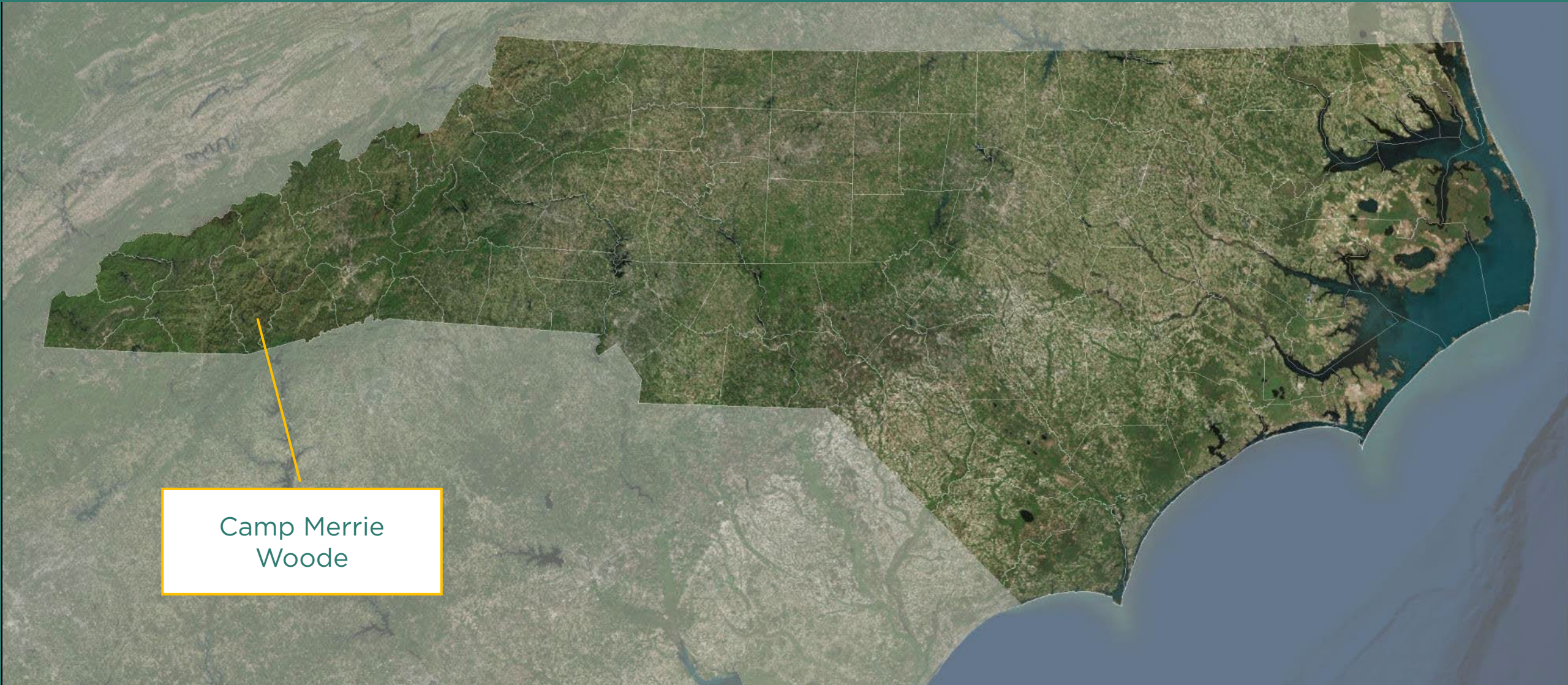
Moores Creek – Deer Valley and Moores Creek National Battlefield Registered Heritage Area

- New voluntary registry (ies)
 - Five separate partnerships with the same managing member
 - 1,988 acres
 - 1,634 acres Primary, including 1,391 acres restoration
 - 354 acres Buffer
- Element occurrences include:
 - Coastal Plain Semipermanent Impoundment (Open Water Subtype) S4G5
 - Coastal Plain Small Stream Swamp S4G4
 - Cypress--Gum Swamp (Blackwater Subtype) S4G4
 - Venus Flytrap (*Dionaea muscipula*) S2G2
 - Dry-Mesic Oak--Hickory Forest (Coastal Plain Subtype) S3G3
- Part of Moores Creek – Deer Valley natural area (R3C4) and Moores Creek National Battlefield (R3C3)

