



AGENDA
N.C. WILDLIFE RESOURCES COMMISSION
July 24, 2025 9:00 a.m.
1751 Varsity Drive
NCWRC Conference Room, 5th Floor
Raleigh, North Carolina

CALL TO ORDER – *Chairman Monty Crump*

This meeting is being streamed live for the public to attend and recorded as a public record. The recording of the meeting will be available at www.ncwildlife.gov.

PLEDGE OF ALLEGIANCE – *Commissioner Landon Zimmer*

INVOCATION – *Commissioner Tom Haislip*

ROLL CALL OF COMMISSIONERS PRESENT – *Margo Minkler, Commission Liaison*

MANDATORY ETHICS INQUIRY – North Carolina General Statute §138A-15 mandates that the Commission Chair shall remind all Commissioners of their duty to avoid conflicts of interest and appearances of conflict under this Chapter, and that the chair also inquires as to whether there is any known conflict of interest or appearance of conflict with respect to any matters coming before the Commission at this time. It is the duty of each Commissioner who is aware of such personal conflict of interest or of an appearance of a conflict to notify the Chair of the same. *Chairman Crump*

APPROVAL OF JUNE 5, 2025 MEETING MINUTES – Take action on the June 5, 2025 Wildlife Resources Commission meeting minutes as written in the exhibit. **(EXHIBIT A)**

FINANCIAL STATUS REPORT – Receive Financial Status Report on the Wildlife Resources Commission General Fund, Capital Improvement Fund, and the Endowment Fund. – *Jason Cottle, Chief Financial Officer (EXHIBIT B)*

COMMITTEE MEETING REPORTS

Executive Committee – **July 23, 2025** – *Monty Crump, Chair*

Boating Safety Committee – **July 23, 2025** – *J.C. Cole, Chair*

Fisheries Committee – **July 23, 2025** – *John Stone, Chair*

Habitat, Nongame and Endangered Species Committee – **July 23, 2025** – *Landon Zimmer, Vice Chair*

Land Acquisition and Property Committee – **July 23, 2025** – *Tom Berry, Chair*

Committee of the Whole – **July 23, 2025** – *Monty Crump, Chair*

AGENCY SPOTLIGHT – Pathways of Progress – 20 years of Conserving North Carolina’s Aquatic Species of Greatest Conservation Need – Rachael Hoch, Inland Fisheries Division Assistant Chief

2025 WILDLIFE RESOURCES COMMISSION MEETING SCHEDULE – Consider approval of the proposed revisions to 2025 Wildlife Resources Commission meeting schedule – *Kyle Briggs, Executive Director (EXHIBIT C)*

LAND ACQUISITIONS AND PROPERTY MATTERS

Phase II Land Acquisition – Consider final approval to proceed with acquisition of the following properties – *Ben Solomon, Assistant Chief and Land Acquisition Manager (EXHIBITS D-1, D-2, D-3, D-4, D-5, D-6)*

- Dennis Creek – Watauga and Caldwell Counties **(D-1)**
- Buffalo Creek Headwaters – Watauga and Caldwell Counties **(D-2)**
- Caddell/BLATCO – Richmond County **(D-3)**
- Loblolly Group LLC – Hoke County **(D-4)**
- Great Dismal Swamp Restoration Bank – Camden County **(D-5)**
- Shark Island Reallocation – Carteret County **(D-6)**

Other Property Matters – Consider approval of the following other property matters – *Ben Solomon (EXHIBITS E-1, E-2)*

- Easement Request – Request from NCDOT for a permanent right of way and temporary construction easement on Green River Game Land in Henderson County **(E-1)**
- Disposition – Request to demolish a storage building at Armstrong Fish Hatchery **(E-2)**
- Property Trade – City of Salisbury **(E-3)**

WATER SAFETY RULEMAKING

Permanent Rulemaking Notice of Text and Review of Fiscal Note – 10F .0338 Caldwell County – Consider request to notice proposed rule text with an open comment period and public hearing for a proposed amendment to 10F .0338 to enlarge the no-wake zone on Lake Hickory in the City of Hickory. Review and consider approval of fiscal note for the proposed no-wake zone in the City of Hickory and the no-wake zone around the Adam W. Klutz Bridge in Granite Falls – *Betsy Haywood, Water Safety Rulemaking Coordinator (EXHIBITS F-1, F-2)*

Permanent Rulemaking Notice of Text – 10F .0324 Davidson County – Consider request to notice proposed rule text with an open comment period and public hearing for proposed amendments to 10F .0324 for no-wake zones on High Rock Lake, Badin Lake, Tuckertown Reservoir, and Yadkin River. Review and consider approval of fiscal note – *Betsy Haywood (EXHIBITS G-1, G-2)*

Permanent Rulemaking Notice of Text – 10F .0307 Catawba, Iredell, Lincoln, and Mecklenburg Counties – Consider request to notice proposed rule text with an open comment period and public hearing for proposed amendments to 10F .0307 for vessel livery requirements on Lake Norman. Review and consider approval of fiscal note – *Will Casola, Policy Analyst (EXHIBITS H-1, H-2)*

RULEMAKING

Permanent Rulemaking Notice of Text – 10D .0295 Paynes Branch Game Land – Consider request to notice proposed rule text with an open comment period and public hearing for proposed adoption of 10D .0295. Review and consider approval of fiscal note – *Will Casola* (**EXHIBITS I-1, I-2**)

Permanent Rulemaking Notice of Text – 10H .1100 Furbearer Propagation – Consider request to notice proposed rule text with an open comment period and public hearing for proposed amendments to 10H .1100 Rules. Review and consider approval of fiscal note – *Will Casola* (**EXHIBITS J-1, J-2**)

Permanent Rulemaking Notice of Text – Rule Readoption: 10G .0400 Wildlife Service Agents – Consider request to notice proposed rule text with an open comment period and public hearing for proposed amendments to 10G .0400 Rules. Review and consider approval of fiscal note – *Will Casola* (**EXHIBITS K-1, K-2**)

WILDLIFE MANAGEMENT DIVISION

SPECIES CONSERVATION PLAN – Consider staff recommendation for final adoption of the Black Rail Conservation Plan – *Dr. Sara Schweitzer, Wildlife Management Division Assistant Chief* (**EXHIBIT L**)

ELECTION OF OFFICERS – Pursuant to North Carolina General Statute § 143-243, at the first scheduled meeting of the Commission after July 1 of each odd-numbered year, the Wildlife Resources Commission shall select from among its membership a chairman and a vice chairman who shall serve for terms of two years or until their successors are elected and qualified.

- Vote for Vice Chairman
- Vote for Chairman

COMMENTS BY THE CHAIRMAN

COMMENTS BY THE EXECUTIVE DIRECTOR – *Executive Director Briggs*

ADJOURN

EXHIBIT A

July 24, 2025



MINUTES June 5, 2025

N.C. Wildlife Resources Commission Meeting Raleigh, North Carolina

Chairman Monty Crump called the June 5, 2025 N.C. Wildlife Resources Commission meeting to order at 9:00 a.m. in the Commission Room at the agency's headquarters in Raleigh. Chairman Crump reminded everyone that the meeting is being audio streamed live and will be available at www.ncwildlife.gov.

Commissioner Wes Seegars led the Pledge of Allegiance.

Commissioner John Alexander gave the invocation.

ROLL CALL

Margo Minkler, *Commission Liaison*, called the roll. Mike Alford, Joe Budd, David Hoyle, and Hayden Rogers were absent.

COMMISSIONER ATTENDANCE

Monty Crump	Thomas Fonville	Ray Clifton	John Stone	Reid Smith
Mark Craig	Tom Berry	Kelly Davis	John Alexander	
John Coley	Brad Stanback	Steve Windham	Tom Haislip	
Wes Seegars	Jim Ruffin	Landon Zimmer	JC Cole	

MANDATORY ETHICS INQUIRY

Chairman Crump advised the Commission of the mandatory ethics inquiry as mandated in NCGS §138A-15.

MINUTES OF APRIL 17, 2025 MEETING

On a motion by Jim Ruffin and second by Wes Seegars, the Minutes of the April 17, 2025 meeting were approved as presented in **EXHIBIT A**.

EXHIBIT A is incorporated into the official record of this meeting.

ADMINISTRATION

Jason Cottle, Chief Financial Officer, presented a status report in **EXHIBIT B** on the Wildlife Resources Commission General Fund, Capital Improvement Fund, and the Endowment Fund.

EXHIBIT B is incorporated into the official record of this meeting.

COMMITTEE MEETING REPORTS

Habitat, Nongame, and Endangered Species Committee Report – June 4, 2025 – Kelly Davis, Chair, reported the Committee met on June 4, 2025. *Kacy Cook, Coastal Waterbird Biologist*, began the meeting with a presentation on the Eastern Black Rail in North Carolina, including background on the species' distribution, abundance, threats, and conservation efforts. *Dr. Sara Schweitzer, Wildlife Management Division Assistant Chief*, followed with a summary of the Black Rail Conservation Plan. After brief discussion, the Committee voted to approve releasing the Plan for a 30-day public comment period. Next, *Dr. Schweitzer* presented nominations for membership to the Nongame Wildlife Advisory Committee (NWAC). The Committee endorsed the staff recommendation, which was presented later in the meeting. *Shannon Deaton, Habitat Conservation Division Chief*, then provided an update on the 2025 Thomas L. Quay Wildlife Diversity Award cycle. The request for nominations has been re-posted through June 27. *Shannon* also provided an update on the 2025 Draft State Wildlife Action Plan's 10-year revision. Public comments can be submitted through the agency website until July 5, and Committee members are invited to review. A Commission endorsement of the Plan will be requested before it is submitted to the U.S. Fish and Wildlife Service for final approval. *Shannon* also shared a summary of the agency's efforts to assist with debris removal in western rivers and streams following Hurricane Helene. Staff developed a one-page fact sheet of Best Management Practices and created maps of High-Quality Habitat stream reaches for each impacted county in response to partner and public requests. *Rachael Hoch, Inland Fisheries Division Assistant Chief*, provided a presentation on six aquatic species recommended for state-listing review by NWAC's Scientific Council. Staff will evaluate these species using the NC Status Assessment Tool, with proposed listing statuses expected to be presented to the Committee in early 2026. Finally, *Brena Jones, Central Region Aquatic Wildlife Diversity Coordinator*, gave a presentation on the Robust Redhorse in the Yadkin-

Pee Dee River and highlighted ongoing conservation efforts aimed at increasing population resiliency. There being no further business, the Committee adjourned.

Small Game and Wild Turkey Committee Report – June 4, 2025 – *Jim Ruffin, Chair*, reported the Committee met on Wednesday, June 4, 2025. *Brad Howard, Wildlife Management Division Chief*, opened the meeting by notifying the Committee that the annual Lawrence Deidrick Small Game Award nomination window is now open and will close July 9. Staff will share nominations with the Committee via email shortly thereafter. Presentations began with *Hannah Plumpton, Upland Game Bird Biologist*, giving a quick summary of the 2025 turkey harvest. Turkey harvest was the 4th highest on record and trends across the state remain steady. Next, *Chris Kreh, Wildlife Management Division Assistant Chief*, updated the committee on fox squirrels. Fox Squirrel populations appear to be steady and range expansion continues statewide. Some questions exist regarding the Sandhills Game Land and hunting pressure on fox squirrels. Staff recommended introducing a point-of-sale permit for fox squirrel hunting on the Sandhills Game Lands to gather additional data on hunting pressure and this will be included in the Game Land Rules package. Next *Daron Barnes, Land and Water Access Division Chief*, updated the Committee on the progress in habitat development on the Caswell Small Game Focal Area. Timber thinning and prescribed burning continue as planned and the early successional habitat is developing well. Finally, the Committee discussed the ongoing efforts of the Quail Restoration Working Group and potential next steps. After a lively discussion the Committee reached the end of the allotted time, and the meeting was adjourned.

Finance, Audit, and Compliance Committee Report – June 4, 2025 – *Landon Zimmer, Chair*, reported the Committee met on Wednesday, June 4, 2025. *Elizabeth Davis, Internal Audit Director*, presented the 2025 updated WRC Internal Audit Charter to the Committee. Key updates to the charter were discussed, and the Committee voted to approve the charter. The results of the Annual Risk Assessment were presented and noted to have informed the development of the Fiscal Year 2026 Audit Plan. The plan was subsequently presented and the Committee voted to approve the plan. An update was given on current engagements and administrative operations. *Jason Cottle, Chief Financial Officer*, presented an overview of year-to-date revenues and expenditures in both our general and capital improvement funds, as compared to the prior fiscal year. An update was provided as to the current value and asset allocation of the agency's Endowment Fund, as well as the current availability of expendable investment income. There being no further business, the meeting was adjourned.

Education and Communication Committee Report – June 4, 2025 – *Tom Haislip, Chair* reported the Committee met on Wednesday, June 4, 2025. Staff presented an update on the Becoming an Outdoors-Woman Program, outlining the team's efforts to evaluate and rebuild the program to ensure it aligns with the Commission's mission. Moving forward, the program will be called the Outdoor Skills Academy, and its first event took place this week in Avery County. Several additional classes are scheduled for this summer, culminating in a major weekend event planned for this fall. The Committee also received a presentation on the evaluation of the John E.

Pechmann Fishing Education Center and plans for its future. In the fall, staff gathered information from agency staff, volunteers, and past class participants to improve programming and expand outreach in the community. Staff recommended expanding the scope of course offerings, developing an integrated volunteer strategy, and marketing programs locally to meet public needs. Both evaluations presented further the goals identified in the Division's program action plans, which the team has recently developed with input from the entire agency. The meeting concluded with a presentation on the agency's youth shooting sports offerings, including the National Archery in the Schools Program and the Youth Hunter Education Skills Tournament. More than 25,000 students participated in these combined programs in 2024. Some past participants in these shooting sports programs have received scholarships and even gone on to work with the agency. The true success is evident in the smiles on the students' faces as they interact with the agency staff. There being no further business, the meeting was adjourned.

Committee of The Whole Report – June 4, 2025 – *Monty Crump, Chair*, reported the Committee met on Wednesday, June 4, 2025, and began with presentations related to the 2026–2027 annual rulemaking cycle. *Corey Oakley, Inland Fisheries Division Chief*, presented proposed Inland Fisheries Rules, followed by *Daron Barnes, Land and Water Access Division Chief*, with proposed changes to Land and Water Access Rules, and *Brad Howard, Wildlife Management Division Chief*, with proposed changes to Wildlife Management Rules. *Brad* also presented proposed changes to Wildlife Captivity and Rehabilitation rules under Section 10H .1400. Next, *Will Casola, Policy Analyst*, reviewed public comments received and presented temporary rulemaking for Sea Trout 10C .0325 and Pisgah Game Land 10D .0260. *Corey Oakley* then provided a brief update on Flounder. The Committee moved into closed session pursuant to N.C. General Statute §143-318.11(a)(3) to discuss ongoing litigation. There being no further business, the Committee returned to open session and adjourned.

AGENCY SPOTLIGHT – NCWRC Prescribed Burning Program – Building, Training, Innovating – *Casey Phillips, Land and Water Access Forestry Program Leader*, gave a presentation highlighting the prescribed burning program on game lands across the state including historical and current achievements, strategies and tactics for meeting agency goals, and new capabilities and efficiencies. He described grants and partnerships, new training, equipment and technologies, and how those tools are integrated into the program to mitigate the inherent risks of prescribed burning while achieving the greatest benefits possible with limited resources.

CONSIDERATION OF NONGAME WILDLIFE ADVISORY COMMITTEE APPOINTMENTS – On a motion by Kelly Davis and second by Brad Stanback, the Commission reappointed *Jeff Beane, North Carolina State Museum of Natural Sciences*; *Elaine Jordon, Coastal Companies*; *Dr. Mike Martin, North Carolina Department of Agriculture*; *Dr. Joe Poston, Catawba College*, and appointed *Dr. Ryan Heise, Duke Energy* to the Nongame Wildlife Advisory Committee.

EXHIBIT C is incorporated into the official record of this meeting.

RULEMAKING

Permanent Rulemaking Notice of Text – 2026-2027 Annual Cycle Inland Fisheries Rules – On a motion by Ray Clifton and a second by Landon Zimmer, the Commission approved publishing the Notice of Text in the *NC Register* with an open comment period and a public hearing for amendments to Inland Fisheries rules presented in **EXHIBIT D-1** and approved fiscal note for proposed rules presented in **EXHIBIT D-2** by *Corey Oakley, Inland Fisheries Division Chief*

EXHIBITS D-1 and D-2 are incorporated into the official record of this meeting.

Permanent Rulemaking Notice of Text – 2026-2027 Annual Cycle Land and Water Access Rules – On a motion by Tom Haislip and a second by Landon Zimmer, the Commission approved publishing the Notice of Text in the *NC Register* with an open comment period and a public hearing for amendments to Land and Water Access rules presented in **EXHIBIT E-1** and approved fiscal note for proposed rules presented in **EXHIBIT E-2** by *Daron Barnes, Land and Water Access Division Chief*

EXHIBITS E-1 and E-2 are incorporated into the official record of this meeting.

Permanent Rulemaking Notice of Text – 2026-2027 Annual Cycle Wildlife Management Rules – On a motion by John Alexander and a second by Kelly Davis, the Commission approved publishing the Notice of Text in the *NC Register* with an open comment period and a public hearing for amendments to Wildlife Management rules presented in **EXHIBIT F-1** and approved fiscal note for proposed rules presented in **EXHIBIT F-2** by *Brad Howard, Wildlife Management Division Chief*

EXHIBITS F-1 and F-2 are incorporated into the official record of this meeting.

Permanent Rulemaking Notice of Text – 10H .1400 Wildlife Captivity and Rehabilitation – On a motion by Jim Ruffin and a second by Brad Stanback, the Commission approved publishing the Notice of Text in the *NC Register* with an open comment period and a public hearing for proposed amendments to 10H .01401 through .1406 presented in **EXHIBIT G-1** and approved fiscal note for proposed rules presented in **EXHIBIT G-2** by *Brad Howard*

EXHIBITS G-1 and G-2 are incorporated into the official record of this meeting.

On a motion by Steve Windham and second by Wes Seegars, the Commission approved the following temporary rules presented in **EXHIBITS H-1 and I-1** by *Will Casola, Policy Analyst*:

Temporary Rulemaking Adoption – 10C .0325 Sea Trout – The Commission reviewed public comments presented in **EXHIBIT H-2** and adopted temporary size and creel limits for sea trout in inland waters and for hook-and-line in joint fishing waters presented in **EXHIBIT H-1**

Temporary Rulemaking Adoption – 10D .0260 Pisgah Game Lands – The Commission reviewed public comments presented in **EXHIBIT I-2** and adopted temporary rules for permitted activities on the Lutz Tract of Pisgah Game Land presented in **EXHIBIT I-1**

EXHIBITS H-1, H-2, I-1, I-2 are incorporated into the official record of this meeting.

COMMENTS FROM THE CHAIRMAN – Chairman Crump began his remarks by encouraging Commissioners to attend the ribbon cutting for the Samarcand Wildlife Law Enforcement Training Facility on June 23, describing it as a legacy event for the agency. The program will also include a rededication ceremony honoring fallen officers, whose memorial has been relocated to the facility. He announced that Commissioner Reid Smith has generously invited the Commission to visit his farm in conjunction with the December meeting. Additional details will be shared in the coming months. Chairman Crump recognized Tom Berry, who was inducted into the Guilford County Sports Hall of Fame. In closing, he noted that the election of the Chair and Vice Chair will take place at the July meeting and encouraged any interested Commissioners to submit their names ahead of time.

COMMENTS FROM THE EXECUTIVE DIRECTOR – Executive Director Briggs expressed his appreciation to staff for their continued hard work in supporting the agency's mission. He gave special thanks to those involved in preparing the annual cycle rule proposals, noting the significant effort required to refine the proposals in a way that balances the needs of both wildlife and constituents. He also thanked the Commissioners for their ongoing support, advice, and guidance, especially for the time and effort they contribute outside of formal meetings. In closing, he shared that the Law Enforcement Basic School graduation will be held on August 1 at Pinehurst First Baptist Church and encouraged Commissioners to mark their calendars.

ADJOURNMENT

There being no further business, the WRC webinar meeting was adjourned at 9:50 a.m. All exhibits are incorporated into the official record of this meeting by reference and are filed with the minutes.

Monty Crump, Chairman

Date

Kyle Briggs, Executive Director

Date

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
CAFR 52G - STATEMENT OF REVENUES, EXPENDITURES and CHANGES in FUND BALANCES

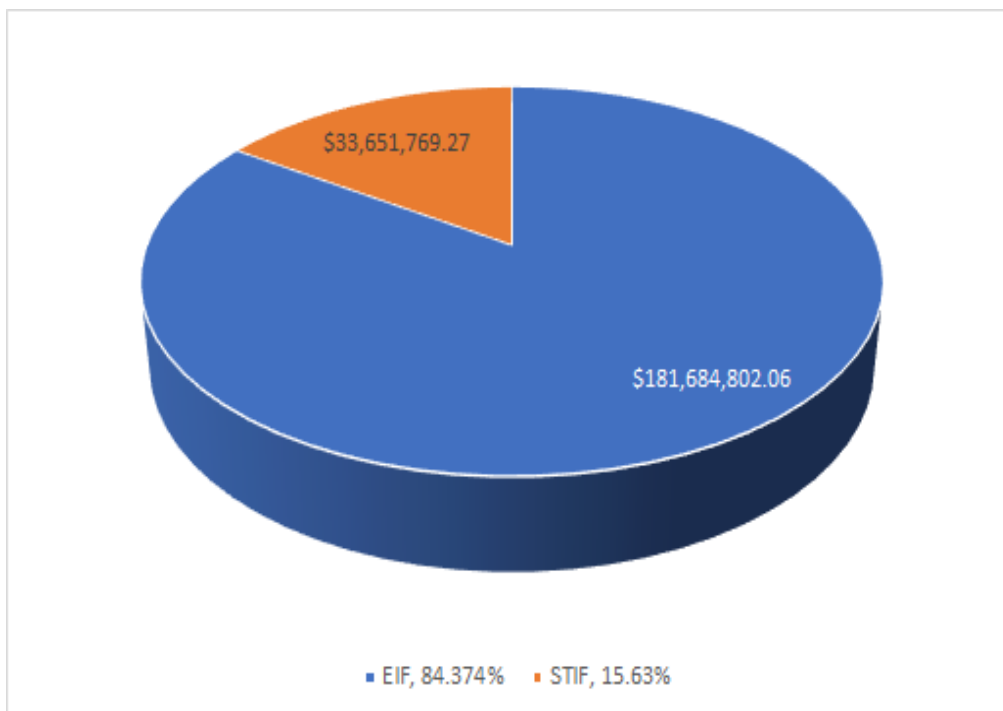
GOVERNMENTAL FUNDS
AS OF MAY 31, 2025

	FY 2025 General Fund	FY 2025 Capital Improvement Fund
REVENUES		
Federal funds	\$ 33,332,757.33	\$ 1,262,646.56
Local funds	\$ 1,797.23	\$ -
Investment earnings	\$ 625,038.67	\$ -
Sales and services	\$ 9,501,483.67	\$ -
Rental and lease of property	\$ 74,944.90	\$ -
Fees, licenses and fines	\$ 33,753,243.91	\$ -
Contributions, gifts and grants	\$ 1,406,033.49	\$ 1,103,426.14
Miscellaneous	\$ (11,871.08)	\$ -
Unclassified/invalid accounts	\$ -	\$ -
Other Financing Sources - Sale of capital assets	\$ 253,525.29	\$ -
Other Financing Sources - Insurance recoveries	\$ -	\$ 9,287.63
Other Financing Sources - Transfers in	\$ 61,920,622.95	\$ 6,326,830.64
Other Financing Sources - Appropriations	\$ 16,738,524.00	\$ -
TOTAL REVENUES	\$ 157,596,100.36	\$ 8,702,190.97
EXPENDITURES		
Personal services	\$ 40,289,770.47	\$ -
Employee benefits	\$ 19,393,832.19	\$ -
Contracted personal services	\$ 14,261,032.69	\$ 303,112.22
Supplies and materials	\$ 7,901,997.41	\$ 430.35
Purchases for Resale	\$ 60,938.18	\$ -
Travel	\$ 758,521.26	\$ 319.26
Communication	\$ 873,053.45	\$ -
Utilities	\$ 636,759.94	\$ -
Data processing services	\$ 470,143.38	\$ -
Other services	\$ 4,425,874.45	\$ 507,795.00
Principal Retirement	\$ 11,424.00	\$ -
Interest and Fees	\$ 1,035.85	\$ -
Claims and benefits	\$ 1,474,102.00	\$ -
Other fixed charges	\$ 247,938.10	\$ 100.00
Capital outlay	\$ 10,593,603.33	\$ 7,150,555.40
Grants, state aid and subsidies	\$ 2,896,182.45	\$ -
Insurance and bonding	\$ 308,446.83	\$ -
Other expenditures	\$ 3,494,504.35	\$ 19,776.38
Reimbursements	\$ (535,198.29)	\$ -
Unclassified/invalid accounts	\$ 500.00	\$ -
Other Financing (Uses) - Transfers out	\$ 56,473,094.60	\$ 127,684.73
TOTAL EXPENDITURES	\$ 164,037,556.64	\$ 8,109,773.34
EXCESS OF REVENUES OVER (UNDER) EXPENDITURES	\$ (6,441,456.28)	\$ 592,417.63
FUND BALANCE - JULY 1, 2024	\$ 28,742,870.36	\$ 4,689,552.52
FUND BALANCE - MAY 31, 2025	\$ 22,301,414.08	\$ 5,281,970.15

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION ENDOWMENT PORTFOLIO

Fund Balance*: May 31, 2025: \$215,336,571.33

ASSET ALLOCATION



2025 May						
Status:		Principal	ANI Nonexpendable	ANI Expendable		Total
	Adult	\$ 92,988,217.70		\$ 75,261,071.48		\$ 168,249,289.18
	Magazine	\$ 1,573,477.50		\$ 1,105,959.26		\$ 2,679,436.76
	Contributions	\$ 910,973.38		\$ 3,358,042.68		\$ 4,269,016.06
	Diversity	\$ 370,615.22		\$ 87,918.35		\$ 458,533.57
	Infant	\$ 22,812,112.50	\$ 12,929,239.71			\$ 35,741,352.21
	Youth	\$ 3,193,775.00	\$ 1,190,843.60			\$ 4,384,618.60
						\$ 215,782,246.38
	Total	\$ 121,849,171.30	\$ 14,120,083.31	\$ 79,812,991.77		\$ 215,782,246.38
						\$ -
				Total from detail area >>		\$ 215,782,246.38
						\$ -

Of the amount noted above as expendable income, the figures below represent WRC's known obligations for Endowment income over the next three years:

Setzer Hatchery Renovation	\$19,700,000.00
Other Capital Projects	\$ 3,679,202.00
Other Agency Priorities	\$ 4,218,917.74
Debt Service	\$ 4,632,401.00

Remaining Available Expendable Income \$47,582,471.03

EXHIBIT C

July 24, 2025



2025 WILDLIFE RESOURCES COMMISSION MEETINGS

PROPOSED REVISIONS TO SCHEDULE ADOPTED ON DECEMBER 5, 2024

THURSDAY, FEBRUARY 6, 2025

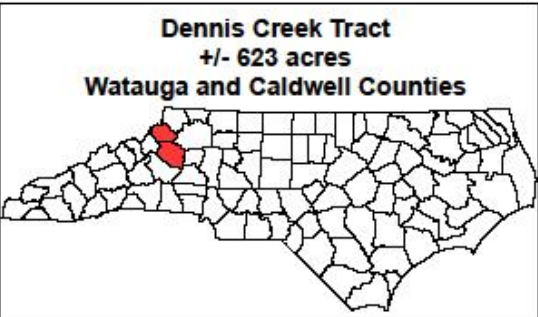
THURSDAY, APRIL 17, 2025

THURSDAY, JUNE 5, 2025

THURSDAY, JULY 24, 2025

THURSDAY, OCTOBER 16, 2025

THURSDAY, DECEMBER 4, 2025



Dennis Creek (Exhibit D-1)

Acquisition Plan

- Appraisal: \$3,943,100

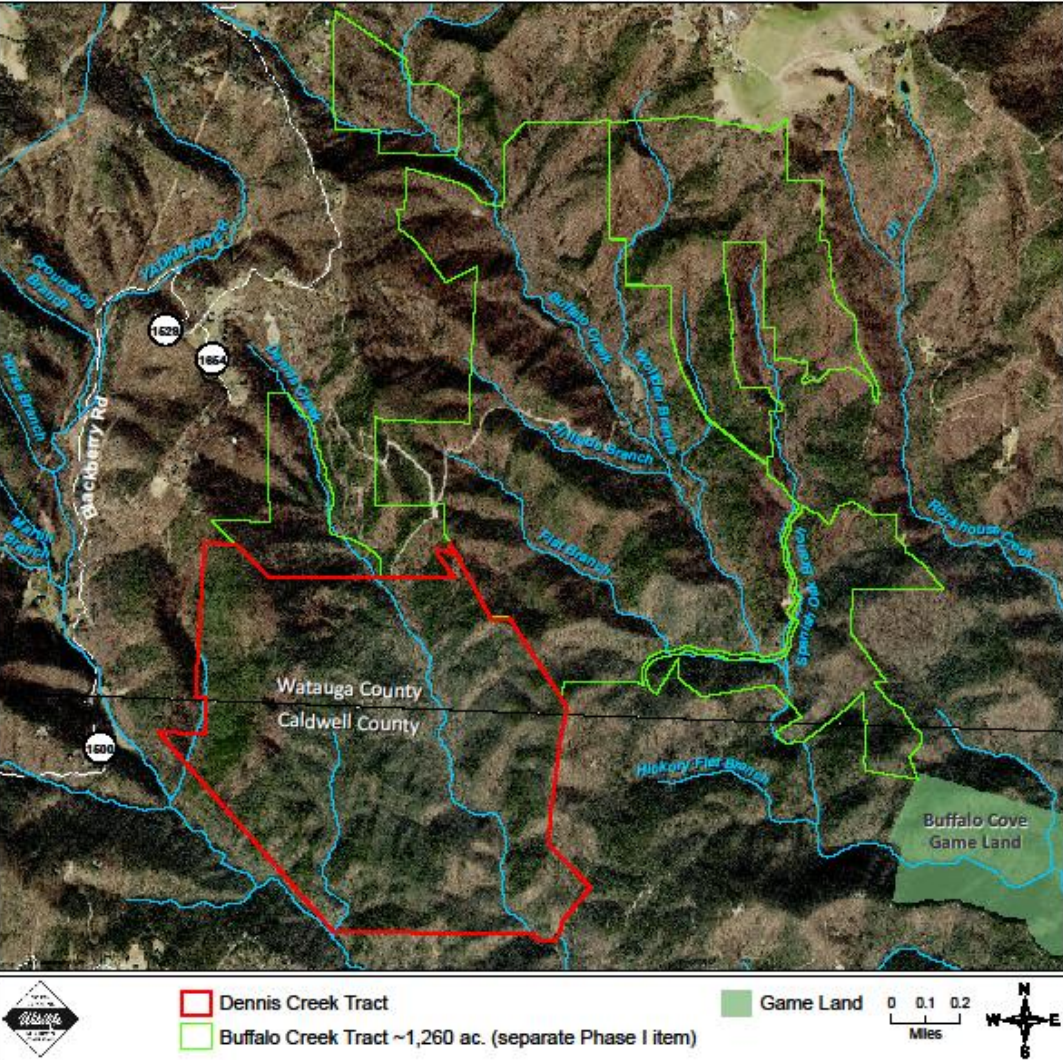
Blue Ridge Conservancy LWF Grant	\$2,100,000.00
Wildlife Restoration Funds	\$571,000.00
Total Acquisition	\$2,671,000.00

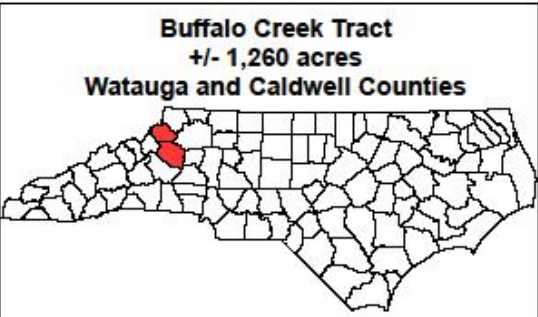
Five-Year Stewardship/Revenue Estimates

- Total Stewardship Costs Estimate: \$21,500
- Boundary establishment
 - Gate installation

Total Revenue Estimate: \$0.00

Staff recommend Phase II approval





Buffalo Creek Headwaters (Exhibit D-2)

Acquisition Plan

- Appraisal: \$18,100,000

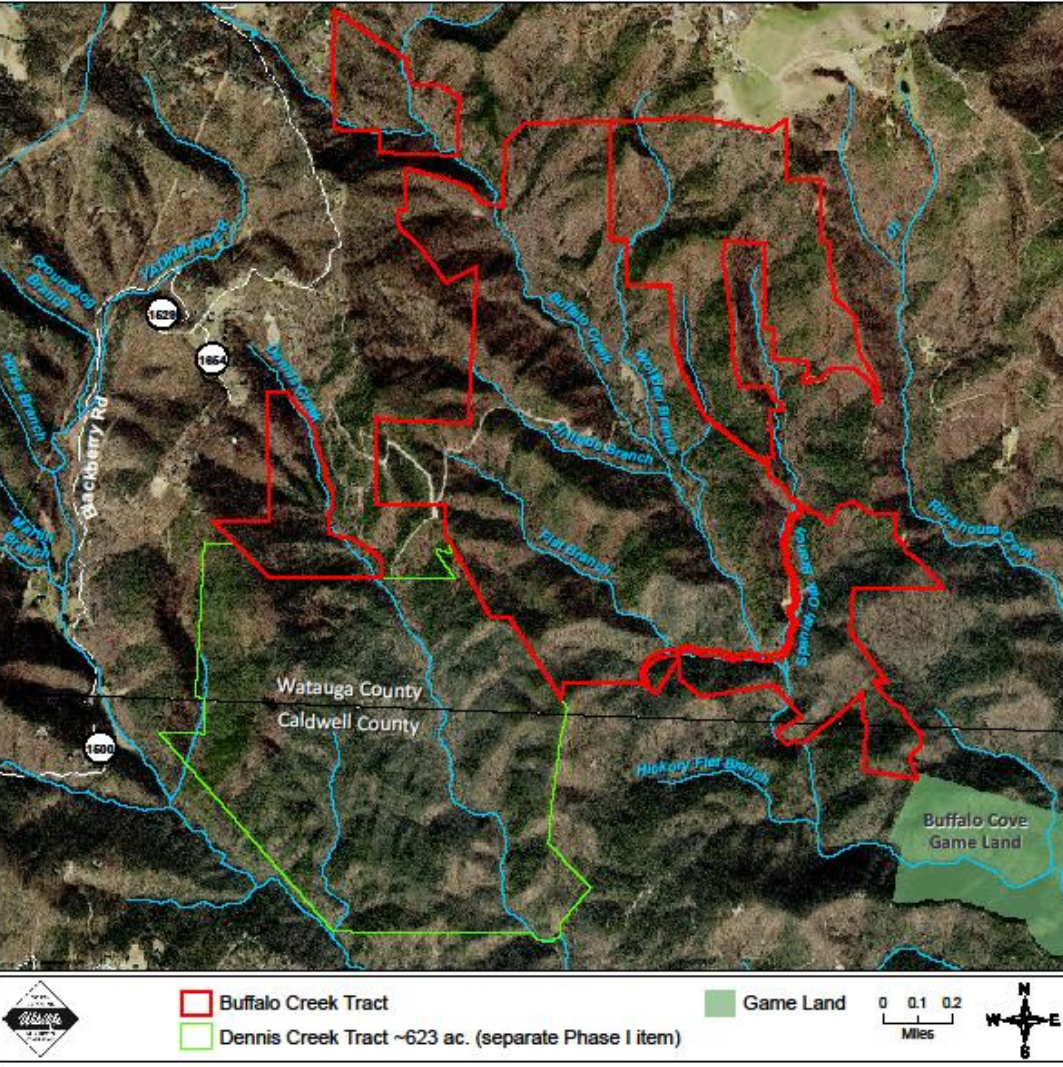
Forest Legacy Grant	\$13,500,000.00
Total Acquisition	\$13,500,000.00

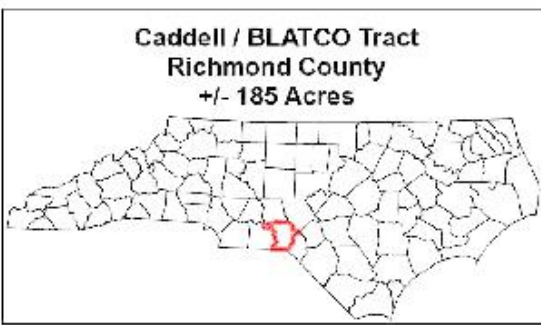
Five-Year Stewardship/Revenue Estimates

- Total Stewardship Costs Estimate: \$46,000
- Boundary establishment
 - Gate installation

Total Revenue Estimate: \$0.00

Staff recommend Phase II approval





Caddell/BLATCO Tract (Exhibit D-3)

Acquisition Plan

- Donation from The Nature Conservancy

Five-Year Stewardship/Revenue Estimates

Total Stewardship Costs Estimate: \$625

- Boundary establishment

Total Revenue Estimate: \$0.00

Staff recommend Phase II approval



**Loblolly Group LLC Tract
Hoke County
+/- 80 Acres**



Loblolly Group LLC Tract (Exhibit D-4)

Acquisition Plan

- Donation from The Nature Conservancy

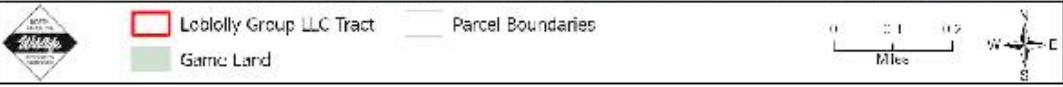
Five-Year Stewardship/Revenue Estimates

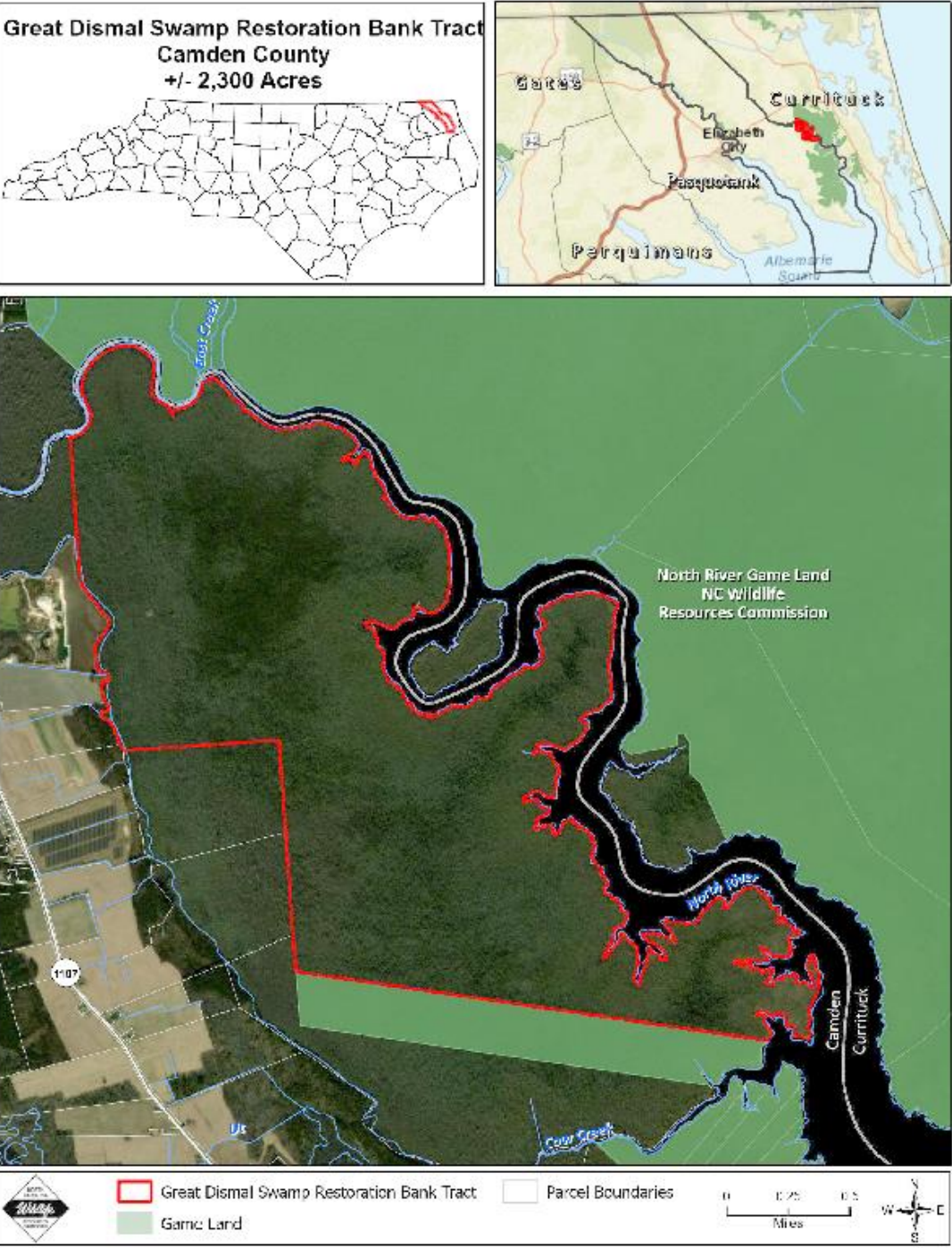
Total Stewardship Costs Estimate: \$1,250

- Boundary establishment

Total Revenue Estimate: \$0.00

Staff recommend Phase II approval





Great Dismal Swamp Restoration Bank (Exhibit D-5)

Acquisition Plan

- Donation from The Nature Conservancy

Five-Year Stewardship/Revenue Estimates

Total Stewardship Costs Estimate: \$10,625

- Boundary establishment and maintenance

Total Revenue Estimate: \$0.00

Staff recommend Phase II approval

Shark Island
Carteret County
+/- 128 Acres



Shark Island Reallocation (Exhibit D-6)

Acquisition Plan

- Reallocation from NCDORA to NCWRC

Five-Year Stewardship/Revenue Estimates

Total Stewardship Costs Estimate: \$13,194

- Boundary establishment
- Signage and supplies for waterbirds and sea turtles
- Ferry Fee's for staff to access island

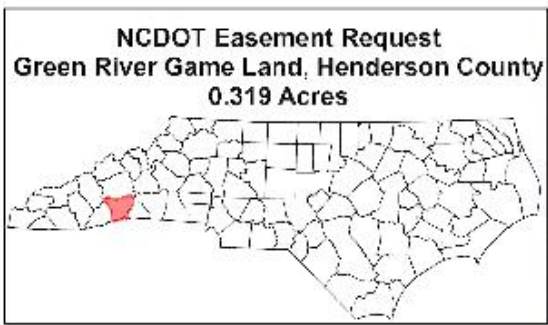
Total Revenue Estimate: \$0.00

Staff recommend Phase II approval

NPS Cape Lookout
National Seashore

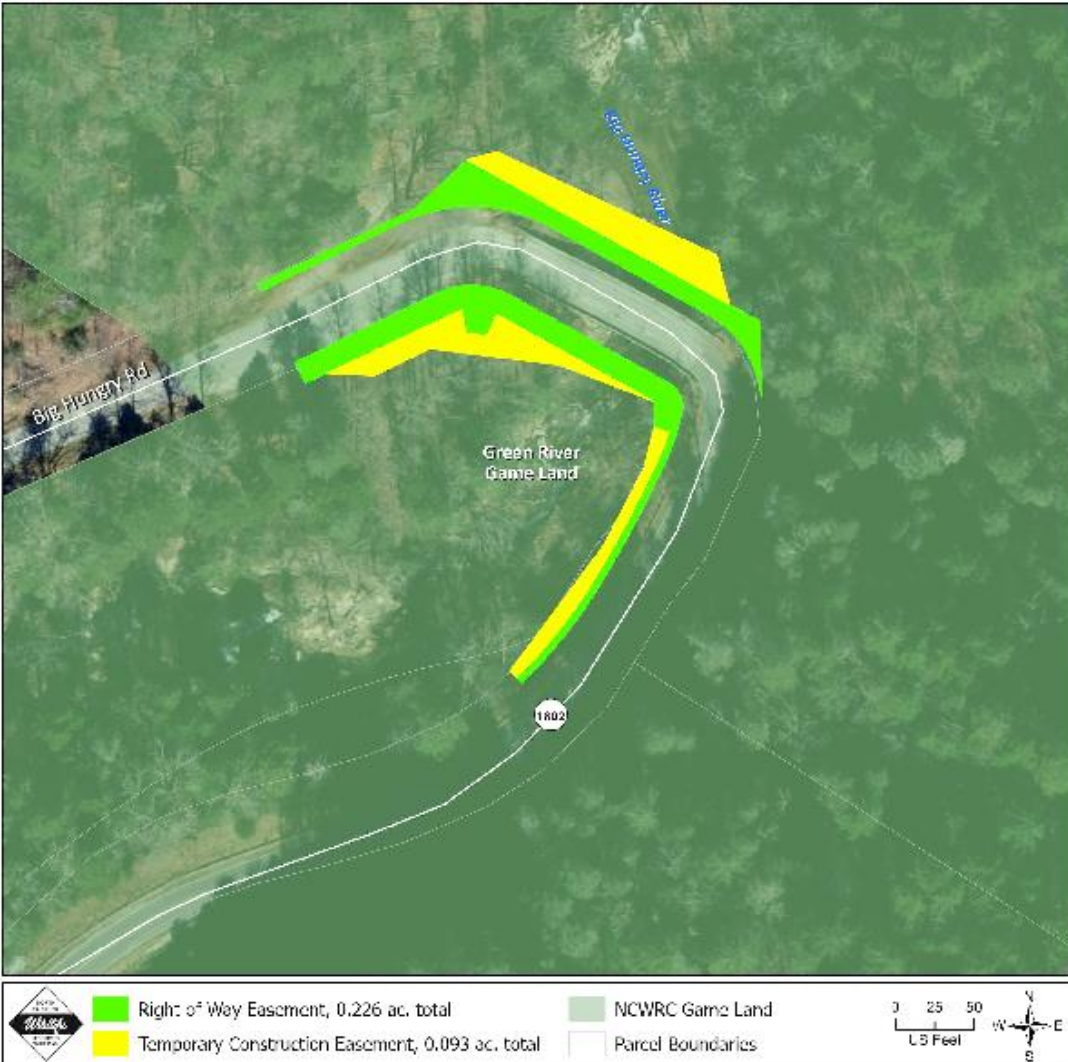
Shark Island



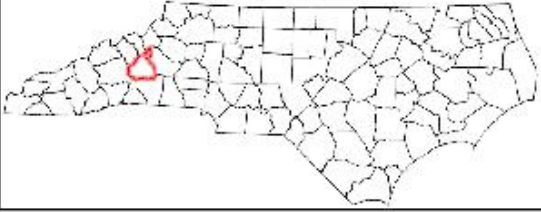


Easement Request – Green River Game Land (Exhibit E-1)

- Easement request from NCDOT
- Green River Game Land - Henderson County
- Permanent Right of Way - 0.226 acres total
- Temporary Construction Easement - 0.093 acres total
- Easement value to be determined by the State Property Office.



**Building Demolition
Armstrong State Fish Hatchery
McDowell County**



Disposition – Armstrong Fish Hatchery (Exhibit E-2)

- Request to demolish a storage building at Armstrong Fish Hatchery.
- The building has historically been utilized for storage and other hatchery operations.
- The building sustained damage in Hurricane Helene.
- Staff believe the best action is to demolish the building.



City of Salisbury Property Trade



Property Trade – City of Salisbury (Exhibit E-3)

- Property trade request from the City of Salisbury to support the development of a new drinking water intake facility, supporting ~53,000 households in the area.
- Proposed property trade
 - 15.83 acres of Commission owned game land in exchange for 19.64 acres of land owned by the City of Salisbury
 - The proposed trade will not involve exchange of funds
 - City will utilize these 15.83 acres for construction of a new water intake facility
- The Commission owned property was acquired with NC Land and Fund funding, as well as federal Pittman-Robertson funding.
- NC Land and Water Fund and NC Natural Heritage have reviewed and approved of the land trade.
- Staff recommend Commission approval of the proposed land trade, contingent on receiving approval from US Fish and Wildlife Service to dispose of the 15.83 acres.