Camp Merrie Woode Registered Heritage Area



Camp Merrie Woode RHA



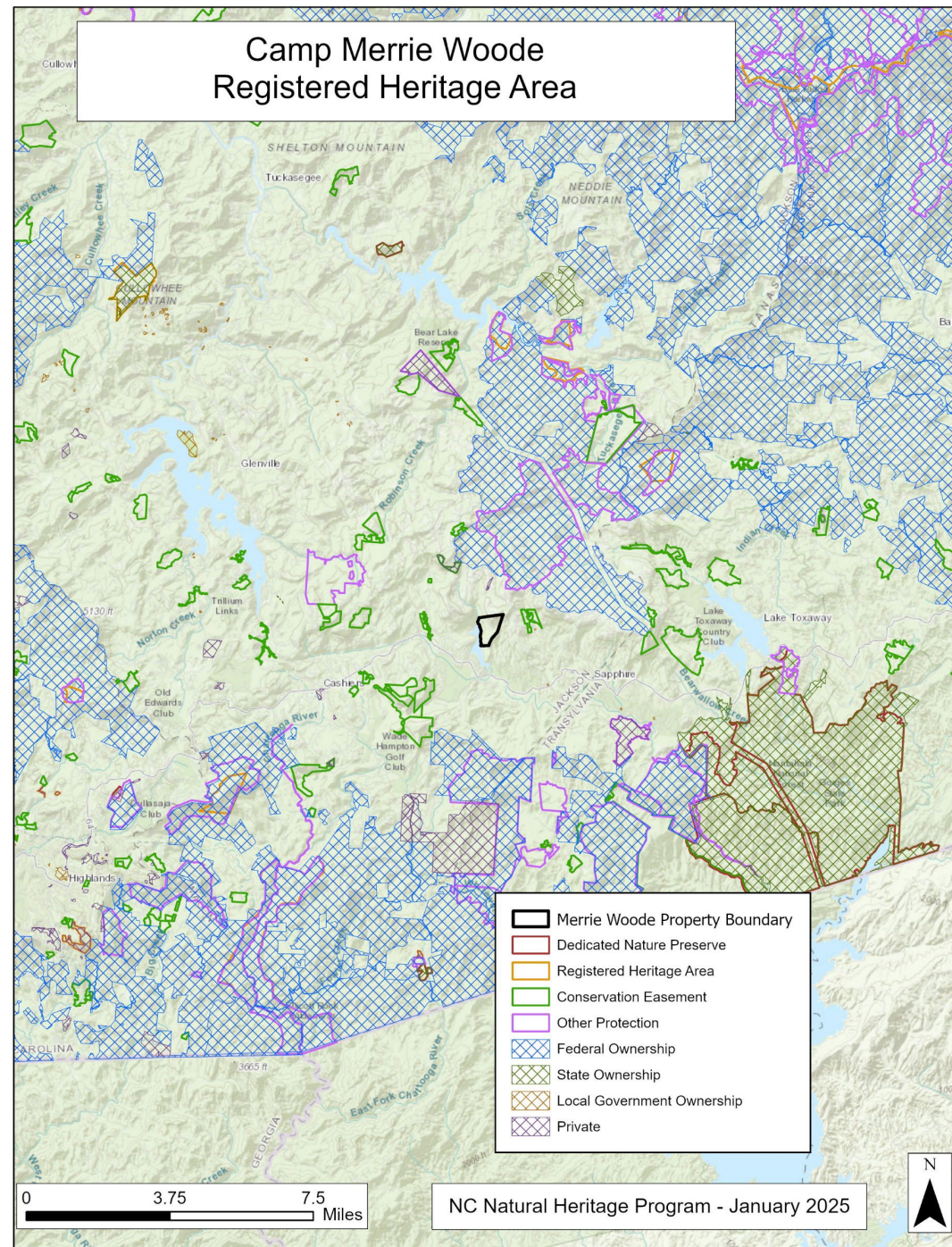
Jackson County

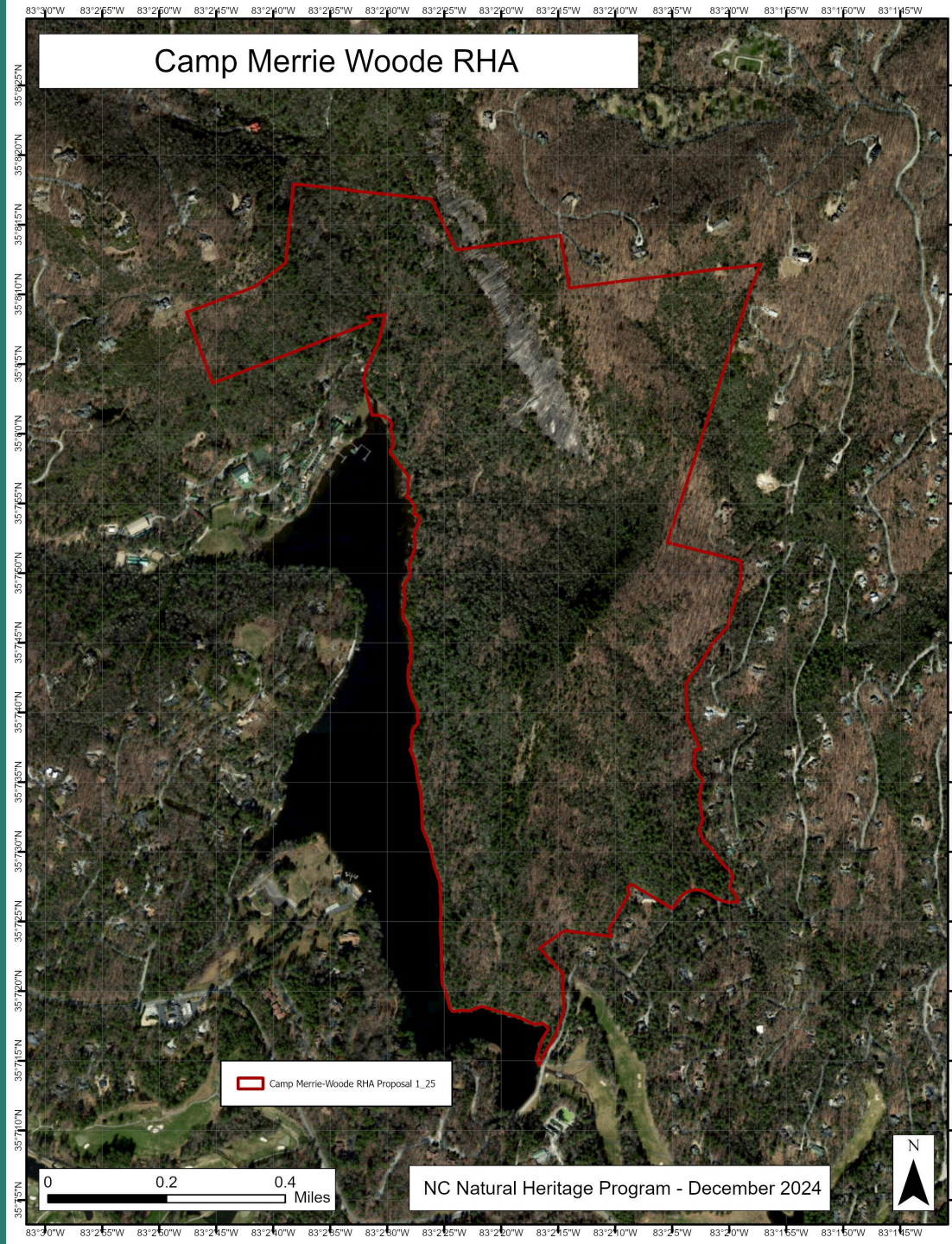
Cherokee, Yuchi, Miccosukee



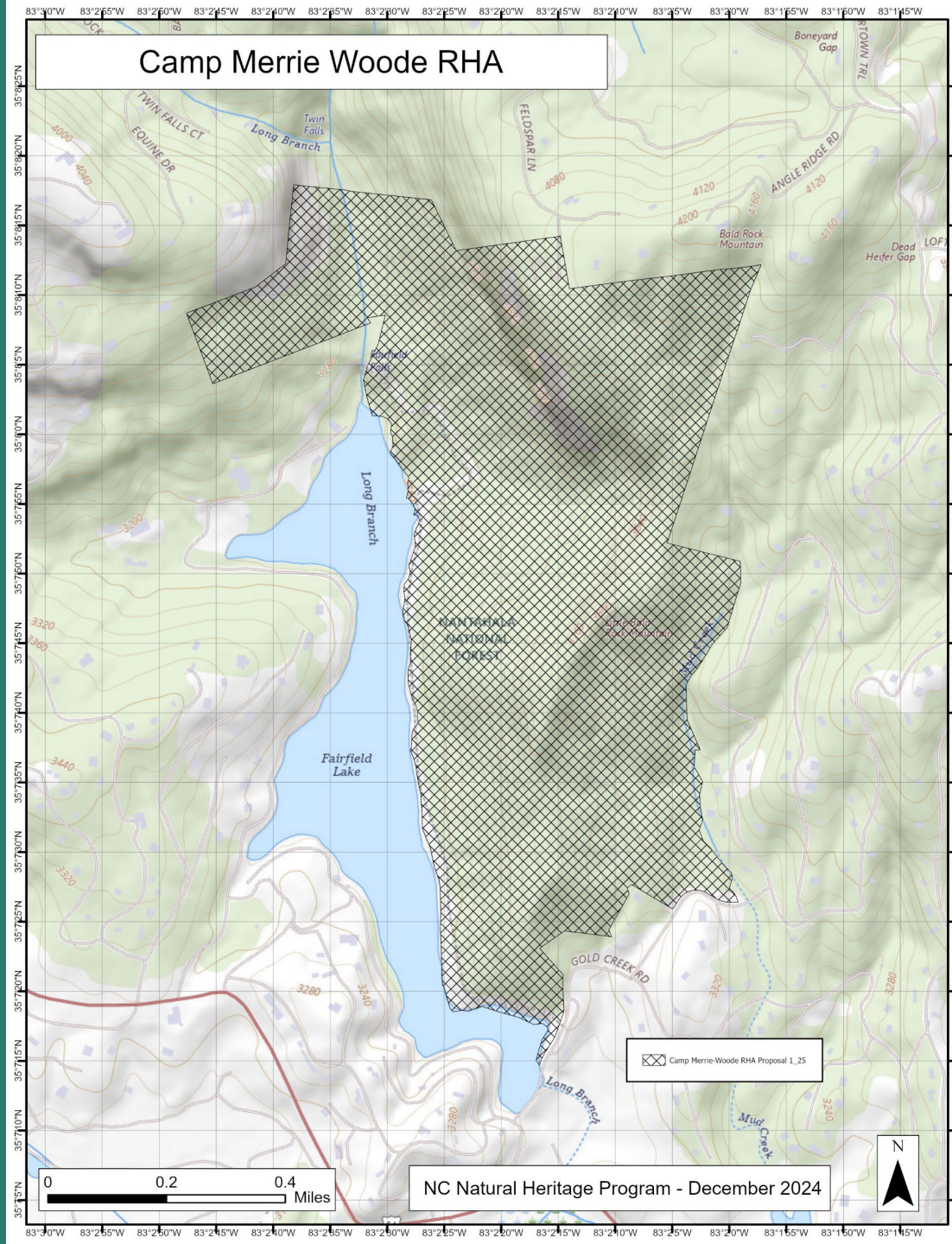
NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Camp Merrie Woode Registered Heritage Area





View from the summit of Bald Rock Mountain
Photo courtesy of Jess Schaner



Camp Merrie Woode RHA

✕ Camp Merrie-Woode RHA Proposal 1, 25

0 0.2 0.4 Miles

NC Natural Heritage Program - December 2024



Camp Merrie Woode

Registered Heritage Area

- New voluntary registry
 - 286 acres, all Primary
- Element occurrences include:
 - High Elevation Granitic Dome S3G2
 - Montane Oak-Hickory Forest (Acidic Subtype)
 - Granite Dome Goldenrod (*Solidago simulans*) S2G2
 - Biltmore Sedge (*Carex biltmoreana*) S3G3
- Part of Bald Rock Mountain/Little Bald Rock Mountain natural area (R1C4)
- The developed camp with cabins is a separate, adjacent area



Solidago simulans on the High Elevation
Granitic Dome of Bald Rock Mountain
Photo courtesy of Jess Schaner

Questions:

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Natural Heritage Program

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