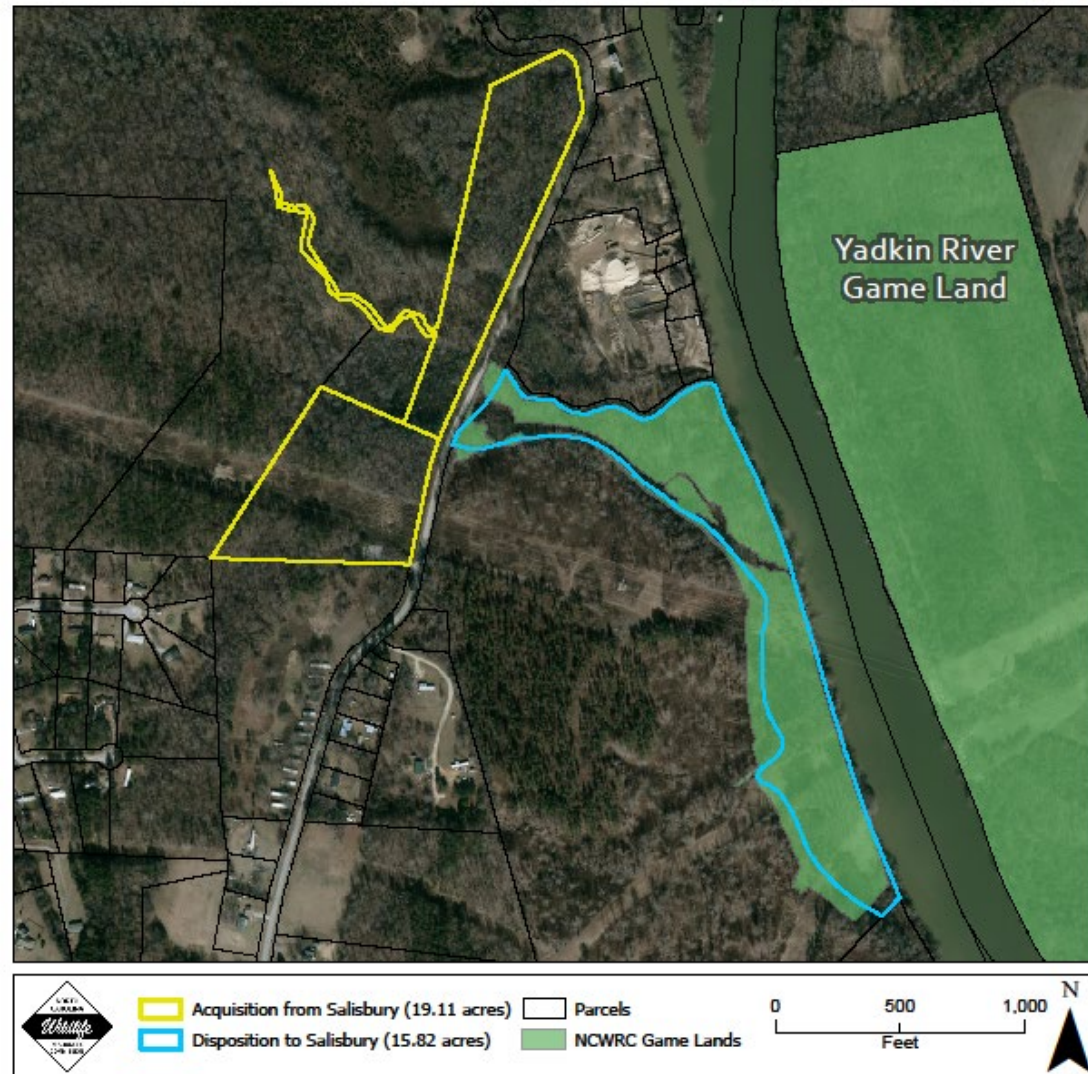


EXHIBIT F-1

July 24, 2025



15A NCAC 10F .0338 CALDWELL COUNTY, CITY OF HICKORY PROPOSED NOTICE OF TEXT FOR AMENDMENT TO NO-WAKE ZONE ON LAKE HICKORY IN THE CITY OF HICKORY

The Wildlife Resources Commission (WRC) received an application and Resolution from the City of Hickory, for rulemaking to enlarge the no-wake zone on Lake Hickory shore to shore, from a point 50 yards southwest of the U.S. Highway 321 bridge, northward past River Walk on the east shore and Lake Hickory Pub and Marina on the west shore, ending at a point 460 yards northeast of the bridge.

Agency Enforcement has investigated the area and returned the Assessment Matrix. Enforcement found known hazards around the U.S. Highway 321 bridge, including visual obstructions and boat wakes that have a negative effect on maneuverability under the bridge and around the bridge supports. The new River Walk on the east shore and access area for non-motorized vessels that are rented from the Lake Hickory Marina on the west shore create congestion and hazards. Non-motorized vessels congregate around the pillars that support the River Walk. Jet skis travel very fast in the unregulated area as well, and wakes have swamped some of the rented non-motorized vessels. Boaters use little caution when exiting the Lake Hickory Marina and its fuel dock on the west side of the lake just north of the bridge. Extending this no-wake zone shore to shore and for a longer distance will mitigate multiple hazards to boaters and other water recreation activities in the busy area.

The City of Hickory will implement the enlarged no-wake zone around the U.S. Highway 321 Bridge, River Walk, and Lake Hickory Pub and Marina. The City will purchase five no-wake buoys, which will be installed by WRC Land and Water Access staff.

Staff requests Commission approval to publish Notice of Text in the *NC Register* with an open comment period and public hearing, for rulemaking for an enlarged no-wake zone on Lake Hickory in the City of Hickory.

15A NCAC 10F .0338 CALDWELL COUNTY

(a) Regulated Areas. This Rule ~~shall apply~~ applies to the following waters in Caldwell County:

~~(1) — Catawba River;~~

~~(2)~~(1) Lake Rhodhiss:

- (A) within 50 yards of the marina facilities at Castle Bridge Marina, 6131 Castle Bridge Drive in Granite Falls;
- (B) within 50 yards of the Castle Bridge Boating Access Area, 6131 Connelly Springs Road in Granite Falls; and
- (C) within 50 yards of the Conley Creek Boating Access Area, 5475 Waterworks Road in Granite Falls Falls; and

~~(3) — Little Gunpowder Lake; and~~

~~(4)~~(2) Lake Hickory:

- ~~(A) — within 30 yards of the docks at the Lake Hickory Marina and Boat Rentals, on Limbaugh Lane in the City of Hickory;~~
- (A) the waters shore to shore beginning 50 yards southwest of the U.S. Highway 321 Bridge, from a line at a point on the east shore of Lake Hickory at 35.75636 N, 81.37646 W to a point on the west shore at 35.75820 N, 81.37843 W, northeast past River Walk on the east shore and Lake Hickory Pub and Marina on the west shore, ending at a line from a point on the east shore at 35.76041 N, 81.37425 W to a point on the west shore at 35.76054 N, 81.37713 W in the City of Hickory;
- (B) within 50 yards of the Gunpowder Boating Access Area, at 5450 Hurricane Hill Road in Granite Falls; ~~and~~
- (C) within 50 yards of the Lovelady Boating Access Area, at 5682 Rocky Mount Road in Granite Falls. Falls; and
- (D) the waters of Gunpowder Creek shore to shore, within 50 yards northeast and 50 yards southwest of the Adam W. Klutz Bridge on Grace Chapel Road in Granite Falls.

(b) Speed limit. No person shall operate a vessel at greater than no-wake speed within any regulated area described in Paragraph (a) of this Rule.

(c) Speed Limit in Mooring Areas. No person shall operate a vessel at greater than no-wake speed while within a marked mooring area on the regulated areas described in Paragraph (a) of this Rule.

~~(d) Swimming Areas. No person operating or responsible for the operation of a vessel shall permit it to enter any marked public swimming area on the regulated areas described in Paragraph (a) of this Rule.~~

~~(e)~~(d) Placement of Markers. ~~The following agencies shall place or place and maintain the markers implementing this Rule, subject to the approval of the United States Coast Guard and United States Army Corps of Engineers:~~

- (1) the Board of Commissioners of Caldwell County shall ~~place the~~ be the designated agency markers implementing Subparagraph (a)(1)(A) of this Rule;

- (2) the City of Hickory shall ~~place the~~ be the designated agency markers implementing Part (a)(2)(A) of this Rule; and
- (3) the North Carolina Wildlife Resources Commission shall ~~place and maintain the~~ be the designated agency markers implementing Parts (a)(1)(B) and (C) and (a)(2)(B) through (D) of this Rule.

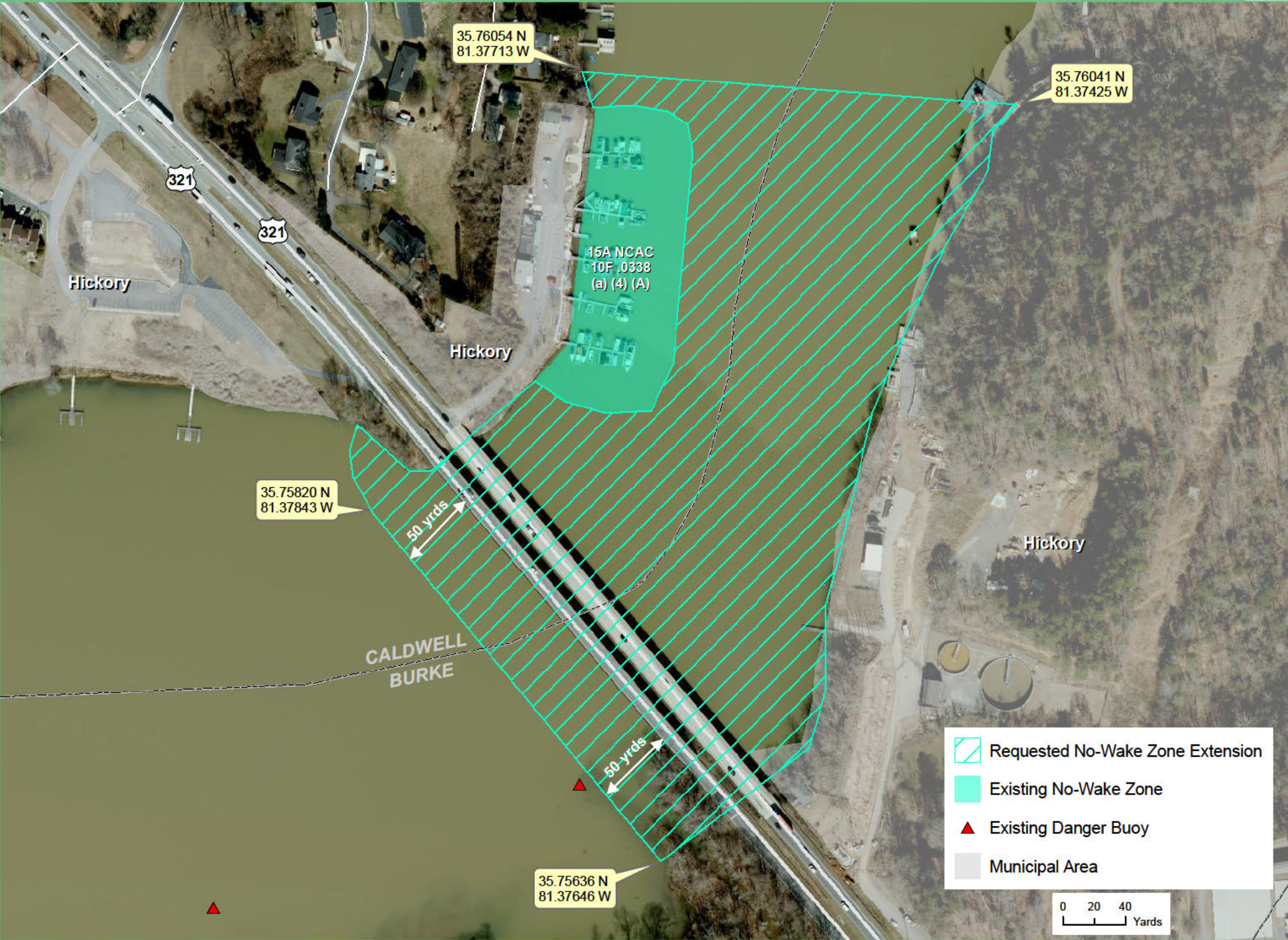
History Note: Authority G.S. 75A-3; 75A-15;

Eff. August 23, 1981;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 6, 2016;

Amended Eff. February 1, 2024; July 1, 2018.

15A NCAC 10F .0323 & 15A NCAC 10F .0338 - Requested No-Wake Zone Extension by the City of Hickory
Lake Hickory Marina and Boat Rental docks, Lake Hickory, Burke and Caldwell Counties



RESOLUTION NO. 25-21

**A RESOLUTION OF THE HICKORY CITY COUNCIL
EXPRESSING SUPPORT IN ESTABLISHING A NO WAKE ZONE ON LAKE
HICKORY LOCATED TO THE NORTHEAST OF THE CURRENT U.S. 321
BRIDGE AND ADJACENT TO LAKE HICKORY MARINA LOCATED AT [REDACTED]
[REDACTED] AND THE CITY OF HICKORY RIVERWALK; AND TO
FORMALLY REQUEST THE N.C. WILDLIFE RESOURCES COMMISSION
TAKE ACTION ON THE PROPOSAL**

WHEREAS, Lake Hickory, northeast of the current U.S. 321 bridge and adjacent to Lake Hickory Marina, located at 6700 Limbaugh Lane, and the City of Hickory Riverwalk, is a popular location for boating and general recreational activities; and

WHEREAS, currently this area of the lake is not designated as a "no wake zone"; and

WHEREAS, acceleration and deceleration, along with the wake generated by the boats traveling on the lake creates a variety of issues harmful to the public health, safety, and welfare of citizens using the lake; and

WHEREAS, Hickory City Council has been made aware of the request to implement a "no wake zone" on Lake Hickory, northeast of the current U.S. 321 bridge and adjacent to Lake Hickory Marina, located at 6 [REDACTED] and City of Hickory Riverwalk; and

WHEREAS, in accordance with North Carolina General Statute §75A-15, the Hickory City Council will conduct a public hearing for the consideration of the establishment of a "no wake zone" on Lake Hickory; and

WHEREAS, Hickory City Council desires to express its support for this effort as an important means of protecting the public health, safety, and welfare of citizens.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Hickory, North Carolina:

SECTION 1. The above recitals are true and correct, and are incorporated into this Resolution and are hereby specifically made a part hereof.

SECTION 2. After holding a public hearing, April 1, 2025, the City Council of the City of Hickory hereby expresses its support for a "no wake zone" on Lake Hickory northeast of the current U.S.

321 Bridge and adjacent to Lake Hickory Marina, located at [REDACTED] and the City of Hickory Riverwalk.

SECTION 3. Planning Director, Brian Frazier is directed to provide a copy of this Resolution to the North Carolina Wildlife Resources Commission.

SECTION 4. This Resolution shall take effect immediately upon its execution.

Adopted this the 1st day of April, 2025.



ATTEST:

[REDACTED]
Debbie D. Miller, City Clerk

City of Hickory

By: [REDACTED]
Hank Guess, Mayor



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 1: APPLICANT REQUEST AND INFORMATION

- Name of organization/entity: City of Hickory
- Primary contact information: Wilson Elliott, City of Hickory planner [REDACTED]
- Location of requested no-wake zone:
 - Body of water and County: Lake Hickory in Caldwell and Burke Counties in the City of Hickory
 - Location: Shore to shore beginning north of the US Hwy 321 bridge, northward to a line north of the Lake Hickory Marina on western shore and River Walk on eastern shore
 - Popular name of area, if any: River Walk and Lake Hickory Marina
 - Width of No-Wake Zone: Narrowest Point: 140yd Widest Point: 275yd
 - Brief Description of area (example: bridge overpass, obstructed views, Intracoastal Waterway; etc.)

Since the development of the River Walk in Hickory on the eastern shore north of the bridge, city staff and citizens and boaters have expressed concerns about safety hazards to motor boats, non-motorized vessels, and pedestrian activity. The River Walk walkway extends over the lake and this narrow strip with pillars in the water supporting the walkway has become more congested for boaters and lake visitors. There is an access point from the parking lot at Riverwalk for non-motorized crafts. The Lake Hickory Marina rents these crafts, and some of them have been swamped and sunk due to boat wakes. Jet skis and kayaks and canoes travel under the highway bridge at times, with the jet skis that travel very fast in the currently unregulated area. Boaters use little caution when exiting the Lake Hickory Marina, which currently has only a 30 yard NWZ to the Burke County line. The marina has a fuel dock. The marina is interested in expanding its no-wake zone shore to shore as well to mitigate multiple hazards to boater and other water recreation safety.

Attach map of designated no-wake zone

Map showing Riverwalk and existing Lake Hickory Marina attached. Attached in email

Ensure proposed no-wake zone map/and or location is agreed upon by point of contact



NO-WAKE ZONE INVESTIGATION MATRIX

Provide detailed reason given from point of contact for the request

Please see detailed reason, above. Please see photos provided by City Planner showing the Riverwalk walkway and supports under the walkway.

- Is the proposed no-wake zone located within an area that is regulated by the U.S Army Corps of Engineers or the Division of Coastal Management (CAMA) i.e., Intracoastal Waterway?

YES ☐

NO ☒

When dealing with the point of contact, please advise that placement of markers in these waters is subject to prior approval of above agency in waters where applicable. NCWRC has no authority to supersede these rules.



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 2: PUBLIC SAFETY HAZARD

Identify all public safety hazards in this section by checking the block and listing name and/or location

☐ FUELING DOCK OR FACILITY

Name of Facility: _____

☐ PUBLIC SWIMMING OR RECREATIONAL AREA

Would the establishment of a roped swimming area or placement of no-wake regulatory buoys be more appropriate?

ROPED SWIM AREA ☐

NO-WAKE BUOYS ☐

☐ PUBLIC BOAT ACCESS

Name of Access Area: _____

☐ PUBLIC FISHING PIER OR FISHING ACCESS AREA

Name of Pier/Access Area: _____

☐ RESTAURANT DOCKS

Name of Restaurant: _____

Number of Docks: _____

☒ OTHER (list and describe)

River Walk Structure Pylons / 321 Bridge Pylons

SECTION 3: NAVIGATIONAL HAZARDS

Identify all potential hazards associated with the proposed no-wake zone (check all that apply)

☒ OBSTRUCTIONS (Identify) River Walk Structure Pylons/ 321 Bridge Pylons

Can obstructions be removed? ☐ YES ☒ NO

☒ NARROW CHANNEL (give approximate width) 140yd

☐ SHALLOW WATER (give average depth) _____



NO-WAKE ZONE INVESTIGATION MATRIX

☒ OBSTRUCTED VISION (for approximately how great a distance) Approximately 100ft

STRUCTURES: (Check all applicable)

☐ DAM Name: _____

☐ SPILLWAY Location: _____

☐ FLOOD CONTROL STRUCTURE Location: _____

☒ BRIDGE Roadway: Hwy 321
Height above water: Approximately 20ft
Width between piers: Approximately 100ft

☐ TRESTLE Height above water: _____
Width between piers: _____

☐ POWER LINE _____

☐ LOCK Lock Number: _____

☐ JETTY _____

☐ SUBMERGED STRUCTURE Identify Structure: _____

- Would placement of "Danger" buoys or other informational markers mitigate the hazards in lieu of a no-wake zone? ☐ YES ☒ NO

☐ SANDBAR _____

☐ SHOAL _____

☐ OTHER (list and describe)



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 4: SUMMARY OF BOATING SAFETY STATISTICS

Identify known data reflecting safety concerns:

☐ BOAT INCIDENTS Date(s): _____

☐ CITATIONS ISSUED Violations: _____

☐ VERIFIED COMPLAINTS List: _____

- Rate traffic density in this area LIGHT ☒
- Is traffic density specific to weekend/and or holidays? YES ☒ NO ☐
- Does traffic density or ability to maneuver a vessel due to traffic cause safety issues?
YES ☒ NO ☐

SECTION 5: CURRENT REGULATIONS

- List existing local laws currently in place restricting vessel speed in the requested area:
None
- Would enforcement of existing boating laws mitigate the issues and concerns addressed in the proposed area?

☐ YES Identify Violations: _____
☒ NO



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 6: NO-WAKE ZONE DIMENSIONS AND SCOPE

Evaluate the applicant's proposed no-wake request based on criteria and complete Section 6. If investigated area does not meet criteria for a no-wake zone, move to section 7. If the area meets no-wake zone criteria but the proposed area exceeds the need to address the issues, recommend appropriately sized area and attach map with changes.

A. PROPOSED

- If approved, does no-wake zone extend into a designated channel?
☒ YES Distance extended into channel: Entire channel
☐ NO
- Total distance travelled at no-wake speed (in feet): 1350ft
- Estimated travel time through propose area at no-wake speed: Approximately 3 min
- Width of proposed no-wake zone (in feet): Narrowest: 420ft Widest: 825ft
- Does proposed no-wake zone meet criteria for consideration?
☐ YES: Appropriately sized
☒ YES: Adjusted size recommended
☐ NO
- Description/Explanation of adjusted size
Extending the wake zone 50 yards west of the Hwy 321 bridge would help mitigate the risk of visual obstructions and reduce the impact of pylons in the area. This adjustment would provide boaters with more time and space to navigate around potential hazards, improving safety by enhancing visibility and avoiding close encounters with the bridge supports. The added buffer zone would also promote safer boating practices, particularly in areas with limited line of sight or congested traffic.
- ☒ Adjusted map attached



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 7: OFFICER ASSESSMENT OF WATER SAFETY HAZARDS

- Does the proposed area meet the criteria to be recommended as a no-wake zone?

YES: ☒

NO: ☐

- Justification:

Approving the no wake zone at the Hwy 321 bridge, with the revised extension, is a necessary measure to enhance safety and protect both recreational boaters and infrastructure in the area. This extension addresses key concerns related to both visual and physical obstructions. The 50-yard buffer provides boaters with a greater margin of safety when navigating near the bridge, where limited sightlines and the presence of bridge pylons can create unexpected hazards. The extension also mitigates the risk of boat wakes impacting the integrity of the bridge and nearby structures, such as the newly developed River Walk. With increased boating traffic in the region due to the River Walks popularity, this proactive change will help ensure that boaters have sufficient time to adjust their speed and maneuver safely, reducing the likelihood of accidents or damage to both the waterway and surrounding property. Furthermore, the expanded no wake zone aligns with community goals of promoting a safe and enjoyable environment for all users, fostering a responsible approach to water activities while balancing development with public safety.

Officer: T.E. Barber [REDACTED]

Date: 02/05/2025

Sergeant: D.K. Ethridge [REDACTED]

Date: 02/05/2025



Thank you!

Wilson Elliott, CZO
Planner
Office of Business Development
Planning and Development Division



Pursuant to North Carolina General Statutes Chapter 132, Public Records, this electronic mail message and any attachments hereto, as well as any electronic mail message(s) that may be sent in response to it may be considered public record and as such are subject to request and review.

From: [REDACTED]
Sent: Thursday, June 27, 2024 2:12 PM

Haywood, Betsy

From: Wilson Elliott [REDACTED]
Sent: Thursday, June 27, 2024 2:21 PM
To: Haywood, Betsy
Subject: RE: [External] RE: Preparation for Boating Safety Hazards Assessment Shore to Shore North of the Bridge

CAUTION: External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Of course!

The area under the Riverwalk has pillars that go down into the water, so the jet skis are weaving in and out near the pillars. I'm not sure of the exact height, but I would say about 10-12 feet above the waterline. I have attached these pictures for reference to the area in question.



EXHIBIT F-2

July 24, 2025



Fiscal Note for No-Wake Zone Rule 15A NCAC 10F .0338 Caldwell County

Agency Contact: Betsy Haywood
Water Safety Rules Coordinator NC Wildlife Resources Commission
1751 Varsity Drive, Raleigh, NC 27606
(919) 707-0011
Betsy.haywood@ncwildlife.gov

William Casola
Policy Analyst
NC Wildlife Resources Commission
1751 Varsity Drive
Raleigh, NC 27606
(919) 707-0125
william.casola@ncwildlife.gov

Fiscal Impact: State Government: Yes
Local Government: Yes
Private Impact: Yes
Substantial Economic Impact: No

Authority: G.S. 75A-3; 75A-15

The City of Hickory applied to extend the no wake zone from south of the U.S. Highway 321 Bridge on Lake Hickory shore to shore, northward to a point approximately 460 yards north of the bridge, to mitigate hazards to boater and water recreation safety. Development of the Riverwalk on the east shore north of the bridge by the City of Hickory for water and pedestrian recreation has created congestion and multiple safety hazards with obstructed sight lines. A narrow walkway extends over the lake, supported by pillars, under which kayaks, canoes, and jet skis congregate. Non-motorized vessels are rented from Lake Hickory Marina across the lake from an access point in the Riverwalk parking lots. Boat wakes have damaged some of the non-

EXHIBIT F-2

July 24, 2025

motorized vessels. The Lake Hickory Pub and Marina and fuel dock is an existing no-wake zone only 30 yards from shore. The extension shore to shore will better protect both facilities and the bridge, especially on high traffic days. The City of Hickory will implement the extended no-wake zone and will purchase five buoys. The WRC will assist with buoy placement.

Also, in Caldwell County on Lake Hickory, Wildlife Resources Commission Law Enforcement recommended a no-wake zone in Gunpowder Creek shore to shore 50 yards northeast and 50 yards southwest of the Adam W. Klutz Bridge on Grace Chapel Road in Granite Falls to mitigate hazards to boater and water recreation safety. The WRC will purchase and place two buoys.

The proposed amendments remove reference to the Catawba River and Little Gunpowder Lake in Paragraph (a) as neither water body contains a regulated area. Swimming Areas, currently Paragraph (d), is also proposed for removal from the Rule as the regulated areas described in Paragraph (a) do not contain a swimming area and swimming areas are broadly regulated in 15A NCAC 10F .0301.

Fiscal Impact

State Impact

The proposed amendment in the City of Hickory will have a minimal impact to the State. Two Land and Water Access technicians will place five buoys at a total cost of approximately \$140.00 (2 hours of labor x 2 technicians x \$35/hr = \$140.00)¹.

At the Adam Klutz Bridge in Granite Falls, the WRC will purchase two no-wake buoys at a cost of \$600 (\$300 each x 2). Two Land and Water Access technicians will place 2 buoys at a total cost of approximately \$70.00 (1 hours of labor x 2 technicians x \$35/hr = \$70.00).

Local Impact

The City of Hickory will be responsible for purchase of five no-wake buoys to mark the no-wake zone from south of the U.S. Highway 321 Bridge to a point north of Riverwalk and Lake Hickory Marina, at a total cost of \$1,500 (\$300 per buoy x 5). The City of Hickory may incur future costs to replace damaged or missing buoys.

Private Impact

The proposed amendments are expected to have minimal private impact. The regulated community will not incur any direct financial cost because of this rule. Their behavior will be restricted in that boaters will be required to reduce speeds in the regulated portions of Lake Hickory in Hickory at Riverwalk, and within 50 yards of both sides of the Adam W. Klutz Bridge

¹ Calculated using average salary and benefits of current technicians as of July 2025.

EXHIBIT F-2

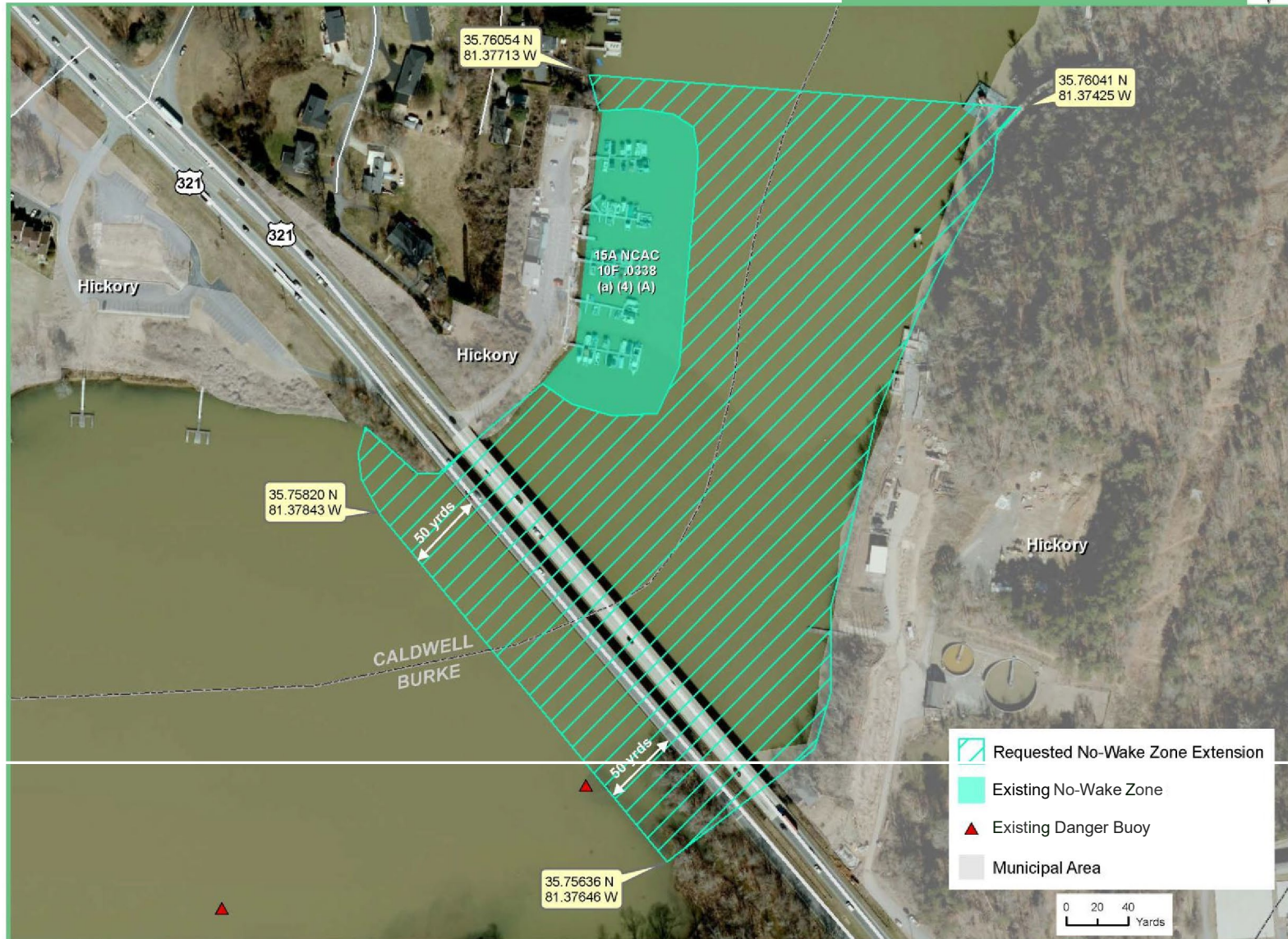
July 24, 2025

in Granite Falls. The reduction in speed has the potential to improve boating traffic safety and reduce the potential for damage to vessels and collisions with water recreationists. Given the increasing safety and navigation hazards caused by increasing development in this area, these potential benefits are likely to be realized; however, these benefits could not be quantified.

EXHIBIT F-2

July 24, 2025

15A NCAC 10F .0323 & 15A NCAC 10F .0338- Requested No-Wake Zone Extension by the City of Hickory
Lake Hickory Marina and Boat Rental docks, Lake Hickory, Burke and Caldwell Counties



Created by NCWRC, February 2025

C.E'ikilly\lCL-1.RC, f=etJflrNY 20:24

EXHIBIT F-2

July 24, 2025

15A NCAC 10F .0338 CALDWELL COUNTY

(a) Regulated Areas. This Rule ~~shall apply~~ applies to the following waters in Caldwell County:

~~(1) — Catawba River;~~

~~(2)(1)~~ Lake Rhodhiss:

(A) within 50 yards of the marina facilities at Castle Bridge Marina, 6131 Castle Bridge Drive in Granite Falls;

(B) within 50 yards of the Castle Bridge Boating Access Area, 6131 Connelly Springs Road in Granite Falls; and

(C) within 50 yards of the Conley Creek Boating Access Area, 5475 Waterworks Road in Granite Falls Falls; and

~~(3) — Little Gunpowder Lake; and~~

~~(4)(2)~~ Lake Hickory:

~~(A) — within 30 yards of the docks at the Lake Hickory Marina and Boat Rentals, on Limbaugh Lane in the City of Hickory;~~

(A) the waters shore to shore beginning 50 yards south of the U.S. Highway 321 Bridge, from a line at a point on the east shore of Lake Hickory at 35.75636 N, 81.37646 W to a point on the west shore at 35.75820 N, 81.37843 W, northeast past River Walk on the east shore and Lake Hickory Pub and Marina on the west shore, ending at a line from a point on the east shore at 35.76041 N, 81.37425 W to a point on the west shore at 35.76054 N, 81.37713 W in the City of Hickory;

(B) within 50 yards of the Gunpowder Boating Access Area, at 5450 Hurricane Hill Road in Granite Falls; ~~and~~

(C) within 50 yards of the Lovelady Boating Access Area, at 5682 Rocky Mount Road in Granite Falls. Falls; and

(D) the waters of Gunpowder Creek shore to shore, within 50 yards northeast and 50 yards southwest of the Adam W. Klutz Bridge on Grace Chapel Road in Granite Falls.

(b) Speed limit. No person shall operate a vessel at greater than no-wake speed within any regulated area described in Paragraph (a) of this Rule.

(c) Speed Limit in Mooring Areas. No person shall operate a vessel at greater than no-wake speed while within a marked mooring area on the regulated areas described in Paragraph (a) of this Rule.

~~(d) Swimming Areas. No person operating or responsible for the operation of a vessel shall permit it to enter any marked public swimming area on the regulated areas described in Paragraph (a) of this Rule.~~

~~(e)(d) Placement of Markers. The following agencies shall place or place and maintain the markers implementing this Rule, subject to the approval of the United States Coast Guard and United States Army Corps of Engineers:~~

(1) the Board of Commissioners of Caldwell County shall ~~place the~~ be the designated agency markers implementing ~~Subparagraph Part (a)(1)(A) and (a)(3), and Part (a)(2)(A) of this Rule;~~

EXHIBIT F-2

July 24, 2025

- 1 (2) the City of Hickory shall ~~place the~~ be the designated agency markers implementing Part ~~(a)(4)(A)~~
2 (a)(2)(A) of this Rule; and
3 (3) the North Carolina Wildlife Resources Commission shall ~~place and maintain the~~ be the designated
4 agency markers implementing Parts ~~(a)(2)(B), (C), and (a)(4)(B), (C)~~ (a)(1)(B) and (C) and (a)(2)(B)
5 through (D) of this Rule.

6
7 *History Note:* *Authority G.S. 75A-3; 75A-15;*
8 *Eff. August 23, 1981;*
9 *Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December*
10 *6, 2016;*
11 *Amended Eff. February 1, 2024; July 1, 2018.*
12

EXHIBIT G-1

July 24, 2025



15A NCAC 10F .0324 DAVIDSON COUNTY PROPOSED NOTICE OF TEXT FOR AMENDMENTS TO NO-WAKE ZONES ON HIGH ROCK LAKE, BADIN LAKE, TUCKERTOWN RESERVOIR, AND YADKIN RIVER

Staff requests Commission consideration to notice proposed text for several amendments in Davidson County on the waters of High Rock Lake, Badin Lake, Tuckertown Reservoir, and Yadkin River.

On High Rock Lake, staff requests approval to enlarge the no-wake zone shore to shore beginning 50 yards north of Skip Jack Marina, including the waters south of the marina within 50 yards south of the Raven Point Boy Scout dock. Enforcement completed an assessment matrix which shows several hazards at the marina, where there are 75-plus docks and a fuel dock in the narrow cove. Enlarging the no-wake zone to include the dock at Raven Point Boy Scout Camp will protect the safety of swimmers around the dock and boaters who use the dock. The Davidson County Board of Commissioners is the designated agency for implementation of the no-wake zone. Private citizens have agreed to purchase three buoys to mark the zone. They will be assisted in placement by WRC Land and Water Access staff.

As part of the routine review of Rules, Staff identified one no-wake zone in a cove on High Rock Lake at High Rock Shores Drive that does not meet statutory criteria for a no-wake zone. The cove located off the main channel of Abbott's Creek was designated a no-wake zone over 40 years ago. Enforcement officers completed a safety hazards assessment matrix. There is very little vessel traffic except for local residents within the cove. There have been no incidents or complaints reported within the cove. Staff recommend removal of this no-wake zone from the NCAC as being unnecessary to mitigate hazards to boater safety.

The vague and non-specific language pertaining to regulation of public docks, marinas, boat service areas, boating access areas, swim areas, bridges and trestles on lakes, will also be replaced by a list in the NCAC, indicating the location and address of boating access areas, swim areas, bridges, and railroad trestles that are marked and maintained on the waters in Davidson County. Cube Hydro Carolinas, the Wildlife Resources Commission, and Davidson County are listed as the designated agencies for implementation of the no-wake zones under their respective authority.

15A NCAC 10F .0324 DAVIDSON COUNTY

~~(a) Regulated Areas. This Rule shall apply to those portions of High Rock Lake, Tuckertown Lake, and Badin Lake that lie within the boundaries of Davidson County.~~

~~(b) Speed Limit. No person shall operate a vessel at greater than no wake speed:~~

- ~~(1) — within 50 yards of any marked public boat launching ramp, bridge, dock, marina, boat storage structure, boat service area or pier while on the waters of High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County;~~
- ~~(2) — High Rock Shores Drive Cove on High Rock Lake in Hi Roe Shores Subdivision in Silver Hill Township, shore to shore northeast of a line from a point on the east shore at 35.67720 N, 80.24526 W to a point on the west shore at 35.67663 N, 80.24437 W;~~
- ~~(3) — Flat Swamp Creek on High Rock Lake shore to shore, from a point 50 yards north of the docks at Camp Walter Johnson at 35.67130 N, 80.16592 W to a point 100 yards south of the docks at 35.66993 N, 80.16582 W;~~
- ~~(4) — the cove in Oakwood Acres on Abbotts Creek Cove on High Rock Lake shore to shore, west of a line from a point on the south shore at 35.64704 N, 80.24787 W to a point on the north shore at 35.64809 N, 80.24870 W; and~~
- ~~(5) — Beaverdam Creek Cove on Badin Lake, shore to shore north of a line from a point on the east shore at 35.50714 N, 80.09994 W to a point on the west shore at 35.50715 N, 80.10086 W.~~

~~(c) Speed Limit in Mooring Areas. No person shall operate a vessel at greater than no wake speed while within a marked mooring area on the waters of High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County.~~

~~(d) Swimming Areas. No person operating or responsible for the operation of a vessel shall permit it to enter any marked public swimming area on the waters of High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County.~~

~~(e) Placement of Markers. The Board of Commissioners of Davidson County shall be the designated agency for placement of the markers implementing this Rule.~~

(a) Regulated Areas. This Rule applies to the following waters in Davidson County.

- (1) High Rock Lake:
 - (A) the waters of the cove shore to shore in Abbotts Creek between North Shore Drive and South Shore Drive, east of a point at 35.64752 N, 80.24875 W;
 - (B) the waters shore to shore from a point 50 yards north of the docks at Camp Walter Johnson at 35.67130 N, 80.16592 W to a point 100 yards south of the docks at 35.66993 N, 80.16582 W, on Flat Swamp Creek on High Rock Lake;
 - (C) the waters within 50 yards of the High Rock Boat Dock Marina pier north of Abbotts Creek Cove on High Rock Lake in Lexington, at 35.64992 N, 80.24802 W;
 - (D) the waters shore to shore in the cove at Skip Jack Harbor Marina and the Raven Point Boy Scout Camp dock, from a line at a point 50 yards south of the Raven Point Boy Scout Camp dock on the east shore of the cove at 35.63722 N, 80.27054 W, to a point on the west shore of the cove at 35.63788 N, 80.27212 W, northward ending 50 yards north of the Skipjack

Harbor Marina dock at a line from a point on the east shore at 35.64070 N, 80.26864 W to a point on the west shore at 35.64064 N, 80.27050 W;

- (E) the waters within 50 yards of the High Rock Marina and Campground and fuel dock in Abbotts Creek on High Rock Lake, from a point on the southwest shore at 35.68274 N, 80.25228 W, around the peninsula to a point on the north shore at 35.68439 N, 80.25052 W;
- (F) the waters 50 yards northeast and 50 yards southwest of the N.C. Highway 8 Bridge on Flat Swamp Creek on High Rock Lake, from a point northeast of the bridge at 35.64564 N, 80.18493 W to a point southwest of the bridge at 35.64488 N, 80.18559 W;
- (G) the waters 50 yards east and 50 yards west of the railroad trestle over Flat Swamp Creek on High Rock Lake, from a point east of the trestle at 35.61161 N, 80.23434 W, to a point west of the trestle at 35.61151 N, 80.23535 W;
- (H) the waters shore to shore 50 yards northeast and 50 yards southwest of the SR 1396 bridge, otherwise known as the Linwood-Southmont Road Bridge on Swearing Creek on High Rock Lake, from a point northeast of the bridge at 35.69185 N, 80.30139 W to a point southwest of the bridge at 35.69135 N, 80.30218 W.
- (I) the waters within 50 yards northwest and 50 yards southeast of SR 2294 bridge otherwise known as the Holloway Church Road Bridge on Abbotts Creek on High Rock Lake, from a point east of the bridge at 35.67612 N, 80.25005 W, to a point west of the bridge at 35.67663 N, 80.25097 W;
- (J) the waters within 50 yards northeast and 50 yards southwest of the N.C. Highway 8 bridge and railroad trestle on Abbotts Creek on High Rock Lake, from a point southeast of the railroad trestle at 35.64235 N, 80.25508 W, to a point northeast of the bridge at 35.64292 N, 80.25396 W;
- (K) the waters 50 yards north and 50 yards south of the N.C. Highway 47 bridge on Abbotts Creek on High Rock Lake, from a point north of the bridge at 35.74835 N, 80.24164 W, to a point south of the bridge at 35.74759 N, 80.24163 W;
- (L) the waters within 50 yards of the dock and ramp at the Southmont Boat Ramp on Abbotts Creek on High Rock Lake at Wildlife Recreation Area Access Road, at 35.64694 N, 80.25990 W;
- (M) the waters within 50 yards of the dock and ramp at Buddle Creek Swim Area Boat Ramp on Abbotts Creek on High Rock Lake, on Holloway Church Road, at 35.68212 N, 80.22924 W;
- (N) the waters within 50 yards of the dock and ramp at the Pebble Beach Boat Ramp on Flat Swamp Creek on High Rock Lake off N.C. Highway 8, south of the N.C. Highway 8 Bridge, at 35.64356 N, 80.18570 W;

(2) Badin Lake:

- (A) the waters of Beaverdam Creek Cove on Badin Lake shore to shore, north of a point at 35.50710 N, 80.10036 W in New London; and
 - (B) the waters within 50 yards of the Circle Drive Boating Access Area on Badin Lake, at 724 Shoreline Drive, New London.
- (3) Tuckertown Reservoir. The waters 50 yards east and 50 yards west of the railroad trestle at Ellis Creek on Tuckertown Reservoir, from a point east of the trestle at 35.52983 N, 80.18650 W, to a point west of the trestle at 35.52966 N, 80.18749 W; and
- (4) Yadkin River:
 - (A) the waters 50 yards north and 50 yards south of the N.C. Highway 29/70 bridge, otherwise known as the Wil-Cox Bridge, and the railroad trestle near Yadkin River Park on the Yadkin River in Linwood, from a point north of the bridge at 35.72328 N, 80.391137 W, to a point south of the railroad trestle at 35.72263 N, 80.39137 W; and
 - (B) the waters within 50 yards of the York Hill Yadkin River (YRST) boat ramp on the Yadkin River at 35.72398 N, 80.39116 W, west of SR 1147 in Linwood.
- (b) Speed Limit. No person shall operate a vessel at greater than no-wake speed while on the waters of the regulated areas designated in Paragraph (a) of this Rule.
- (c) Swimming Areas:
 - (1) Buddle Creek Swimming Area. No person operating a vessel shall permit it to enter the Swimming Area at the Buddle Creek Swim Area at Abbotts Creek on High Rock Lake in Lexington, east of the ropes from a point at 35.68124 N, 80.22895 W; and
 - (2) Pebble Beach Swimming Area. No person operating a vessel shall permit it to enter the Swimming Area at the Pebble Beach Swim Area at Flat Swamp Creek on High Rock Lake in Denton, west of the ropes from a point at 35.64403 N, 80.18557 W to the shore at the N.C. Highway 8 bridge.
- (d) Placement of Markers.
 - (1) the Board of Commissioners of Davidson County shall be the designated agency implementing Parts (a)(1)(A) through (E), (a)(2)(A), and (a)(4)(A) and (B) of this Rule;
 - (2) Cube Hydro Carolinas shall be the designated agency implementing Parts (a)(1)(L) through (N); and Subparagraph (c)(1) and (2) of this Rule; and
 - (3) the North Carolina Wildlife Resources Commission shall be the designated agency implementing Parts (a)(1)(F) through (K), (a)(2)(B); and (a)(3) of this Rule.

History Note: Authority G.S. 75A-3; 75A-15;

Eff. July 1, 1976;

Amended Eff. January 1, 2012; May 1, 2004; December 1, 1995; December 1, 1991; August 1, 1991; September 1, 1982;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 6, 2016;

Amended Eff. October 1, 2018.



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 1: APPLICANT REQUEST AND INFORMATION

- Name of organization/entity: Wildlife Resources Commission
- Primary contact information: _____ [REDACTED] _____
- Location of requested no-wake zone:
 - Body of water and County: High Rock Lake, Davidson County
 - Location: Skip Jack Marina and Raven Point Camp
 - Popular name of area, if any: Ship Jack Cove or Sail Boat Cove
 - Width of No-Wake Zone: Narrowest Point: 51 yards Widest Point: 100 yds
 - Brief Description of area (example: bridge overpass, obstructed views, Intracoastal Waterway; etc.)

Proposed text: the waters shore to shore in the cove at Skip Jack Harbor Marina and the Raven Point Boy Scout Camp dock, from a line at a point 50 yards south of the Raven Point Boy Scout camp dock on the east shore of the cove at 35.63722 N, 80.27054 W, to a point on the west shore of the cove at 35.63818 N, 80.26970 W, northward ending 50 yards north of the Skip Jack Harbor Marina dock at a line from a point on the east shore at 35.64070 N, 80.26864 W to a point on the west shore at 35.64064 N, 80.27050 W

Attach map of designated no-wake zone

Ensure proposed no-wake zone map/and or location is agreed upon by point of contact



NO-WAKE ZONE INVESTIGATION MATRIX

Provide detailed reason given from point of contact for the request

The owners of Skip Jack Marina request rulemaking to mitigate hazards to boater safety in a cove on High Rock Lake where Skip Jack Harbor and Marina, with its long dock with multiple boat slips on the east shore of the cove (approximately 65 yards wide), and fuel dock is located. Immediately south of the docks is a busy boat ramp. The marina owners are joined in their request by the Raven Point Boy Scout Camp, which has a busy dock not far from the fuel dock, closer to the mouth of the cove. Please see attached letter and document submitted by Old Hickory Council of Boy Scouts, that details year-round usage of the camp and deep water dock. Boating safety, fishing, swimming, and other water recreation are taught. Special events and leader training are booked throughout the year at Raven Point Boy Scout Camp. For years buoys were placed in the water near the marina and the boy scout dock, albeit incorrectly. The buoys are gone. Old boiler plate language in the Rule that designated no-wake zones around any marked public boat ramp, bridge, dock, marina, boat storage area or pier is being codified into the NC Administrative Code on a case by case basis. Please consider no-wake zone shore to shore from 50 yards south of the dock at the Raven Point Boy Scout dock to a point 50 yards north of the pier and boat slips at Skip Jack Harbor and Marina.

- Is the proposed no-wake zone located within an area that is regulated by the U.S Army Corps of Engineers or the Division of Coastal Management (CAMA) i.e., Intracoastal Waterway?

YES ☐

NO ☒

When dealing with the point of contact, please advise that placement of markers in these waters is subject to prior approval of above agency in waters where applicable. NCWRC has no authority to supersede these rules.



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 2: PUBLIC SAFETY HAZARD

Identify all public safety hazards in this section by checking the block and listing name and/or location

☒ FUELING DOCK OR FACILITY

Name of Facility: Skip Jack Marina

☐ PUBLIC SWIMMING OR RECREATIONAL AREA

Would the establishment of a roped swimming area or placement of no-wake regulatory buoys be more appropriate?

ROPED SWIM AREA ☐

NO-WAKE BUOYS ☐

☐ PUBLIC BOAT ACCESS

Name of Access Area: _____

☐ PUBLIC FISHING PIER OR FISHING ACCESS AREA

Name of Pier/Access Area: _____

☐ RESTAURANT DOCKS

Name of Restaurant: _____

Number of Docks: _____

☒ OTHER (list and describe)

Next to the fuel dock is a marina that has 75+ boat slips. They also have food trucks and a convenience store at the marina that attracts boaters from other parts of the lake. The Marina also has a boat ramp that is heavily used on the weekends. The Raven Point Boys Scout Camp is at the point coming into the cove. They have a dock just up from the marina. They launch canoes and kayaks here during the summer months.

SECTION 3: NAVIGATIONAL HAZARDS

Identify all potential hazards associated with the proposed no-wake zone (check all that apply)

☐ OBSTRUCTIONS (Identify) _____

Can obstructions be removed? ☐ YES ☐ NO

☐ NARROW CHANNEL (give approximate width) _____

☐ SHALLOW WATER (give average depth) _____



NO-WAKE ZONE INVESTIGATION MATRIX

☐ OBSTRUCTED VISION (for approximately how great a distance) _____

STRUCTURES: (Check all applicable)

☐ DAM Name: _____

☐ SPILLWAY Location: _____

☐ FLOOD CONTROL STRUCTURE Location: _____

☐ BRIDGE Roadway: _____

Height above water: _____

Width between piers: _____

☐ TRESTLE Height above water: _____

Width between piers: _____

☐ POWER LINE _____

☐ LOCK Lock Number: _____

☐ JETTY _____

☐ SUBMERGED STRUCTURE Identify Structure: _____

- Would placement of "Danger" buoys or other informational markers mitigate the hazards in lieu of a no-wake zone? ☐ YES ☐ NO

☐ SANDBAR _____

☐ SHOAL _____

☐ OTHER (list and describe)



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 4: SUMMARY OF BOATING SAFETY STATISTICS

Identify known data reflecting safety concerns:

☐ BOAT INCIDENTS Date(s): _____

☒ CITATIONS ISSUED Violations: No Wake zone violations in front of fuel dock under current rule.

☐ VERIFIED COMPLAINTS List: _____

- =====
- Rate traffic density in this area MEDIUM
 - Is traffic density specific to weekend/and or holidays? YES ☒ NO ☐
 - Does traffic density or ability to maneuver a vessel due to traffic cause safety issues?
YES ☒ NO ☐

SECTION 5: CURRENT REGULATIONS

- List existing local laws currently in place restricting vessel speed in the requested area:
No Local law but NC NCAC that is vaguely written.
- Would enforcement of existing boating laws mitigate the issues and concerns addressed in the proposed area?

☐ YES Identify Violations: _____
☒ NO



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 6: NO-WAKE ZONE DIMENSIONS AND SCOPE

Evaluate the applicant's proposed no-wake request based on criteria and complete Section 6. If investigated area does not meet criteria for a no-wake zone, move to section 7. If the area meets no-wake zone criteria but the proposed area exceeds the need to address the issues, recommend appropriately sized area and attach map with changes.

A. PROPOSED

- If approved, does no-wake zone extend into a designated channel?
☐ YES Distance extended into channel: _____
☒ NO
- Total distance travelled at no-wake speed (in feet): 1245
- Estimated travel time through propose area at no-wake speed: 3 minutes
- Width of proposed no-wake zone (in feet): Narrowest: 51 Widest: 100 yards
- Does proposed no-wake zone meet criteria for consideration?
☒ YES: Appropriately sized
☐ YES: Adjusted size recommended
☐ NO
- Description/Explanation of adjusted size
- ☐ Adjusted map attached



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 7: OFFICER ASSESSMENT OF WATER SAFETY HAZARDS

- Does the proposed area meet the criteria to be recommended as a no-wake zone?

YES: ☒

NO: ☐

- Justification:

This no wake zone encompasses a fuel dock, marina with 75+ docks and a Boy Scout Camp dock. This area falls under the current language in the the NCAC for Davidson County but that language is vague. In an effort to clean up the rules for Davidson County, this NWZ would codify what has been a historic no wake zone. The current NWZ buoy is only in front of the fuel dock. The purposed NWZ would protect the safety of the boaters on the marina docks, patrons of the fuel dock and boaters and swimmers at the boy scout camp. This cove averages 50-60 yards across in the proposed area. It would help ensure the safety of all the user's in this area.


Officer: Lt Scott Strickland

Date: 5/30/25

Sergeant: _____

Date: _____

**Potential NWZ at Raven Point/Skip Jack
High Rock Lake, Davidson County**

 Potential No-Wake Zone

0 25 50
Yards





NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 1: APPLICANT REQUEST AND INFORMATION

- Name of organization/entity: NC Wildlife Enforcement
- Primary contact information: Betsy Haywood
- Location of requested no-wake zone:
 - Body of water and County: High Rock Lake Davidson County
 - Location: High Rock Shores Drive Cove south of High Rock Shore Dr
 - Popular name of area, if any: _____
 - Width of No-Wake Zone: Narrowest Point: 34 Feet Widest Point: 71 Yards
 - Brief Description of area (example: bridge overpass, obstructed views, Intracoastal Waterway; etc.)
Residential Cove

Attach map of designated no-wake zone

See map.

Ensure proposed no-wake zone map/and or location is agreed upon by point of contact



NO-WAKE ZONE INVESTIGATION MATRIX

Provide detailed reason given from point of contact for the request

Please evaluate this cove shore to shore, north of its mouth, east of Holloway Church Road. This NWZ is one of the earliest and appears to predate the NC Administrative Procedure Act. Please note whether there are hazards to boater safety to warrant the cove being a no-wake zone.

- Is the proposed no-wake zone located within an area that is regulated by the U.S Army Corps of Engineers or the Division of Coastal Management (CAMA) i.e., Intracoastal Waterway?

YES ☐

NO ☐

When dealing with the point of contact, please advise that placement of markers in these waters is subject to prior approval of above agency in waters where applicable. NCWRC has no authority to supersede these rules.



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 2: PUBLIC SAFETY HAZARD

Identify all public safety hazards in this section by checking the block and listing name and/or location

☐ FUELING DOCK OR FACILITY

Name of Facility: _____

☐ PUBLIC SWIMMING OR RECREATIONAL AREA

Would the establishment of a roped swimming area or placement of no-wake regulatory buoys be more appropriate?

ROPED SWIM AREA ☐

NO-WAKE BUOYS ☐

☐ PUBLIC BOAT ACCESS

Name of Access Area: _____

☐ PUBLIC FISHING PIER OR FISHING ACCESS AREA

Name of Pier/Access Area: _____

☐ RESTAURANT DOCKS

Name of Restaurant: _____

Number of Docks: _____

☐ OTHER (list and describe)

SECTION 3: NAVIGATIONAL HAZARDS

Identify all potential hazards associated with the proposed no-wake zone (check all that apply)

☐ OBSTRUCTIONS (Identify) _____

Can obstructions be removed? ☐ YES ☐ NO

☐ NARROW CHANNEL (give approximate width) _____

☐ SHALLOW WATER (give average depth) _____



NO-WAKE ZONE INVESTIGATION MATRIX

☐ OBSTRUCTED VISION (for approximately how great a distance) _____

STRUCTURES: (Check all applicable)

- ☐ DAM Name: _____
- ☐ SPILLWAY Location: _____
- ☐ FLOOD CONTROL STRUCTURE Location: _____
- ☐ BRIDGE Roadway: _____
Height above water: _____
Width between piers: _____
- ☐ TRESTLE Height above water: _____
Width between piers: _____
- ☐ POWER LINE _____
- ☐ LOCK Lock Number: _____
- ☐ JETTY _____
- ☐ SUBMERGED STRUCTURE Identify Structure: _____

- Would placement of "Danger" buoys or other informational markers mitigate the hazards in lieu of a no-wake zone? ☐ YES ☐ NO

- ☐ SANDBAR _____
- ☐ SHOAL _____
- ☐ OTHER (list and describe)



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 4: SUMMARY OF BOATING SAFETY STATISTICS

Identify known data reflecting safety concerns:

☐ BOAT INCIDENTS Date(s): None

☐ CITATIONS ISSUED Violations: None

☐ VERIFIED COMPLAINTS List: None

- Rate traffic density in this area LIGHT
- Is traffic density specific to weekend/and or holidays? YES ☒ NO ☐
- Does traffic density or ability to maneuver a vessel due to traffic cause safety issues?
YES ☐ NO ☒

SECTION 5: CURRENT REGULATIONS

- List existing local laws currently in place restricting vessel speed in the requested area:
- Would enforcement of existing boating laws mitigate the issues and concerns addressed in the proposed area?

☒ YES Identify Violations: _____
☐ NO



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 6: NO-WAKE ZONE DIMENSIONS AND SCOPE

Evaluate the applicant's proposed no-wake request based on criteria and complete Section 6. If investigated area does not meet criteria for a no-wake zone, move to section 7. If the area meets no-wake zone criteria but the proposed area exceeds the need to address the issues, recommend appropriately sized area and attach map with changes.

A. PROPOSED

- If approved, does no-wake zone extend into a designated channel?
☐ YES Distance extended into channel: _____
☐ NO
- Total distance travelled at no-wake speed (in feet): _____
- Estimated travel time through propose area at no-wake speed: _____
- Width of proposed no-wake zone (in feet): Narrowest: _____ Widest: _____
- Does proposed no-wake zone meet criteria for consideration?
☐ YES: Appropriately sized
☐ YES: Adjusted size recommended
☐ NO
- Description/Explanation of adjusted size

- ☐ Adjusted map attached



NO-WAKE ZONE INVESTIGATION MATRIX

SECTION 7: OFFICER ASSESSMENT OF WATER SAFETY HAZARDS

- Does the proposed area meet the criteria to be recommended as a no-wake zone?

YES: ☐

NO: ☒

- Justification:

This is a residential cove with private docks. The mouth of the cove is 71 yards across and narrows to 23 feet at the very back. The majority of the cove is 50-60 yards across. We do not receive calls regarding no wake violations in this cove. It is off the main channel of Abbott's Creek on High Rock Lake. It's vessel traffic is mainly from residences in the cove. There are approximately 16 homes in this cove.

Officer: Lt Scott Strickland

Date: 7/1/2025

Sergeant: _____

Date: _____

Davidson Co High Rock Lake at High Rock Shores Drive Cove (10F .0324 (b)(2).

Write a description for your map.

Legend

- 15ANCAC
- Grimes Bulldogs
- High Rock Shores Dr

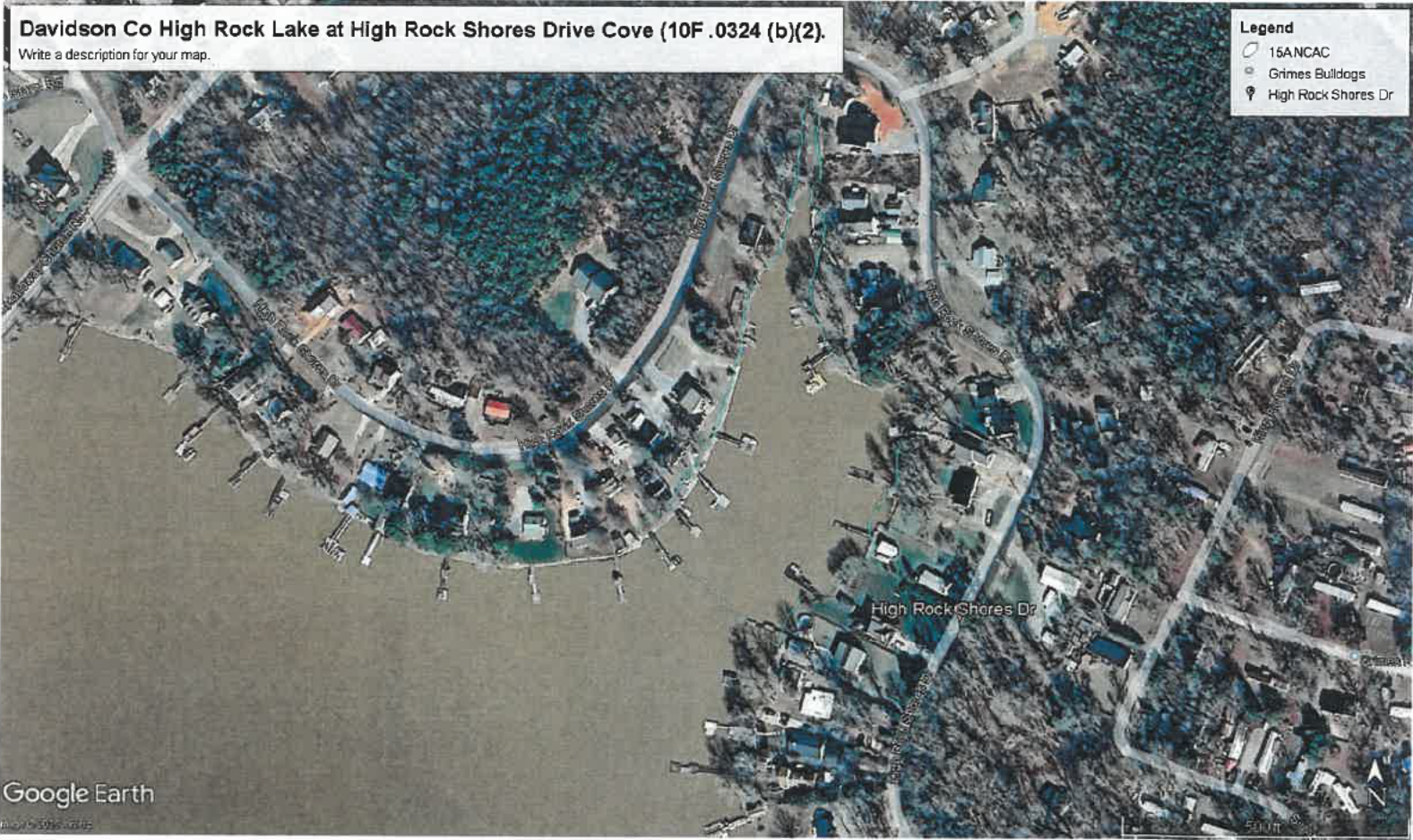


EXHIBIT G-2
July 24, 2025



Fiscal Note for No-Wake Zone Rule
15A NCAC 10F .0324 Davidson County

Agency Contact: Betsy Haywood
Water Safety Rules Coordinator
NC Wildlife Resources Commission
1751 Varsity Drive, Raleigh, NC 27606
(919) 707-0011
Betsy.haywood@ncwildlife.gov

William Casola
Policy Analyst
NC Wildlife Resources Commission
1751 Varsity Drive, Raleigh, NC 27606
(919) 707-0125
william.casola@ncwildlife.gov

Fiscal Impact: State Government: No
Local Government: Minimal
Private Impact: Minimal
Substantial Economic Impact: No

Authority: G.S. 75A-3; 75A-15

The Wildlife Resources Commission is updating 15A NCAC 10F .0324 Davidson County to explicitly define all regulated no-wake zones on High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County. The current rule text, see current (b)(1), limits vessels to no-wake speed around any marked public boat launching ramp, bridge, dock, marina, boat storage structure, boat service area or pier, but does not explicitly list the locations in the Rule, as we do in other Local Water Safety Regulations (Section .0300). The lack of specificity creates confusion within the regulated community. Additionally, the existing rule fails to specify who is responsible for the placement of markers delineating each no-wake zone. In practice, the Board of

EXHIBIT G-2

July 24, 2025

Commissioners of Davidson County, Cube Hydro Carolinas, and the WRC have each taken responsibility for placement of markers implementing different aspects of the existing rule. The proposed amendments explicitly define which agency is responsible for each location.

Additionally, the no-wake zone on High Rock Shores Drive Cove, currently (b)(2), is proposed for repeal based on a recent no-wake zone investigation matrix completed by WRC law enforcement. In addition to a Public Safety Assessment and a Navigational Hazards Assessment, the investigation summarizes boating safety statistics related to the specified regulated area. The investigation found no boating accidents, no citations issued, and no verified complaints within the WRC database. Law Enforcement concluded the current no-wake zone is unnecessary as vessel traffic is light and consists primarily of the 16 residences in the cove. The buoys in the cove were privately placed and removing this no-wake zone will have no impact on State or local government.

Lastly, the no-wake zone at Skip Jack Harbor Marina will be expanded to include the Raven Point Boy Scout Camp to mitigate hazards to boater and water recreation safety.

Fiscal Impact

State Impact

The proposed amendments are expected to have no State impact. The WRC was already responsible for the placement of markers listed in proposed amendment (d)(3). The proposed amendments will have no impact on law enforcement operations. The WRC will assist with the removal of buoys from High Rock Shores Drive Cove and with the movement of buoys around Raven Point Boy Scout Camp. These activities will be part of normal Land and Water Access operations.

Local Impact

The Board of Commissioners of Davidson County is now explicitly listed as the designated agency for the placement of markers described in proposed amendment (d)(1). They purchased the markers currently in the water for these locations. As the designated agency, they may incur future costs related to the replacement of missing or dislocated markers. The cost for one no-wake buoy is currently about \$300.

It is the WRC's understanding that the Board of Commissioners of Davidson County will delegate the purchase of additional buoys to private entities for the expanded no-wake zone around Skip Jack Marina. The WRC will assist the Board of Commissioners with the movement of existing buoys and placement of new buoys at Skip Jack Harbor Marina such that they include the expanded area around Raven Point Boy Scout Camp.

EXHIBIT G-2
July 24, 2025

Private Impact

In the proposed rule, Cube Hydro Carolinas is listed as the designated agency for the placement of markers described in proposed amendment (d)(3). They purchased the markers currently in the water for these locations. Through an agreement with the WRC, Cube Hydro pays an annual stipend for the purchase and placement (including replacement) of buoys described in (d)(3).

Overall, these proposed amendments are expected to have minimal impact on private individuals. For most areas, these no-wake restrictions are already in effect. As such, the proposed changes will primarily improve clarity and understanding of the rules, rather than significantly alter current boating behavior. The only notable exception is the larger no-wake area around Raven Point Boy Scout Camp, where expanded boundaries may result in some minor adjustment for boaters. Additionally, the removal of no-wake zone restrictions at High Rock Shores Drive Cove is anticipated to have minimal, if any, impact, as the cove is primarily utilized by a small number of private residences and no complaints have been received about boating speed in this area.

While boaters will be required to reduce speeds in the designated no-wake areas as outlined in the Rule, explicitly listing these zones should help alleviate confusion among vessel operators. Adherence to speed reductions is expected to enhance boating safety and reduce the likelihood of vessel damage or collisions with other water recreationists. Given the popularity of boating and recreation in these areas, these benefits are likely to be realized; however, these benefits could not be quantified.

EXHIBIT G-2
July 24, 2025

15A NCAC 10F .0324 DAVIDSON COUNTY

~~(a) Regulated Areas. This Rule shall apply to those portions of High Rock Lake, Tuckertown Lake, and Badin Lake that lie within the boundaries of Davidson County.~~

~~(b) Speed Limit. No person shall operate a vessel at greater than no wake speed:~~

~~(1) within 50 yards of any marked public boat launching ramp, bridge, dock, marina, boat storage structure, boat service area or pier while on the waters of High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County;~~

~~(2) High Rock Shores Drive Cove on High Rock Lake in Hi Roe Shores Subdivision in Silver Hill Township, shore to shore northeast of a line from a point on the east shore at 35.67720 N, 80.24526 W to a point on the west shore at 35.67663 N, 80.24437 W;~~

~~(3) Flat Swamp Creek on High Rock Lake shore to shore, from a point 50 yards north of the docks at Camp Walter Johnson at 35.67130 N, 80.16592 W to a point 100 yards south of the docks at 35.66993 N, 80.16582 W;~~

~~(4) the cove in Oakwood Acres on Abbotts Creek Cove on High Rock Lake shore to shore, west of a line from a point on the south shore at 35.64704 N, 80.24787 W to a point on the north shore at 35.64809 N, 80.24870 W; and~~

~~(5) Beaverdam Creek Cove on Badin Lake, shore to shore north of a line from a point on the east shore at 35.50714 N, 80.09994 W to a point on the west shore at 35.50715 N, 80.10086 W.~~

~~(c) Speed Limit in Mooring Areas. No person shall operate a vessel at greater than no wake speed while within a marked mooring area on the waters of High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County.~~

~~(d) Swimming Areas. No person operating or responsible for the operation of a vessel shall permit it to enter any marked public swimming area on the waters of High Rock Lake, Tuckertown Lake, and Badin Lake in Davidson County.~~

~~(e) Placement of Markers. The Board of Commissioners of Davidson County shall be the designated agency for placement of the markers implementing this Rule.~~

(a) Regulated Areas. This Rule applies to the following waters in Davidson County.

(1) High Rock Lake:

(A) the waters of the cove shore to shore in Abbotts Creek between North Shore Drive and South Shore Drive, east of a point at 35.64752 N, 80.24875 W;

(B) the waters shore to shore from a point 50 yards north of the docks at Camp Walter Johnson at 35.67130 N, 80.16592 W to a point 100 yards south of the docks at 35.66993 N, 80.16582 W, on Flat Swamp Creek on High Rock Lake;

(C) the waters within 50 yards of the High Rock Boat Dock Marina pier north of Abbotts Creek Cove on High Rock Lake in Lexington, at 35.64992 N, 80.24802 W;

(D) the waters shore to shore in the cove at Skip Jack Harbor Marina and the Raven Point Boy Scout Camp dock, from a line at a point 50 yards south of the Raven Point Boy Scout Camp dock on the east shore of the cove at 35.63722 N, 80.27054 W, to a point on the west shore

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1 of the cove at 35.63788 N, 80.27212 W, northward ending 50 yards north of the Skipjack
2 Harbor Marina dock at a line from a point on the east shore at 35.64070 N, 80.26864 W to
3 a point on the west shore at 35.64064 N, 80.27050 W;

4 (E) the waters within 50 yards of the High Rock Marina and Campground and fuel dock in
5 Abbotts Creek on High Rock Lake, from a point on the southwest shore at 35.68274 N,
6 80.25228 W, around the peninsula to a point on the north shore at 35.68439 N, 80.25052
7 W;

8 (F) the waters 50 yards northeast and 50 yards southwest of the N.C. Highway 8 Bridge on
9 Flat Swamp Creek on High Rock Lake, from a point northeast of the bridge at 35.64564
10 N, 80.18493 W to a point southwest of the bridge at 35.64488 N, 80.18559 W;

11 (G) the waters 50 yards east and 50 yards west of the railroad trestle over Flat Swamp Creek
12 on High Rock Lake, from a point east of the trestle at 35.61161 N, 80.23434 W, to a point
13 west of the trestle at 35.61151 N, 80.23535 W;

14 (H) the waters shore to shore 50 yards northeast and 50 yards southwest of the SR 1396 bridge,
15 otherwise known as the Linwood-Southmont Road Bridge on Swearing Creek on High
16 Rock Lake, from a point northeast of the bridge at 35.69185 N, 80.30139 W to a point
17 southwest of the bridge at 35.69135 N, 80.30218 W.

18 (I) the waters within 50 yards northwest and 50 yards southeast of SR 2294 bridge otherwise
19 known as the Holloway Church Road Bridge on Abbotts Creek on High Rock Lake, from
20 a point east of the bridge at 35.67612 N, 80.25005 W, to a point west of the bridge at
21 35.67663 N, 80.25097 W;

22 (J) the waters within 50 yards northeast and 50 yards southwest of the N.C. Highway 8 bridge
23 and railroad trestle on Abbotts Creek on High Rock Lake, from a point southeast of the
24 railroad trestle at 35.64235 N, 80.25508 W, to a point northeast of the bridge at 35.64292
25 N, 80.25396 W;

26 (K) the waters 50 yards north and 50 yards south of the N.C. Highway 47 bridge on Abbotts
27 Creek on High Rock Lake, from a point north of the bridge at 35.74835 N, 80.24164 W, to
28 a point south of the bridge at 35.74759 N, 80.24163 W;

29 (L) the waters within 50 yards of the dock and ramp at the Southmont Boat Ramp on Abbotts
30 Creek on High Rock Lake at Wildlife Recreation Area Access Road, at 35.64694 N,
31 80.25990 W;

32 (M) the waters within 50 yards of the dock and ramp at Buddle Creek Swim Area Boat Ramp
33 on Abbotts Creek on High Rock Lake, on Holloway Church Road, at 35.68212 N, 80.22924
34 W;

35 (N) the waters within 50 yards of the dock and ramp at the Pebble Beach Boat Ramp on Flat
36 Swamp Creek on High Rock Lake off N.C. Highway 8, south of the N.C. Highway 8
37 Bridge, at 35.64356 N, 80.18570 W;

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1 (2) Badin Lake:

2 (A) the waters of Beaverdam Creek Cove on Badin Lake shore to shore, north of a point at
3 35.50710 N, 80.10036 W in New London; and

4 (B) the waters within 50 yards of the Circle Drive Boating Access Area on Badin Lake, at 724
5 Shoreline Drive, New London.

6 (3) Tuckertown Reservoir. The waters 50 yards east and 50 yards west of the railroad trestle at Ellis
7 Creek on Tuckertown Reservoir, from a point east of the trestle at 35.52983 N, 80.18650 W, to a
8 point west of the trestle at 35.52966 N, 80.18749 W; and

9 (4) Yadkin River:

10 (A) the waters 50 yards north and 50 yards south of the N.C. Highway 29/70 bridge, otherwise
11 known as the Wil-Cox Bridge, and the railroad trestle near Yadkin River Park on the
12 Yadkin River in Linwood, from a point north of the bridge at 35.72328 N, 80.391137 W,
13 to a point south of the railroad trestle at 35.72263 N, 80.39137 W; and

14 (B) the waters within 50 yards of the York Hill Yadkin River (YRST) boat ramp on the Yadkin
15 River at 35.72398 N, 80.39116 W, west of SR 1147 in Linwood.

16 (b) Speed Limit. No person shall operate a vessel at greater than no-wake speed while on the waters of the regulated
17 areas designated in Paragraph (a) of this Rule.

18 (c) Swimming Areas:

19 (1) Buddle Creek Swimming Area. No person operating a vessel shall permit it to enter the Swimming
20 Area at the Buddle Creek Swim Area at Abbotts Creek on High Rock Lake in Lexington, east of the
21 ropes from a point at 35.68124 N, 80.22895 W; and

22 (2) Pebble Beach Swimming Area. No person operating a vessel shall permit it to enter the Swimming
23 Area at the Pebble Beach Swim Area at Flat Swamp Creek on High Rock Lake in Denton, west of
24 the ropes from a point at 35.64403 N, 80.18557 W to the shore at the N.C. Highway 8 bridge.

25 (d) Placement of Markers.

26 (1) the Board of Commissioners of Davidson County shall be the designated agency implementing Parts
27 (a)(1)(A) through (E), (a)(2)(A), and (a)(4)(A) and (B) of this Rule;

28 (2) Cube Hydro Carolinas shall be the designated agency implementing Parts (a)(1)(L) through (N);
29 and Subparagraph (c)(1) and (2) of this Rule; and

30 (3) the North Carolina Wildlife Resources Commission shall be the designated agency implementing
31 Parts (a)(1)(F) through (K), (a)(2)(B); and (a)(3) of this Rule.

32
33 History Note: Authority G.S. 75A-3; 75A-15;

34 Eff. July 1, 1976;

35 Amended Eff. January 1, 2012; May 1, 2004; December 1, 1995; December 1, 1991; August 1,
36 1991; September 1, 1982;

37 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December
38 6, 2016;

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1 *Amended Eff. October 1, 2018.*
2
3
4

EXHIBIT H-1

July 24, 2025



Proposed Amendments to 15A NCAC 10F .0307 – Catawba, Iredell, Lincoln, and Mecklenburg Counties Recommended by Agency Staff for Public Notice, Comment, and Presentation at Public Hearing

Wildlife Resources Commission staff were notified last fall of safety concerns and enforcement challenges surrounding vessel liveries on Lake Norman. Lack of regulations codified in Rule has made it difficult to enact and enforce regulations on vessel liveries, leading to lack of action against liveries and increased safety concerns among lake users. A temporary rule was adopted to address concerns during the boating season.

Permanently codifying vessel livery safety requirements in Rule will clarify standards for livery companies, facilitate and streamline enforcement activities, and improve public safety.

The proposed changes are identical to the temporary rule currently in effect.

15A NCAC 10F .0307 CATAWBA, IREDELL, LINCOLN, AND MECKLENBURG COUNTIES

1 **15A NCAC 10F .0307 CATAWBA, IREDELL, LINCOLN, AND MECKLENBURG COUNTIES**

2 (a) Regulated Area. This Rule shall apply to Lake Norman in Catawba, Iredell, Lincoln, and Mecklenburg counties:

- 3 (1) within 50 yards of the shoreline at Jetton Park in Mecklenburg County, from a point on the west
4 side of the park at 35.47082 N, 80.90427 W, south and around the point at 35.46703 N, 80.90360
5 W, then northeast to a point at 35.47262 N, 80.89727 W;
6 (2) Bluff Point Cove in Cornelius shore to shore, east of a line from a point 50 yards west of the south
7 shore of the cove mouth at 35.45327 N, 80.89520 W to a point 50 yards west of the north shore of
8 the cove mouth at 35.45487 N, 80.89440 W; and
9 (3) the cove immediately north of the inlet of Hager Creek in Iredell County, north of a line from a point
10 on the north shore at 35.55760 N, 80.94730 W southwest to a point on the island at the inlet of Hager
11 Creek at 35.55695 N, 80.94971 W, and east of a line from the same point on the island northwest to
12 a point on the north shore at 35.55754 N, 80.95029 W.

13 (b) Speed Limit. No person shall operate a vessel at greater than no wake speed within the regulated areas described
14 in Paragraph (a) of this Rule and as set forth in G.S. 75A-14.1.

15 ~~(c) Swimming Areas. No person operating or responsible for the operation of a vessel shall permit it to enter any~~
16 ~~marked swimming area on the waters of Lake Norman.~~

17 ~~(d)(c)~~ Placement and Maintenance of Markers. The Lake Norman Marine Commission shall be the designated agency
18 for placement and maintenance of navigational aids and regulatory markers on the waters of Lake Norman.

19 ~~(d) Vessel Liveries. Vessel liveries operating on Lake Norman shall conduct the following activities with each vessel~~
20 ~~renter prior to relinquishing control of the vessel:~~

- 21 ~~(1) a pre-rental vessel inspection to ensure that safety equipment required by Rule .0201 of this~~
22 ~~Subchapter is on board and accessible; and~~
23 ~~(2) provide and review instruction on safe operation of the vessel rented including review of navigation~~
24 ~~rules in G.S. 75A-6.1, operating restrictions in G.S. 75A-10, an electronic or waterproof~~
25 ~~navigational map of Lake Norman, and the U.S. Coast Guard's U.S. Aids to Navigation System~~
26 ~~pamphlet.~~

27 ~~Both parties shall sign and date documentation verifying adherence to these requirements on the date the rental~~
28 ~~begins. The vessel livery shall maintain a copy of this documentation for a period of two years from the date of rental~~
29 ~~which shall be made available to law enforcement officers upon request. The vessel renter shall have a copy of the~~
30 ~~documentation on the vessel and available for law enforcement upon demand during the term of the rental.~~

31
32 History Note: Authority G.S. 75A-3; 75A-15;

33 Eff. February 1, 1976;

34 Amended Eff. July 1, 1998; October 1, 1992; May 1, 1989; March 25, 1978;

35 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December
36 6, 2016;

37 Amended Eff. October 1, 2019; October 1, 2018.

1
2

Temporary Amendment Eff. March 7, 2025.

EXHIBIT H-2

July 24, 2025



Fiscal Note for Lake Norman Boating Safety Rule

15A NCAC 10F .0307 - CATAWBA, IREDELL, LINCOLN, AND MECKLENBURG COUNTIES

Agency Contact: William Casola
Policy Analyst
NC Wildlife Resources Commission
1751 Varsity Drive
Raleigh, NC 27606
(919) 707-0125
william.casola@ncwildlife.gov

Fiscal Impact: State Government: No
Local Government: Minimal
Private Impact: Minimal
Substantial Economic Impact: No

Authority: G.S. 75A 3; 75A 15

Background

The proposed amendments to Rule 15A NCAC 10F .0307 provide a defined framework for safety requirements that will apply to vessel liveries in Lake Norman. This framework is intended to make enforcement of boating safety requirements more consistent and streamlined, ultimately enhancing public safety.

“Vessel livery” refers to a business that provides boats for people to rent and use for recreational activities on the lake, typically on a daily or hourly basis. Several agencies share responsibility for enforcing boating safety on Lake Norman. The Charlotte-Mecklenburg Police Department operates a full-time Lake Enforcement Unit that patrols Lake Norman year-round. The North Carolina Wildlife Resources Commission (WRC) enforces boating laws on all public waters,

including Lake Norman. Additionally, the Iredell, Catawba, and Lincoln County Sheriff's Offices, along with the Cornelius Police Department, maintain lake patrol units. The Lake Norman Marine Commission also plays a key role in regulating activities, monitoring the lake and supporting enforcement efforts.

The WRC has been made aware of safety concerns and enforcement challenges surrounding vessel liveries on Lake Norman. Although the Lake Norman Marine Commission has the authority to establish regulations for public recreation and water safety, effective enforcement has been challenging without a joint resolution, as required by S.L. 1969-1089, or regulations formally codified in Rule. This has resulted in limited action against vessel liveries and increased safety concerns among lake users.

A temporary version of this rule is currently in effect, having been adopted by the WRC and taking effect on March 7, 2025.

Proposed Rule Amendments

The proposed amendments will require vessel liveries operating on Lake Norman to:

- **Conduct a pre-rental vessel inspection.**
 - Ensure all required safety equipment is present and accessible on each vessel before rental.
- **Instruct renters on safe vessel operation.**
 - Instructions must include navigation rules, operating restrictions, use of an electronic or waterproof navigational map of Lake Norman, and a review of the U.S. Coast Guard's Aids to Navigation System pamphlet.
- **Provide and keep documentation.**
 - Liveries must document that the vessel inspection and renter instruction steps were completed. Both the livery and renter must sign and date documentation confirming these steps were completed. In addition, the livery must keep this documentation for two years and provide it to law enforcement upon request. Note that the proposed rule does not specify a required format -- electronic or paper documentation is acceptable. Renters must be provided a copy to keep on board during the rental period for law enforcement inspection.

Fiscal Impact

State Impact

The proposed amendments are anticipated to have no impact on State government. The proposed changes require livery companies to keep records that are available to law enforcement for

review if needed. Record review is not anticipated to occur frequently but is part of normal law enforcement operations.

Local Impact

The proposed amendments are anticipated to have small, but meaningful impacts on local governments, particularly lake patrol units. The following four local law enforcement agencies patrol Lake Norman:

- Iredell County
- Catawba County
- Lincoln County
- Town of Cornelius

Proposed changes codify requirements which will promote more consistent regulation of and enforcement on livery companies. By mandating pre-rental inspections and safety briefings, the changes will help ensure that all vessels are properly equipped and renters are informed about safe operation. This is expected to enhance boater safety on the lake, potentially reducing the need for law enforcement involvement.

The requirements for both the vessel renters and the liveries to have documentation on hand will enable patrol officers to more quickly check documentation to confirm compliance, both with the liveries and on the water with renters.

While the WRC is unable to quantify these benefits, improvements over the current situation are expected to yield incremental gains in enforcement efficiency, effectiveness, and overall safety on Lake Norman.

Private Impact

The agency believes that some liveries are likely already performing these safety instructions and vessel inspections prior to renting due to their own diligence or through requirements of insurers. Livery companies not already in compliance with proposed requirements may need to spend additional time preparing documentation and reviewing the safety requirements with each customer prior to relinquishing control of the vessel. There will be no required additional costs associated with providing navigational maps as an electronic version is available at no charge on the Lake Norman Marine Commission website¹ (waterproof maps can be purchased for a flat \$5.00 postage fee).

Boat renters may spend additional time reviewing operating and safety procedures before taking the boat on the lake. However, the proposed requirements are anticipated to benefit all lake users

¹ [2023 Updated Lake Norman Waterproof Maps and Digital Maps - Lake Norman Marine Commission](#)

by creating a safer environment for recreation. With better-informed renters and properly equipped vessels, the risk of accidents and safety violations may decrease.

As of 2024, the Lake Norman Marine Commission had approved 47 boat rental companies on the lake.² However, the WRC does not know how many individuals rent vessels on the lake each year. Thus, the WRC does not have a mechanism to quantify the specific impacts of the proposed change on private entities. Lake Norman is the largest man-made lake in North Carolina and is well known as one of the most popular lakes for boating and fishing.

Summary

This regulation establishes clear, enforceable standards for vessel liveries on Lake Norman which should promote incremental improvement to renter safety and regulatory compliance. Although this regulation introduces some additional administrative responsibilities for livery operators, the anticipated benefits from improved public safety, greater accountability, and more efficient enforcement are likely to outweigh these costs.

² [List of Charter and Rental Boats Approved by Lake Norman Marine Commission - Lake Norman Marine Commission](#)

1 **15A NCAC 10F .0307 CATAWBA, IREDELL, LINCOLN, AND MECKLENBURG COUNTIES**

2 (a) Regulated Area. This Rule shall apply to Lake Norman in Catawba, Iredell, Lincoln, and Mecklenburg counties:

- 3 (1) within 50 yards of the shoreline at Jetton Park in Mecklenburg County, from a point on the west
4 side of the park at 35.47082 N, 80.90427 W, south and around the point at 35.46703 N, 80.90360
5 W, then northeast to a point at 35.47262 N, 80.89727 W;
- 6 (2) Bluff Point Cove in Cornelius shore to shore, east of a line from a point 50 yards west of the south
7 shore of the cove mouth at 35.45327 N, 80.89520 W to a point 50 yards west of the north shore of
8 the cove mouth at 35.45487 N, 80.89440 W; and
- 9 (3) the cove immediately north of the inlet of Hager Creek in Iredell County, north of a line from a point
10 on the north shore at 35.55760 N, 80.94730 W southwest to a point on the island at the inlet of Hager
11 Creek at 35.55695 N, 80.94971 W, and east of a line from the same point on the island northwest to
12 a point on the north shore at 35.55754 N, 80.95029 W.

13 (b) Speed Limit. No person shall operate a vessel at greater than no wake speed within the regulated areas described
14 in Paragraph (a) of this Rule and as set forth in G.S. 75A-14.1.

15 ~~(c) Swimming Areas. No person operating or responsible for the operation of a vessel shall permit it to enter any~~
16 ~~marked swimming area on the waters of Lake Norman.~~

17 (c~~e~~) Placement and Maintenance of Markers. The Lake Norman Marine Commission shall be the designated agency
18 for placement and maintenance of navigational aids and regulatory markers on the waters of Lake Norman.

19 ~~(d) Vessel Liveries. Vessel liveries operating on Lake Norman shall conduct the following activities with each vessel~~
20 ~~renter prior to relinquishing control of the vessel:~~

- 21 ~~(1) a pre-rental vessel inspection to ensure that safety equipment required by Rule .0201 of this~~
22 ~~Subchapter is on board and accessible; and~~
- 23 ~~(2) provide and review instruction on safe operation of the vessel rented including review of navigation~~
24 ~~rules in G.S. 75A-6.1, operating restrictions in G.S. 75A-10, an electronic or waterproof~~
25 ~~navigational map of Lake Norman, and the U.S. Coast Guard's U.S. Aids to Navigation System~~
26 ~~pamphlet.~~

27 ~~Both parties shall sign and date documentation verifying adherence to these requirements on the date the rental~~
28 ~~begins. The vessel livery shall maintain a copy of this documentation for a period of two years from the date of rental~~
29 ~~which shall be made available to law enforcement officers upon request. The vessel renter shall have a copy of the~~
30 ~~documentation on the vessel and available for law enforcement upon demand during the term of the rental.~~

31
32 History Note: Authority G.S. 75A-3; 75A-15;

33 Eff. February 1, 1976;

34 Amended Eff. July 1, 1998; October 1, 1992; May 1, 1989; March 25, 1978;

35 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December
36 6, 2016;

37 Amended Eff. October 1, 2019; October 1, 2018.

EXHIBIT I-1

July 24, 2025



Proposed Adoption of 15A NCAC 10D .0295 Paynes Branch Game Land Recommended by Agency Staff for Public Notice, Comment, and Presentation at Public Hearings

The proposed rule will establish Paynes Branch Game Land. The Commission, in partnership with The Conservation Fund, the National Wild Turkey Federation, and the North Carolina Wildlife Habitat Foundation, recently acquired 209 acres of property on either side of Paynes Branch stream in Northern Forsyth and Southern Stokes Counties. At 209 acres, this would be a relatively small game land, however the property is located in a region of the State where few public hunting opportunities currently exist. Adding this property to the Game Land Program as a three day per week area will provide recreational opportunities for hunters, trappers, wildlife viewers, and other outdoor recreationists. Additionally, this rule will establish requirements related to deer seasons and prohibit horseback riding and target shooting.

15A NCAC 10D .0295 PAYNES BRANCH GAME LAND

1 15A NCAC 10D .0295 PAYNES BRANCH GAME LAND IN FORSYTH AND STOKES COUNTIES

2 Paynes Branch Game Land is a Three Days per Week Area, in which the following applies:

- 3 (1) Antlered or antlerless deer may be taken the first open day of the All Lawful Weapons Season for
4 Deer With Visible Antlers through the second Wednesday thereafter.
- 5 (2) Target shooting is prohibited.
- 6 (3) Horseback riding is prohibited.

EXHIBIT I-2

July 24, 2025



Fiscal Note for Paynes Branch Game Land

15A NCAC 10D .0295 – PAYNES BRANCH GAME LAND IN FORSYTH AND STOKES COUNTIES

Agency Contact: William Casola
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(919) 707-0125
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Fiscal Impact: State Government: Yes
Local Government: Minimal
Private Impact: Yes
Substantial Economic Impact: No

Authority: G.S. 113-134, 113-264

The proposed rule will establish the Paynes Branch Game Land. The Commission, in partnership with The Conservation Fund, the National Wild Turkey Federation, and the North Carolina Wildlife Habitat Foundation, recently acquired 209 acres of property on either side of Paynes Branch stream in Northern Forsyth and Southern Stokes Counties. At 209 acres, this would be a relatively small game land, however the property is located in a region of the State where few public hunting opportunities currently exist. Adding this property to the Game Land Program as a three day per week area will provide recreational opportunities for hunters, trappers, wildlife viewers, and other outdoor recreationists. Additionally, this rule will establish requirements related to deer seasons and prohibit horseback riding and target shooting.

Fiscal Impact

State Impact

The agency anticipates a one-time cost of approximately \$5,340 to establish the new game land. This includes \$840 for the boundary survey and markings (2.80 miles x \$300/mile), and \$4,500 for one new parking area.

Local Impact

Creating a new game land may increase the number of people visiting local businesses, which may result in an increase in the purchase of goods and services as they relate to the needs of the recreational user groups (e.g., food, gas, camping supplies, etc.). Increased spending at business may result in additional tax revenue for State and local governments. The Paynes Branch Game Land is relatively small in size, so the total amount of tax-based revenue generated due to its establishment is likely to be small, especially relative to larger game lands. The Commission is unable to give an exact estimate as tax-based revenue varies depending on the activities allowed on the game land, its proximity to local amenities, and its size.

This game land may increase nearby home values, increasing property tax revenue, although the amount is highly uncertain.¹

Private Impact

This new game land will provide additional opportunities for hunting and outdoor recreation. Game land users will have increased opportunities for wildlife-based recreation and 209 acres of undeveloped land will be conserved with public access. There is currently not a game land in this area of the State and wildlife and outdoor recreationists from surrounding municipalities can take advantage of this public land for hunting, hiking, and wildlife watching.

There are few residential homes immediately adjacent to the property therefore noise impacts on nearby residents are anticipated to be minimal. The proposed rule will prohibit target shooting and horseback riding. Given the game land's small size, allowing target shooting would raise safety concerns and could lead to excessive litter. Additionally, the properties' small size and lack of trail network is not conducive to horseback riding. The three-day per week designation will provide balance between the expected hunting pressure and game species management.

¹ Casola, William R., Peterson, M.N., Wu, Y., Sills, E.O., Pease, B.S., Pacifici, K., 2021b. Measuring the value of public hunting land using a hedonic approach. *Human Dimensions of Wildlife*. 1–17. <https://doi.org/10.1080/10871209.2021.1953196>.

Game lands provide significant economic contributions to local economies through the market impact of visitors participating in outdoor recreational activities. In 2018, North Carolina game lands received over 2.2 million visits. An evaluation conducted by NC State University researchers estimates that these visits generated over \$180 million in game land related expenditures (gross), contributing a net added value of \$140 million to the state's economic activity.²

Adding an additional game land will bolster state revenue and recreational visits. The value of game land access to recreators can be assumed to be at least as much as they spend per trip, although there are additional use and non-use benefits that are not captured in trip expenditures. This same study found that non-licensed activity users (e.g., hikers, bikers) spent an average of \$119.83 per trip while hunters and anglers spent on average \$84.19 per trip.²

The concept of willingness to pay (WTP) can provide a more comprehensive estimate of how much users value game lands, including those aesthetic, environmental, and inter-generational benefits that cannot be measured directly in the market through expenditures or home values. However, WTP values come with a greater degree of uncertainty; the estimates are sensitive to the research methods used to elicit the values including the design and delivery of the contingent valuation exercise.

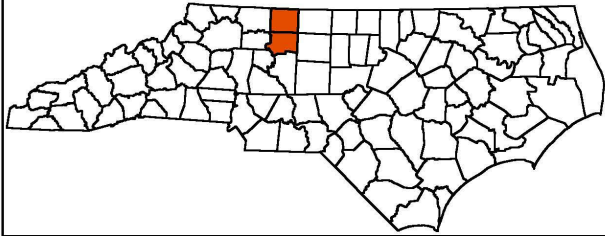
An associated study assessed users' willingness to pay (one time) to conserve 20% of North Carolina's game lands. Values varied by user type. Non-licensed users valued the proposed conservation at \$130 compared to licensed users at \$120. Dual users that pursue both licensed and non-licensed activities valued game lands most highly at \$160. More detailed studies would be needed to determine willingness to pay on an annual or per-acre basis, and to determine these values for both users and non-users³.

This game land may increase home values in the area as well. Studies in NC have demonstrated that proximity to game lands provide moderate positive value to nearby properties in some locations, even within rural settings and when controlling for access to other sources of public land. This is especially true for areas where there are no other nearby high-value natural amenities such as beaches and national parks¹.

² Casola, W.R., Peterson, M.N., Sills, E.O., Pacifici, K., Moorman, C.E., 2022. Economic contributions of wildlife management areas in North Carolina. *Forest Policy and Economics*. 140, 102747 <https://doi.org/10.1016/j.forpol.2022.102747>.

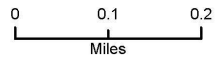
³ Casola, W.R., Peterson, M.N., Sills, E.O., Pacifici, K., Moorman, C.E., 2023. Conservation motivations and willingness to pay for wildlife management areas among recreational user groups. *Land Use Policy*. 132, <https://doi.org/10.1016/j.landusepol.2023.106801>.

**Payne Branch Tract
Forsyth and Stokes Counties
209 Acres Total**



February 23, 2023

Paynes Branch Property



1 **15A NCAC 10D .0295 PAYNES BRANCH GAME LAND IN FORSYTH AND STOKES COUNTIES**

2 Paynes Branch Game Land is a Three Days per Week Area, in which the following applies:

- 3 (1) Antlered or antlerless deer may be taken the first open day of the All Lawful Weapons Season for
4 Deer With Visible Antlers through the second Wednesday thereafter.
5 (2) Target shooting is prohibited.
6 (3) Horseback riding is prohibited.

EXHIBIT J-1

July 24, 2025



Proposed Amendments to Furbearer Propagation Rules Recommended by Agency Staff for Public Notice, Comment, and Presentation at Public Hearings

The proposed amendments to Rules within 15A NCAC 10H .1100 provide updates to the program framework for Furbearer Propagation in North Carolina. Highlights include updates to language throughout for improved clarity, updates to caging standards for mink and fox based on Fur Commission USA and U.S. Fox Shipper's Council recommendations, updates to biosecurity and human safety standards, clarity on reporting requirements, and additional requirements for licenses holders working with rabies species that are consistent with requirements for captivity license holders.

15A NCAC 10H .1101 FURBEARER PROPAGATION LICENSE

15A NCAC 10H .1104 MINIMUM STANDARDS FOR CAGING AND CARE

15A NCAC 10H .1107 RECORDS AND INSPECTIONS

[illegible]

(a) The furbearer propagation license shall authorize the propagation of furbearing animals and red foxes, including all color phases, for use as fur.

- (1) ~~Breed~~ breed the species of animal designated on the license; species for the production of marketable fur;
- (2) ~~Raise~~ raise live specimens for the production of marketable fur;
- (3) ~~Sell~~ sell domestically produced fur to a licensed fur dealer; and
- (4) ~~Buy~~ acquire, buy, and sell live specimens from or to a another furbearer propagation license holder, a captivity license holder, or a licensed non-resident producer of ranch-raised breeding stock. Live specimens shall not be sourced from the wild.

- (1) ~~The applicant's name;~~
- (2) ~~The applicant's residence or mailing address;~~
- (3) ~~The physical address of the propagation facility;~~
- (4) ~~The applicant's telephone number; and~~
- (5) date of birth;
- ~~(5)(6)~~ The species of furbearing animal or fox to be ~~propagated~~, propagated; and
- (7) certification of up-to-date rabies pre-exposure prophylaxis, if applicable.

History Note: Authority G.S. 113-134; 113-273;
Eff. April 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December
6, 2016;
Amended Eff. November 1, 2019.

1 **15A NCAC 10H .1104 MINIMUM STANDARDS FOR CAGING AND CARE**

2 (a) General Cage Requirements.

- 3 (1) Cages shall be constructed of non-toxic, corrosion-resistant materials sufficient to retain animals
4 without tethers or chains;
5 (2) Cages shall contain a den area large enough for all the animals in that cage to turn around and lie
6 down;
7 (3) Cages shall be housed in an area that provides protection from direct sunlight, precipitation, wind,
8 and other weather conditions;
9 (4) Cages shall minimize heat build-up and provide sufficient light to maintain the animal's circadian
10 rhythms;
11 (5) Cages shall be ventilated to sufficiently provide fresh air circulation;
12 (6) Cages shall be securely anchored and elevated two feet above ground or floor level to facilitate
13 cleaning;
14 (7) Cages shall be arranged in rows to allow for visual and physical inspection and to allow space for
15 cleaning; and
16 (8) Cages shall be surrounded by a four foot perimeter fence with a one foot below ground dig barrier
17 designed to prevent ingress and egress by domestic and wild animals. The fence shall have a top
18 electrified wire three feet above the ground and a bottom electrified wire one foot above the ground.
19 The fence shall be free from structures or vegetation.

20 ~~(b)(a) Breeder cages shall be used to hold a~~ A pair of animals held for breeding and to hold the or a female and her
21 litter from the time the litter is born until weaning. weaning shall be held in a breeder cage.

22 ~~(c)(b) Pelter cages shall only be used to hold A single animals.~~ animal or two mink may be held in a pelter cage.

23 (d) Mink.

- 24 (1) cages shall have a height of 12 inches.
25 (2) breeder cages shall be 4,300 cubic inches.
26 (3) pelter cages shall be 2,500 cubic inches for one mink, and 3,800 cubic inches for two mink.
27 (4) shall be acquired from a furbearer propagation license holder, a captivity license holder, or a licensed
28 non-resident producer of ranch-raised breeding stock that is free from Aleutian Disease, and shall
29 be tested and vaccinated for Aleutian Disease.

30 (e) Fox.

- 31 (1) cages shall have a height of 24 inches.
32 (2) breeder cages shall be 13 cubic feet.
33 (3) pelter cages shall be 16 cubic feet.

34 ~~(f)(e) The minimum dimensions of cages in~~ The following cage dimension requirements in depth (d), width (w), and
35 height (h) (h), measured in feet feet, shall be as follows depending on the species of animals being held: apply:
36
37

SPECIES	BREEDER CAGE	PELTER CAGE
	(d x w x h)	(d x w x h)
Beaver	3 x 6 x 2.5	3 x 4 x 2.5
Bobcat	3 x 6 x 2.5	3 x 4 x 2.5
Fox	5.0 x 3.0 x 3.0	2.5 x 3.0 x 3.0
Mink	2.0 x 0.8 x 1.0	2.0 x 0.5 x 1.0
Nutria	3 x 3 x 2.0	3 x 2 x 2.0
Opossum	3 x 3 x 2.0	3 x 2 x 2.0
Otter	3 x 5 x 1.5	3 x 3 x 1.5
Raccoon	3 x 4 x 2.0	3 x 2 x 2.0
Skunk	3 x 3 x 1.5	3 x 2 x 1.5
Weasel	2 x 2 x 1.5	1 x 2 x 1.5

~~(d) Each license holder shall comply with the following general cage requirements:~~

- ~~(1) cages shall be constructed of non-toxic, corrosion-resistant materials sufficient to retain animals without tethers or chains;~~
- ~~(2) cages shall have a den area large enough for all the animals in that cage to turn around and lie down;~~
- ~~(3) cages shall be housed in an area that provides protection from direct sunlight, precipitation, wind, and other weather conditions;~~
- ~~(4) cages shall be designed to minimize heat build up and provide sufficient light to maintain the animal's circadian rhythms;~~
- ~~(5) caging shall be ventilated;~~
- ~~(6) cages shall be solidly based at least two feet above ground or floor level to facilitate cleaning;~~
- ~~(7) cages shall be arranged in rows to allow visual and physical inspection of all areas and all species and to allow space for operations and cleaning; and~~
- ~~(8) a perimeter fence shall be maintained around the housing area and shall include a dig barrier designed to prevent escape and access by domestic and wild animals.~~

~~(g)(e) Each license holder shall comply with the following general care requirements:~~ General Sanitation and Food Requirements.

- ~~(1) water: clean drinking water shall be provided.~~ Clean drinking water shall be provided daily. All pools, tanks, water areas, and water containers provided for swimming, wading, or drinking shall be clean. Enclosures shall provide drainage for surface water and runoff;
- ~~(2) sanitation: water disposal and waste disposal~~ Water and waste shall be disposed of in accordance with all applicable local, State, and federal laws;

- (3) ~~food: food~~ Food shall be of a type and quantity that is appropriate for the particular species and ~~shall be provided~~ in an unspoiled and uncontaminated ~~condition. condition;~~ Food shall be stored to prevent vermin infestation and spoilage;
- (4) ~~waste: fecal~~ Fecal and food waste shall be removed daily from inside, under, and around enclosures and disposed of in a manner that prevents seepage into groundwater, noxious odors, odors or pests;
- (5) ~~ectoparasites: a program for the control of ectoparasites and vermin shall be established and maintained.~~ Effective measures shall be implemented to control ectoparasites, insects, and vermin. These measures shall be documented and provided, upon request, by a representative of the Commission. Methods to control insects shall be employed and only EPA-approved insecticides shall may be used. Biological pest control methods may be used; used where appropriate.
- (6) Acquired or purchased animals shall be quarantined for 30 days. The quarantine area shall have dedicated coveralls, boots, gloves, and footbath; and
- (7) Carcasses shall be disposed of in an incinerator, landfill, or buried 3 feet below ground and 300 feet from a waterbody. Carcasses shall be temporarily stored in a sealed container prior to final disposal.
- (h) License holders who are authorized to propagate furbearing animals that are rabies species, as defined in 10H .1401(d)(19) and red foxes, shall:
- (1) certify 12 hours of rabies or rabies species-specific training, or a combination thereof, for their initial application;
- (2) certify up-to-date rabies pre-exposure prophylaxis in accordance with current Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention at www.CDC.gov for themselves and staff members who may contact rabies species;
- (3) provide the name and contact information of a North Carolina licensed veterinarian with whom the licensee has consulted and who agrees to provide necessary medical treatment to the rabies species;
- (4) certify notification to the appropriate animal control authority and local health department prior to making application to the Commission, to inform them of their anticipated activities and location, and to coordinate future rabies testing activities;
- (5) post the following information at the license holder's facility and be provided, upon request, by an authorized representative of the Commission:
- (A) proof of immunization or titer checks for individuals who have contact with rabies species;
- (B) contact information for the veterinarian who agrees to provide medical treatment to the rabies species;
- (C) contact information for the local animal control authority and local health department; and
- (D) a written protocol for euthanasia and rabies testing.
- (6) consider rabies species to be potentially infected with the rabies virus. If a human or domestic animal has been scratched, bitten, or exposed to saliva, the fluid that surrounds the brain and spinal cord, or brain or spinal cord material from a rabies species, the license holder shall contact the local health department immediately to report the incident. License holders shall abide by requests from public

1 health department personnel, animal control, and Commission personnel regarding disposition of
2 the animal. Rabies species that have scratched or bitten a human or domestic animal or die in
3 captivity shall not be released or disposed of until the local health department investigates the
4 situation to determine if testing is necessary. Positive rabies test results shall be reported to the
5 Commission within five business days of receipt from the health department.

6 (i) Biosecurity Standards. Prior to entering the perimeter fence, all individuals shall:

7 (1) wear coveralls and boots;

8 (2) wash their hands with a disinfecting soap or use a waterless hand disinfectant; and

9 (3) use a footbath of phenolic, chlorhexidine, or quaternary ammonium disinfectants.

10 Except for license holders, all individuals shall sign an entrance log prior to entering the perimeter fence.

11
12 *History Note: Authority G.S. 113-134; 113-273;*

13 *Eff. April 1, 1986;*

14 *Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December*
15 *6, 2016;*

16 *Amended Eff. November 1, 2019.*

1 **15A NCAC 10H .1107 RECORDS AND INSPECTIONS**

2 (a) Furbearer propagation license holders shall ~~maintain records containing~~ record the following information:

3 (1) the numbers and species of furbearing animals or foxes acquired;

4 (2) the dates and sources of acquisition;

5 (3) the numbers of animals produced by breeding

6 (4) ~~and~~ the numbers of animals raised for market; and

7 (5)(4) the numbers of animals ~~or pelts sold or otherwise disposed of,~~ sold, transferred, died, or euthanized,
8 the dates of disposition, and the ~~identities~~ license numbers of the recipients, if ~~the animals were sold~~
9 ~~alive.~~ applicable.

10 (b) The records required by this Rule shall be submitted to the Commission within 15 days of license expiration and
11 shall be retained for 12 months following license expiration. ~~one year following the end of the calendar year to which~~
12 ~~they pertain. The records required pursuant to this Rule~~ Records shall be available for inspection upon ~~at the~~ request
13 by a representative of the Commission.

14 (c) Representatives of the Commission shall be permitted to enter the premises of a license holder's ~~furbearer~~
15 ~~propagation~~ facility upon request or during the facility's business hours for inspection, enforcement, or scientific
16 purposes.

17
18 *History Note: Authority G.S. 113-134; 113-273;*

19 *Eff. April 1, 1986;*

20 *Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December*
21 *6, 2016;*

22 *Amended Eff. November 1, 2019.*
23
24

EXHIBIT J-2

July 24, 2025



Fiscal Note for Furbearer Propagation

Rule Amendments: 15A NCAC 10H .1101 FURBEARER PROPAGATION LICENSE
15A NCAC 10H .1104 MINIMUM STANDARDS FOR CAGING AND CARE
15A NCAC 10H .1107 RECORDS AND INSPECTIONS

Agency Contact: William Casola
Policy Analyst
NC Wildlife Resources Commission
1751 Varsity Drive
Raleigh, NC 27606
(919) 707-0125
william.casola@ncwildlife.gov

Fiscal Impact: State Government: Minimal
Local Government: No
Private Impact: Minimal
Substantial Economic Impact: No

Authority: G.S. 113-134, 113-273

Background

The proposed amendments to Rules within 15A NCAC 10H .1100 provide minor updates to the framework for Furbearer Propagation in North Carolina. Highlights include updates to language throughout for improved clarity, updates to caging standards for mink and fox based on Fur Commission USA and U.S. Fox Shipper's Council recommendations, updates to biosecurity and human safety standards, and additional requirements for licenses holders working with rabies species.

In June 1985, House Bill 1110 was ratified and amended G.S. 113-273 by creating the furbearer propagation license. The license allows the propagation of beaver, bobcat, mink, muskrat, nutria (a non-native species), opossum, otter, raccoon, red fox (all color phases), striped skunk, spotted skunk, long-tailed weasel, least weasel, and silver fox.

Furbearer propagation has declined in popularity over the years and is uncommon in North Carolina due to low pelt prices and our warm climate, the latter of which impacts fur quality. From the early 2000s until 2015, there were no licensed furbearer propagators in North Carolina. In 2015, an existing mink farm, licensed through USDA-APHIS, was issued a furbearer propagator license; however, this farm stopped renewing their license after 2022 and is no longer in operation. Currently there is one individual with a furbearer propagation license in North Carolina.

The furbearer propagation rules were last updated in November 2019 by WRC staff with input from Fur Commission USA. Further updating the furbearer propagation rules to address reporting requirements, disease management, animal welfare, and biosecurity will address some of the issues observed at the current facility and avoid issues at any future furbearer propagation facilities.

Lastly, the Commission is updating 15A NCAC Section .1400 Rehabilitation and Captivity Rule to minimize rabies exposure risk from captive wild animals. Since most of the species that can be propagated under the furbearer propagation license are rabies vector species, proposed amendments to 15 NCAC Section .1100 have regulatory language consistent with Section .1400 regarding holding rabies vector species in captivity. In addition, SARS-CoV-2 outbreaks have been reported in mink farms in Europe and Canada, resulting in high mortality of captive mink and disease exposure to people and wild mink. Amending section .1100 to strengthen biosecurity requirements and match industry standards could minimize disease outbreaks in humans, captive animals, and wild animals.

Proposed Rule Amendments and Impacts

15A NCAC 10H .1101 FURBEARER PROPAGATION LICENSE

- Clarifies that only species designated on the license can be propagated.
- Removes NCWRC website referenced in rule. The application is not available online.
- Licensees must report their date of birth and certification of up-to-date rabies prophylaxis at time of application. These changes are consistent with updates to 15A NCAC 10H .1400.

The proposed changes should lead to small administrative efficiencies for the agency and licensees. The proposed amendments are anticipated to have no impact on local government.

15A NCAC 10H .1104 MINIMUM STANDARDS FOR CAGING AND CARE

- Updates caging requirements for mink and fox based on Fur Commission USA standards and U.S. Fox Shipper's Council certification.
- Clarifies that clean drinking water shall be provided daily.
- Amends rule language to improve biosecurity and human safety based on recommendations from Fur Commission USA:
 - Specifies perimeter fencing requirements.
 - Requires that food for propagated species be stored in a sanitary manner.
 - Clarifies that fecal and food waste be removed daily.
 - Establishes quarantine requirements for newly acquired species.
 - Requires that acquired mink be tested and free from Aleutian disease.
 - Implements requirements for visitors, such as wearing boots, washing their hands, using a footbath, and signing an entrance log.
 - Requires proper disposal of dead animals.
- Adds rule language that would provide consistency with the captivity and rehabilitation rules in the handling and holding of rabies vectors species by requiring:
 - Rabies training and pre-exposure prophylaxis.
 - A NC licensed veterinarian that agrees to provide medical treatment.
 - That furbearer propagators establish contacts with animal control and local health department regarding their activities and rabies testing.
 - A written protocol for euthanasia and rabies testing.

The proposed changes should lead to small administrative efficiencies for the agency when inspecting furbearer propagation facilities and improve biosecurity, human safety, and overall compliance. The proposed amendments are anticipated to have no impact on local government. The proposed amendments may result in additional costs and administrative burdens for licensees. However, since there is currently only one active furbearer propagation license in NC, the overall potential costs to the existing regulated community will be minimal.

Industry-wide, most operations are likely already in compliance with the proposed rules, as these amendments closely mirror the industry standards defined by Fur Commission USA and U.S. Fox Shipper's Council. Nonetheless, the current North Carolina licensee may incur costs in complying with the proposed amendments. These costs may include the purchase of additional/modified fencing and sanitation equipment such as footbaths, coveralls, boots, and disinfectants.

Quantifying these costs is challenging because the extent of necessary modifications will depend on the current condition and configuration of the facility. For instance, fencing may only require minor upgrades rather than complete replacement, and the costs of sanitation equipment can vary widely depending on the specific brands and quantities purchased. Additionally, if a facility acquires mink, each animal must be tested for Aleutian disease. While rapid test kits can be purchased for as little as \$2, laboratory-based tests are more expensive, and the total cost will depend on both the number of animals and the chosen testing method. These variables, along with the fact that there is currently only one small-scale licensee in the state, make it difficult to provide a precise estimate of overall costs.

The proposed amendments may also increase the (1) labor required to comply with the food and water, carcass disposal, and waste disposal requirements, and the (2) administrative burden required to comply with the rabies species rule proposals. While these costs could not be quantified, they are expected to be minimal.

15A NCAC 10H .1107 RECORDS AND INSPECTIONS

- Updates annual reporting requirements such that they are consistent with those required of licenses issues under section 10H .1400.
- Clarifies that pelts sold and animals that died or were euthanized must be reported on annual records.

The proposed changes should lead to small administrative efficiencies for the agency. The proposed amendments are anticipated to have no impact on local government. The proposed amendments will require licensees to make minor administrative adjustments to recordkeeping and forms, requiring additional detail on annual reports and clarifying record submission timeline.

1 **15A NCAC 10H .1101 FURBEARER PROPAGATION LICENSE**

2 (a) The furbearer propagation license shall authorize the propagation of furbearing animals and red foxes, including
3 all color phases, for use as fur.

4 ~~(b)~~ Furbearer propagation license holders ~~shall be authorized to do the following:~~ may conduct the following activities
5 with species designated on their license:

6 (1) ~~Breed~~ breed the ~~species of animal designated on the license;~~ species for the production of marketable
7 fur;

8 (2) ~~Raise~~ raise live specimens for the production of marketable fur;

9 (3) ~~Sell~~ sell domestically produced fur to a licensed fur dealer; and

10 (4) ~~Buy~~ acquire, buy, and sell live specimens from or to ~~a~~ another furbearer propagation license holder,
11 a captivity license holder, or a licensed non-resident producer of ranch-raised breeding stock. Live
12 specimens shall not be sourced from the wild.

13 ~~(b)(c)~~ Application for a furbearer propagation license shall be made on a form available ~~from the Commission at~~
14 ~~www.ncwildlife.org or~~ at the Commission headquarters located at 1751 Varsity Drive, Raleigh, NC 27606-2576.

15 Information required from the applicant shall include:

16 (1) ~~The applicant's~~ name;

17 (2) ~~The applicant's~~ residence or mailing address;

18 (3) ~~The~~ physical address of the propagation facility;

19 (4) ~~The applicant's~~ telephone number; ~~and~~

20 (5) date of birth;

21 ~~(5)(6)~~ The species of furbearing animal or fox to be propagated; propagated; and

22 (7) certification of up-to-date rabies pre-exposure prophylaxis, if applicable.

23 ~~(e)(d)~~ The furbearer propagation license shall be posted ~~and displayed~~ at the propagation facility and be provided,
24 upon request, to a representative of the Commission. ~~so that it is visible to visitors or patrons at all times.~~

26 *History Note: Authority G.S. 113-134; 113-273;*

27 *Eff. April 1, 1986;*

28 *Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December*
29 *6, 2016;*

30 *Amended Eff. November 1, 2019.*

15A NCAC 10H .1104 MINIMUM STANDARDS FOR CAGING AND CARE

(a) General Cage Requirements.

- (1) Cages shall be constructed of non-toxic, corrosion-resistant materials sufficient to retain animals without tethers or chains;
- (2) Cages shall contain a den area large enough for all the animals in that cage to turn around and lie down;
- (3) Cages shall be housed in an area that provides protection from direct sunlight, precipitation, wind, and other weather conditions;
- (4) Cages shall minimize heat build-up and provide sufficient light to maintain the animal's circadian rhythms;
- (5) Cages shall be ventilated to sufficiently provide fresh air circulation;
- (6) Cages shall be securely anchored and elevated two feet above ground or floor level to facilitate cleaning;
- (7) Cages shall be arranged in rows to allow for visual and physical inspection and to allow space for cleaning; and
- (8) Cages shall be surrounded by a four foot perimeter fence with a one foot below ground dig barrier designed to prevent ingress and egress by domestic and wild animals. The fence shall have a top electrified wire three feet above the ground and a bottom electrified wire one foot above the ground. The fence shall be free from structures or vegetation.

~~(b)(a) Breeder cages shall be used to hold a~~ A pair of animals held for breeding ~~and to hold the~~ or a female and her litter from the time the litter is born until weaning. weaning shall be held in a breeder cage.

~~(c)(b) Pelter cages shall only be used to hold A single animals.~~ animal or two mink may be held in a pelter cage.

(d) Mink.

- (1) cages shall have a height of 12 inches.
- (2) breeder cages shall be 4,300 cubic inches.
- (3) pelter cages shall be 2,500 cubic inches for one mink, and 3,800 cubic inches for two mink.
- (4) shall be acquired from a furbearer propagation license holder, a captivity license holder, or a licensed non-resident producer of ranch-raised breeding stock that is free from Aleutian Disease, and shall be tested and vaccinated for Aleutian Disease.

(e) Fox.

- (1) cages shall have a height of 24 inches.
- (2) breeder cages shall be 13 cubic feet.
- (3) pelter cages shall be 16 cubic feet.

~~(f)(e) The minimum dimensions of cages in~~ The following cage dimension requirements in depth (d), width (w), and height ~~(h) (h)~~, measured in feet feet, shall be as follows depending on the species of animals being held: apply:

SPECIES	BREEDER CAGE	PELTER CAGE
---------	--------------	-------------

	(d x w x h)	(d x w x h)
Beaver	3 x 6 x 2.5	3 x 4 x 2.5
Bobcat	3 x 6 x 2.5	3 x 4 x 2.5
Fox	5.0 x 3.0 x 3.0	2.5 x 3.0 x 3.0
Mink	2.0 x 0.8 x 1.0	2.0 x 0.5 x 1.0
Nutria	3 x 3 x 2.0	3 x 2 x 2.0
Opossum	3 x 3 x 2.0	3 x 2 x 2.0
Otter	3 x 5 x 1.5	3 x 3 x 1.5
Raccoon	3 x 4 x 2.0	3 x 2 x 2.0
Skunk	3 x 3 x 1.5	3 x 2 x 1.5
Weasel	2 x 2 x 1.5	1 x 2 x 1.5

~~(d) Each license holder shall comply with the following general cage requirements:~~

- ~~(1) cages shall be constructed of non-toxic, corrosion-resistant materials sufficient to retain animals without tethers or chains;~~
- ~~(2) cages shall have a den area large enough for all the animals in that cage to turn around and lie down;~~
- ~~(3) cages shall be housed in an area that provides protection from direct sunlight, precipitation, wind, and other weather conditions;~~
- ~~(4) cages shall be designed to minimize heat build-up and provide sufficient light to maintain the animal's circadian rhythms;~~
- ~~(5) caging shall be ventilated;~~
- ~~(6) cages shall be solidly based at least two feet above ground or floor level to facilitate cleaning;~~
- ~~(7) cages shall be arranged in rows to allow visual and physical inspection of all areas and all species and to allow space for operations and cleaning; and~~
- ~~(8) a perimeter fence shall be maintained around the housing area and shall include a dig barrier designed to prevent escape and access by domestic and wild animals.~~

~~(g)~~(e) Each license holder shall comply with the following general care requirements: General Sanitation and Food Requirements.

- (1) ~~water: clean drinking water shall be provided.~~ Clean drinking water shall be provided daily. All pools, tanks, water areas, and water containers provided for swimming, wading, or drinking shall be clean. Enclosures shall provide drainage for surface water and runoff;
- (2) ~~sanitation: water disposal and waste disposal~~ Water and waste shall be disposed of in accordance with all applicable local, State, and federal laws;
- (3) ~~food: food~~ Food shall be of a type and quantity that is appropriate for the particular species and ~~shall be provided~~ in an unspoiled and uncontaminated condition. ~~condition;~~ Food shall be stored to prevent vermin infestation and spoilage;

- (4) ~~waste: fecal~~ Fecal and food waste shall be removed daily from inside, under, and around enclosures and disposed of in a manner that prevents seepage into groundwater, noxious ~~odors~~, ~~odors~~ or pests;
- (5) ~~ectoparasites: a program for the control of ectoparasites and vermin shall be established and maintained.~~ Effective measures shall be implemented to control ectoparasites, insects, and vermin. These measures shall be documented and provided, upon request, by a representative of the Commission. Methods to control insects shall be employed and only EPA-approved insecticides shall may be used. Biological pest control methods may be used; used where appropriate.
- (6) Acquired or purchased animals shall be quarantined for 30 days. The quarantine area shall have dedicated coveralls, boots, gloves, and footbath; and
- (7) Carcasses shall be disposed of in an incinerator, landfill, or buried 3 feet below ground and 300 feet from a waterbody. Carcasses shall be temporarily stored in a sealed container prior to final disposal.
- (h) License holders who are authorized to propagate furbearing animals that are rabies species, as defined in 10H .1401(d)(19) and red foxes, shall:
- (1) certify 12 hours of rabies or rabies species-specific training, or a combination thereof, for their initial application;
- (2) certify up-to-date rabies pre-exposure prophylaxis in accordance with current Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention at www.CDC.gov for themselves and staff members who may contact rabies species;
- (3) provide the name and contact information of a North Carolina licensed veterinarian with whom the licensee has consulted and who agrees to provide necessary medical treatment to the rabies species;
- (4) certify notification to the appropriate animal control authority and local health department prior to making application to the Commission, to inform them of their anticipated activities and location, and to coordinate future rabies testing activities;
- (5) post the following information at the license holder's facility and be provided, upon request, by an authorized representative of the Commission:
- (A) proof of immunization or titer checks for individuals who have contact with rabies species;
- (B) contact information for the veterinarian who agrees to provide medical treatment to the rabies species;
- (C) contact information for the local animal control authority and local health department; and
- (D) a written protocol for euthanasia and rabies testing.
- (6) consider rabies species to be potentially infected with the rabies virus. If a human or domestic animal has been scratched, bitten, or exposed to saliva, the fluid that surrounds the brain and spinal cord, or brain or spinal cord material from a rabies species, the license holder shall contact the local health department immediately to report the incident. License holders shall abide by requests from public health department personnel, animal control, and Commission personnel regarding disposition of the animal. Rabies species that have scratched or bitten a human or domestic animal or die in captivity shall not be released or disposed of until the local health department investigates the

1 situation to determine if testing is necessary. Positive rabies test results shall be reported to the
2 Commission within five business days of receipt from the health department.

3 (i) Biosecurity Standards. Prior to entering the perimeter fence, all individuals shall:

4 (1) wear coveralls and boots;

5 (2) wash their hands with a disinfecting soap or use a waterless hand disinfectant; and

6 (3) use a footbath of phenolic, chlorhexidine, or quaternary ammonium disinfectants.

7 Except for license holders, all individuals shall sign an entrance log prior to entering the perimeter fence.

8
9 *History Note: Authority G.S. 113-134; 113-273;*

10 *Eff. April 1, 1986;*

11 *Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December*
12 *6, 2016;*

13 *Amended Eff. November 1, 2019.*

1 **15A NCAC 10H .1107 RECORDS AND INSPECTIONS**

2 (a) Furbearer propagation license holders shall ~~maintain records containing~~ record the following information:

3 (1) the numbers and species of furbearing animals or foxes acquired;

4 (2) the dates and sources of acquisition;

5 (3) the numbers of animals produced by breeding

6 (4) ~~and~~ the numbers of animals raised for market; and

7 (5)(4) the numbers of animals ~~or pelts sold or otherwise disposed of,~~ sold, transferred, died, or euthanized,

8 the dates of disposition, and the ~~identities~~ license numbers of the recipients, if ~~the animals were sold~~

9 ~~alive.~~ applicable.

10 (b) The records required by this Rule shall be submitted to the Commission within 15 days of license expiration and
11 shall be retained for 12 months following license expiration. ~~one year following the end of the calendar year to which~~
12 ~~they pertain. The records required pursuant to this Rule~~ Records shall be available for inspection upon ~~at the~~ request
13 by a representative of the Commission.

14 (c) Representatives of the Commission shall be permitted to enter the premises of a license holder's ~~furbearer~~
15 ~~propagation~~ facility upon request or during the facility's business hours for inspection, enforcement, or scientific
16 purposes.

17
18 *History Note: Authority G.S. 113-134; 113-273;*

19 *Eff. April 1, 1986;*

20 *Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December*
21 *6, 2016;*

22 *Amended Eff. November 1, 2019.*
23
24
25

EXHIBIT K-1

July 24, 2025



Periodic Rules Review Proposed Adoptions, Amendments, and Repeals to Wildlife Service Agent Rules Recommended by Agency Staff for Public Notice, Comment, and Presentation at Public Hearings

The proposed changes to Rules within 15A NCAC 10G .0400 provide minor updates to the program framework for Wildlife Service Agents. Highlights include updates to language throughout for improved clarity and conciseness, updates to wildlife service agent terms and conditions, and updates to the information and conditions required for application. These Rules are required to be readopted by December 31, 2025.

15A NCAC 10G .0401 PURPOSE OF WILDLIFE SERVICE AGENTS
15A NCAC 10G .0402 APPOINTMENT OF WILDLIFE SERVICE AGENTS
15A NCAC 10G .0403 WILDLIFE SERVICE AGENT AGREEMENT
15A NCAC 10G .0405 WILDLIFE SERVICE AGENT TERMS AND CONDITIONS
15A NCAC 10G .0406 APPOINTMENT TERMINATION

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1 **15A NCAC 10G .0402 APPOINTMENT OF WILDLIFE SERVICE AGENTS**

2 (a) Wildlife Service Agents are official license and vessel agents of the Commission who are authorized to issue
3 hunting, fishing and other licenses, permits, applications, vessel registrations, and items pursuant to G.S. 113-270.1,
4 the Wildlife Service Agent Agreement and the Rules of this Section.

5 ~~(b) Any~~ An individual authorized to act on behalf of a business operating from a fixed location in North Carolina may
6 apply to the Commission for appointment as a Wildlife Service Agent by completing an application provided by the
7 Commission. Agent by completing the Wildlife Service Agent application available at ncwildlife.gov. Information
8 required from the applicant shall include:

9 (1) business name, physical address, email, county, phone number, agent type, description of services,
10 and operational dates and hours; and

11 (2) business owner name, address, date of birth, driver's license number, and length of business
12 ownership.

13 ~~(b) Application. Applications for Wildlife Service Agent appointment shall contain the business name, address,~~
14 ~~county agent contact information, bank account information, business hours, and any other information requested by~~
15 ~~the Commission that is reasonably necessary to determine the fitness of the applicant to serve as a Wildlife Service~~
16 ~~Agent.~~

17 ~~(d)(c) Qualifications and Requirements. Applicants~~ Business owners shall meet the following requirements to
18 qualifications in order to be appointed qualify as a Wildlife Service Agent. Agent unless otherwise approved by the
19 Executive Director or his or her designee to maintain adequate service to the public in a geographic area:

20 (1) ~~Businesses shall operate from a fixed location in North Carolina and shall sell a minimum of one~~
21 ~~thousand dollars (\$1,000) in transaction sales annually. This minimum requirement may be waived~~
22 ~~by the Executive Director if he finds the applicant's services necessary to maintain adequate agent~~
23 ~~services to the public in that geographic area.~~

24 ~~(2)(1)~~ An applicant shall have a minimum of one year's experience in operating the business for which the
25 application is made or other equivalent business experience or training. experience; In those cases
26 ~~where other equivalent business experience or training is accepted in lieu of the minimum one year's~~
27 ~~experience, the applicant shall submit financial statements of the business so that the solvency of~~
28 ~~the business can be judged.~~

29 ~~(3)(2)~~ Applicants shall provide a bank account for the purpose of transferring net proceeds from all
30 Wildlife Service Agent transactions to the Commission's account in the State Treasury every week
31 ~~via an electronic transfer of funds. Commission; and~~

32 (3) no criminal convictions for financial crimes within the five years prior to application.

33 ~~(d) The qualifications as provided by Paragraphs (b) and (c) of this Rule shall be met prior to appointment. Failure~~
34 ~~to comply with the qualifications and requirements as provided by Paragraph (c) of this Rule, throughout the term of~~
35 ~~the appointment, may result in termination of the agent appointment. All agents are subject to monitoring of their~~
36 ~~performance by the Customer Support Section of the Commission.~~

37 ~~(d) Upon approval of the application by the Commission, Wildlife Service Agents shall:~~

- (1) have a computer, printer and internet access at their business location;
- (2) provide a voided check or withdrawal slip for the bank account to be used to transfer funds to the Commission;
- (3) complete online training provided by the Commission or a contracted third-party vendor; and
- (4) sign and submit the Wildlife Service Agent Agreement.

(e) Wildlife Service Agent Agreements and appointments are non-transferable and valid only for the owner and business named on the executed agreement.

*History Note: Authority G.S. 113-134; 113-270.1;
Eff. April 1, 1997;
Amended Eff. September 1, 2011; May 1, 2007; July 1, 1998.*

1 **15A NCAC 10G .0403 WILDLIFE SERVICE AGENT AGREEMENT**

2 ~~Each Wildlife Service Agent shall execute an Agreement with the Commission and shall comply with all rules and~~
3 ~~statutes related to the sale of licenses and the registration of vessels. All terms and conditions shall be set forth in the~~
4 ~~Agreement at the time of execution. The business shall operate as a public convenience and shall serve the public in~~
5 ~~an efficient and helpful manner with all reasonable requests for assistance related to the duties of a Wildlife Service~~
6 ~~Agent whenever open for business. The agent shall be informed and knowledgeable of the laws and rules governing~~
7 ~~requirements for licenses and vessel transactions and stay abreast of changes in these requirements so that the agent~~
8 ~~can provide accurate and reliable information and instruction to persons who seek assistance in these matters. The~~
9 ~~appointment as a Wildlife Service Agent and the Agreement under which the appointment is made are singularly valid~~
10 ~~for the person named thereon who is authorized to act on behalf of the business and applies only to the business and~~
11 ~~location named and is non transferable.~~

12
13 *History Note: Authority G.S. 113-134; 113-270.1;*

14 *Eff. April 1, 1997;*

15 *Amended Eff. September 1, 2011; June 1, 2007; July 1, 1998.*

1 **15A NCAC 10G .0405 WILDLIFE SERVICE AGENT TERMS AND CONDITIONS**

2 (a) A Wildlife Service Agent's Agent shall comply with the following appointment and service is subject to the
3 following terms and conditions:

4 (1) ~~Public Service.~~ Wildlife Service Agents shall serve all persons individuals seeking assistance with
5 matters related to the duties of a Wildlife Service Agent. Agent during regular business hours.

6 (2)(1) ~~Training.~~ New Wildlife Service Agents shall attend a training session at a location specified by the
7 Commission prior to activation of agent status and prior to receiving any equipment or supplies from
8 the Commission. Transfer funds and records to the Commission as specified in the Wildlife Service
9 Agent Agreement;

10 (3) ~~Activation of Agent Status.~~ Upon completion of training and receipt of equipment and supplies,
11 Wildlife Service Agents shall have their equipment set up and ready for operation 10 days after the
12 date they receive the equipment and supplies.

13 (4)(2) ~~Application.~~ Each Wildlife Service Agent shall notify the Commission of any changes to the
14 original application for appointment such as business name, address, agent contact information,
15 bank account information, business hours and other information related to agent appointment, within
16 five business days of it's the change.

17 (5)(3) ~~Business Change of Ownership, Location, or Management.~~ If the ownership of the business,
18 location or management changes, then the Agreement becomes null and void. Written provide
19 written notice of any a change in business ownership, location, or management shall be sent to the
20 Commission at least 10 business days prior to the change along with an application for a new
21 Wildlife Service Agreement, if desired, pursuant to the rules in this Section. desired.

22 (6)(4) ~~Maintain five thousand dollars (\$5,000) in Agent transaction sales at the business location annually.~~
23 Cancellation. A Wildlife Service Agent may cancel the Agreement at any time by sending written
24 notice to the Commission. The Commission shall instruct resigning agents on the procedures for
25 returning all equipment and supplies and to settle their account. Upon resignation of appointment
26 as a Wildlife Service Agent, the former agent must return all consigned equipment and supplies to
27 the Commission and settle the agent financial account within 10 days of the resignation letter's date.

28 (b) A Wildlife Service Agent may cancel the Agreement by sending written notice to the Commission. Consigned
29 equipment and supplies shall be returned to the Commission and the financial account shall be settled within 10
30 business days of the date of resignation letter receipt.

31 (b) ~~Suspension.~~ The Commission shall temporarily suspend any Wildlife Service Agent appointment for:

32 (1) ~~Failure to deposit sufficient funds one or two times to cover the electronic transfer of funds each~~
33 week.

34 (2) ~~Failure to operate as a public convenience as specified in the Agreement one or two times.~~

35 (3) ~~Failure to provide proper and correct information one or two times about wildlife transactions and~~
36 related issues to customers as documented by customer complaints or agency inspections.

1 ~~(4) — Failure to submit or return all required documentation for transactions as outlined in the Agreement~~
2 ~~one or two times.~~

3 Temporary suspension is effective immediately upon communication of that fact to the Wildlife Service Agent. Such
4 communication shall state the grounds for temporary suspension and that the agent may request a hearing within 5
5 working days if he contests the grounds for temporary suspension. If the initial notification is not in writing, it shall
6 be followed by written notice of temporary suspension containing the same information. If the Commission
7 determines it is necessary to protect State property, an employee of the Commission may enter the premises and
8 impound all property and supplies issued or entitled to by the Commission such as equipment, moneys, record books,
9 reports, license forms, other documents and materials pertinent to the agent being suspended. The Commission must
10 make the impounded property, or copies of it, available to the agent during the period of temporary suspension. If a
11 hearing is requested, it shall be before the Executive Director or his designee and shall be held at a location specified
12 by the Executive Director.

13 Temporary suspension remains in effect until the hearing. A temporary suspension may not last longer than 30 days,
14 but additional suspensions may be imposed if, at the end of the suspension period, the agent has not corrected the
15 deficiency or deficiencies that resulted in the suspension. A Wildlife Service Agent may at any time after a hearing
16 appeal his suspension to the Commission. A new suspension shall comply with the provisions of this Paragraph.

17 ~~(c) Termination. The Commission shall terminate any Wildlife Service Agent appointment for any of the deficiencies~~
18 ~~listed below unless it determines that such deficiency may be corrected, is not likely to be repeated during the term of~~
19 ~~the current agreement, and not maintaining the Agent Agreement will result in insufficient Commission services to~~
20 ~~the public in the area served by the Agent. Deficiencies that may result in termination include:~~

21 ~~(1) — Failure to comply with the terms and conditions as outlined in the wildlife service agreement.~~

22 ~~(2) — Failure to deposit sufficient funds three or more times to cover the electronic transfer of funds each~~
23 ~~week.~~

24 ~~(3) — Failure to meet the minimum transaction sales requirement of one thousand dollars (\$1,000)~~
25 ~~annually.~~

26 ~~(4) — Failure to operate as a public convenience as specified in the Agreement three or more times.~~

27 ~~(5) — Failure to provide proper and correct information three or more times about wildlife transactions~~
28 ~~and related issues to customers as documented by customer complaints or agency inspections.~~

29 ~~(6) — Failure to submit or return all required documentation for transactions as outlined in the Agreement~~
30 ~~three or more times.~~

31 ~~Notice of termination of the appointment may be sent to the Wildlife Service Agent in lieu of or in addition to~~
32 ~~temporary suspension. The notice must state the grounds for termination of the appointment and the agent's right to~~
33 ~~a hearing if he has not previously been afforded one. If the appointment is to be terminated, the notice must state the~~
34 ~~effective date and hour of termination. If the agent has not been previously afforded a hearing, the agent is entitled to~~
35 ~~a hearing within 14 days before the Executive Director or his designee to be held at a location specified by the~~
36 ~~Executive Director. If the Executive Director upholds the decision to terminate the appointment, an agent may appeal~~

1 ~~his termination to the Commission. Pending the hearing and any appeal from it, the termination is held in abeyance,~~
2 ~~but no transaction may be made once the agent's termination effective date and time have passed.~~

3 ~~Upon termination of appointment as a Wildlife Service Agent, the former agent must return all consigned equipment~~
4 ~~and supplies to the Commission and settle the agent financial account within 10 days of the date of receiving written~~
5 ~~notice from the Commission. Employees of the Commission may conduct inspections and audits when terminating an~~
6 ~~agent.~~

7 ~~The Executive Director or his designee holding any hearing under this Paragraph must keep a written record of~~
8 ~~evidence considered and findings made. Upon appeal to the Commission, the Commission Chairman or another~~
9 ~~presiding officer must cause such a written record of evidence and findings to be made and kept.~~

10 ~~No person denied appointment or whose appointment was terminated under this Paragraph may apply again for an~~
11 ~~appointment as a Wildlife Service Agent for two years. Upon application, the Commission may not grant the~~
12 ~~appointment as a Wildlife Service Agent unless the applicant produces evidence, convincing to the Commission, that~~
13 ~~he meets all standards and qualifications and will comply with all requirements of statutes and rules pertaining to~~
14 ~~Wildlife Service Agents.~~

15 ~~(d)(c) Use of customer identifying information. Customer identifying information for customers of the Commission~~
16 ~~is protected by G.S. 143-254.5. A Wildlife Service Agents Agent shall not use or disclose any customer identifying~~
17 ~~information specified in G.S. 143-254.5 to any third party without written authorization of from the Commission.~~
18 ~~Wildlife Service Agents shall not use such customer identifying information for any purpose other than the processing~~
19 ~~of Commission transactions requested by the customer. Failure to abide by provisions in this Paragraph is grounds for~~
20 ~~termination of the agency.~~

21
22 *History Note: Authority G.S. 113-134; 113-270.1;*
23 *Eff. June 1, 2007;*
24 *Amended Eff. September 1, 2011.*
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1 **15A NCAC 10G .0406 APPOINTMENT TERMINATION**

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3 (a) The Commission may audit Wildlife Service Agent transactions. Agents shall comply with Commission requests
4 for records and information within 10 business days of the request.

5 (b) The Commission may suspend or terminate Wildlife Service Agent appointment for violation of provisions of G.S.
6 113-270.1, the rules of this Section, or the Wildlife Service Agent Agreement. The determination of whether to
7 suspend or revoke appointment shall be based on the severity and frequency of the violation, and may include failure
8 to:

9 (1) operate as a public convenience as specified in the Agreement;

10 (2) provide correct information about wildlife transactions to customers as documented by customer
11 complaints or agency inspections;

12 (3) submit or return required documentation for transactions;

13 (4) comply with the terms and conditions specified in Rule .0405 of this Section;

14 (5) deposit sufficient funds to cover electronic transfers; and

15 (6) meet the five thousand dollar (\$5,000) annual Agent transaction requirement.

16 (c) Upon termination of appointment, a Wildlife Service Agent shall return consigned equipment and supplies to the
17 Commission and settle the agent financial account within 10 business days of receipt of written of termination notice
18 from the Commission.

19 (d) Individuals denied appointment or whose appointment is terminated shall not reapply for appointment for two
20 years.

21
22 *History Note: Authority G.S. 113-134; 113-270.1;*
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EXHIBIT K-2

July 24, 2025



Fiscal Note for Wildlife Service Agents – Periodic Rules Review

Rule Amendments: 15A NCAC 10G .0401 PURPOSE OF WILDLIFE SERVICE AGENTS
15A NCAC 10G .0402 APPOINTMENT OF WILDLIFE SERVICE AGENTS
15A NCAC 10G .0403 WILDLIFE SERVICE AGENT AGREEMENT
15A NCAC 10G .0405 WILDLIFE SERVICE AGENT TERMS AND CONDITIONS
15A NCAC 10G .0406 APPOINTMENT TERMINATION

Agency Contact: William Casola
Policy Analyst
NC Wildlife Resources Commission
1751 Varsity Drive
Raleigh, NC 27606
(919) 707-0125
william.casola@ncwildlife.gov

Fiscal Impact: State Government: Minimal
Local Government: No
Private Impact: Minimal
Substantial Economic Impact: No

Authority: G.S. 113-134, 113-270.1

Background

The proposed amendments and repeals to Rules within 15A NCAC 10G .0400 provide minor updates to the framework for Wildlife Service Agents. Highlights include updates to language throughout for improved clarity and conciseness, updates to wildlife service agent terms and conditions, and updates to the information and conditions required for application.

Wildlife Service Agents are brick and mortar businesses who are authorized to sell WRC licenses, including hunting licenses, fishing licenses, permits, applications, and vessel registrations. Wildlife Service Agents provide a convenient service to North Carolinians and visitors, allowing people to purchase licenses in person at locations other than WRC headquarters. Agents are required to stay informed of the laws and rules governing requirements for licenses and vessel transactions and stay abreast of changes in these requirements so they can provide accurate and reliable information for people looking to purchase licenses.

Currently, there are approximately 800 Wildlife Service Agents across North Carolina. The benefits of being a Wildlife Service Agent in North Carolina include:

- The opportunity to promote wildlife conservation.
- Being part of a network authorized by the North Carolina Wildlife Resources Commission, which can enhance the credibility and visibility of a business.
- Potential to increase customer traffic and sales by offering hunting, fishing, and vessel licenses, which are in demand among outdoor enthusiasts.
- Access to resources provided by the Commission to stay informed about regulations.
- Generating additional revenue for their business through transactions fees. Transaction fees are collected and kept by the Wildlife Service Agent. Fee amounts are determined in G.S. 113-270.1(b) and G.S. 75A-5.2(c).

Proposed Rule Amendments and Impacts

15A NCAC 10G .0401 PURPOSE OF WILDLIFE SERVICE AGENTS

- This rule is proposed for repeal. Wildlife Service Agent definition moved to .0402.

The proposed repeal is anticipated to have no impact on local or State government.

15A NCAC 10G .0402 APPOINTMENT OF WILDLIFE SERVICE AGENTS

- Information required from the applicant is more clearly defined and includes business name, physical address, email, county, phone number, agent type, description of services, operational dates and hours; and business owner name, address, date of birth, driver's license number, and length of business ownership.

- Applicants must not have convictions for financial crimes within the five years prior to application.
- Agents must have a computer, printer and internet access at their business location, and provide a voided check or withdrawal slip for the bank account to be used to transfer funds to the Commission.

The proposed amendments may reduce opportunities for individuals to become Agents due to their criminal history. Wildlife Service Agents are responsible for selling licenses and permits, collecting money, and transferring these funds to the state. This change is intended to help ensure the trustworthiness of individuals handling public funds and sensitive information. A recent financial crime conviction may indicate a risk of mismanagement or misuse of funds and/or personal information, which could undermine public confidence in the licensing process and the agency as a whole. By restricting individuals with recent financial crime convictions, the Commission aims to protect both state resources and the public interest by appointing agents who demonstrate financial responsibility and ethical conduct. This change is being made out of an abundance of caution given the general rise in financial crimes and scams, and not in response to any known incidents. The agency already conducts background checks on Wildlife Service Agent applicants; as such, this change is not expected to impact current Agents.

The requirement for a computer, printer and internet access is being made to align with current practices and may result in additional costs to businesses that are becoming Wildlife Service Agents. It should be noted that this change will not affect current agents, as they are already required in practice to have this equipment and internet access, even though this requirement is not yet formally reflected in the rule. This change simply aligns the rule with the existing standard operating procedures. This requirement could dissuade some business owners from applying to be a Wildlife Service Agent. However, this change is unlikely to impact many business owners since having computer equipment and internet access has become standard for most businesses. It is reasonable to assume that a business owner would only pursue becoming a Wildlife Service Agent if they determined that the associated costs are justified by the potential benefits.

The proposed amendments are anticipated to have no impact on State or local government.

15A NCAC 10G .0403 WILDLIFE SERVICE AGENT AGREEMENT

- This rule is proposed for repeal. Information on the Wildlife Service Agent Agreement is moved to relevant parts of .0402 and .0405.

The proposed repeal is anticipated to have no impact on local or State government.

15A NCAC 10G .0405 WILDLIFE SERVICE AGENT TERMS AND CONDITIONS

- Agents must maintain \$5,000 in agent transaction sales at the business location annually. Currently, the requirement is \$1,000 in annual transactions.
- Agents may cancel their Agreement by sending written notice to the Commission. Consigned equipment and supplies shall be returned to the Commission and the financial account shall be settled within 10 business days of the date of resignation letter receipt.
- Termination and suspension rules are moved to .0406.

The current transaction threshold has not been updated in almost 25 years. In that same timeframe, there have been three increases in license prices, and two increases in vessel registration prices. The number of transactions needed to meet the proposed threshold is approximately the same as it was when the current transaction threshold was adopted. Additionally, requiring a sales transaction threshold for Agents helps ensure that Wildlife Service Agents are effective, and positioned to best serve the needs of North Carolina's residents. Agents with higher sales volumes are likely to be in locations with greater public demand, improving access and convenience for license buyers across the state. Having a transaction minimum offers administrative efficiencies for the Commission. By setting a sales minimum, the Commission can focus its support, training, and oversight resources on agents who are contributing substantially to public service.

The proposed increase in the required minimum amount of agent transaction sales may increase the likelihood that some Agents' agreements will be terminated. While transaction values fluctuate year to year, we anticipate the proposed increase to result in the termination of agreements with fewer than 15 agents. Upon termination of an agreement, Agents would be required to return consigned equipment and supplies at their expense within 10 business days. Typically, equipment and supplies are returned in person rather than by mail, which may incur travel-related expenses for the business.

The Commission does not anticipate a change in revenue because of the termination of agreements. Customers who have historically purchased licenses with these agents are expected to either switch to other Wildlife Service Agents or purchase their license and/or vessel registration online.

The proposed amendments regarding the cancellation of Agreements and the return of equipment and supplies are intended to formally reflect existing procedures and will not lead to any changes in how these matters are currently handled or the understanding that those agents have about how this process works.

The proposed amendments are anticipated to have no impact on local government.

15A NCAC 10G .0406 APPOINTMENT TERMINATION

- Termination and suspension rules are moved from .0405 and edited for clarity and conciseness.

These minor improvements to the clarity and conciseness of the rules could lead to improved compliance and greater administrative efficiency for the Commission. Clearer rules make it easier for Agents to understand and follow requirements, while also streamlining oversight and enforcement processes for the Commission.

The proposed rule is anticipated to have no impact on local government.

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1 **15A NCAC 10G .0402 APPOINTMENT OF WILDLIFE SERVICE AGENTS**

2 (a) Wildlife Service Agents are official license and vessel agents of the Commission who are authorized to issue
3 hunting, fishing and other licenses, permits, applications, vessel registrations, and items pursuant to G.S. 113-270.1,
4 the Wildlife Service Agent Agreement and the Rules of this Section.

5 ~~(b) Any~~ An individual authorized to act on behalf of a business operating from a fixed location in North Carolina may
6 apply to the Commission for appointment as a Wildlife Service Agent by completing an application provided by the
7 Commission. Agent by completing the Wildlife Service Agent application available at ncwildlife.gov. Information
8 required from the applicant shall include:

9 (1) business name, physical address, email, county, phone number, agent type, description of services,
10 and operational dates and hours; and

11 (2) business owner name, address, date of birth, driver's license number, and length of business
12 ownership.

13 ~~(b) Application. Applications for Wildlife Service Agent appointment shall contain the business name, address,~~
14 ~~county agent contact information, bank account information, business hours, and any other information requested by~~
15 ~~the Commission that is reasonably necessary to determine the fitness of the applicant to serve as a Wildlife Service~~
16 ~~Agent.~~

17 ~~(d)(c) Qualifications and Requirements. Applicants~~ Business owners shall meet the following requirements to
18 qualifications in order to be appointed qualify as a Wildlife Service Agent. Agent unless otherwise approved by the
19 Executive Director or his or her designee to maintain adequate service to the public in a geographic area:

20 (1) ~~Businesses shall operate from a fixed location in North Carolina and shall sell a minimum of one~~
21 ~~thousand dollars (\$1,000) in transaction sales annually. This minimum requirement may be waived~~
22 ~~by the Executive Director if he finds the applicant's services necessary to maintain adequate agent~~
23 ~~services to the public in that geographic area.~~

24 ~~(2)(1)~~ An applicant shall have a minimum of one year's experience in operating the business for which the
25 application is made or other equivalent business experience or training. experience; In those cases
26 ~~where other equivalent business experience or training is accepted in lieu of the minimum one year's~~
27 ~~experience, the applicant shall submit financial statements of the business so that the solvency of~~
28 ~~the business can be judged.~~

29 ~~(3)(2)~~ Applicants shall provide a bank account for the purpose of transferring net proceeds from all
30 Wildlife Service Agent transactions to the Commission's account in the State Treasury every week
31 ~~via an electronic transfer of funds. Commission; and~~

32 (3) no criminal convictions for financial crimes within the five years prior to application.

33 ~~(d) The qualifications as provided by Paragraphs (b) and (c) of this Rule shall be met prior to appointment. Failure~~
34 ~~to comply with the qualifications and requirements as provided by Paragraph (c) of this Rule, throughout the term of~~
35 ~~the appointment, may result in termination of the agent appointment. All agents are subject to monitoring of their~~
36 ~~performance by the Customer Support Section of the Commission.~~

37 ~~(d) Upon approval of the application by the Commission, Wildlife Service Agents shall:~~

- (1) have a computer, printer and internet access at their business location;
- (2) provide a voided check or withdrawal slip for the bank account to be used to transfer funds to the Commission;
- (3) complete online training provided by the Commission or a contracted third-party vendor; and
- (4) sign and submit the Wildlife Service Agent Agreement.

(e) Wildlife Service Agent Agreements and appointments are non-transferable and valid only for the owner and business named on the executed agreement.

*History Note: Authority G.S. 113-134; 113-270.1;
Eff. April 1, 1997;
Amended Eff. September 1, 2011; May 1, 2007; July 1, 1998.*

1 **15A NCAC 10G .0403 WILDLIFE SERVICE AGENT AGREEMENT**

2 ~~Each Wildlife Service Agent shall execute an Agreement with the Commission and shall comply with all rules and~~
3 ~~statutes related to the sale of licenses and the registration of vessels. All terms and conditions shall be set forth in the~~
4 ~~Agreement at the time of execution. The business shall operate as a public convenience and shall serve the public in~~
5 ~~an efficient and helpful manner with all reasonable requests for assistance related to the duties of a Wildlife Service~~
6 ~~Agent whenever open for business. The agent shall be informed and knowledgeable of the laws and rules governing~~
7 ~~requirements for licenses and vessel transactions and stay abreast of changes in these requirements so that the agent~~
8 ~~can provide accurate and reliable information and instruction to persons who seek assistance in these matters. The~~
9 ~~appointment as a Wildlife Service Agent and the Agreement under which the appointment is made are singularly valid~~
10 ~~for the person named thereon who is authorized to act on behalf of the business and applies only to the business and~~
11 ~~location named and is non transferable.~~

12
13 *History Note: Authority G.S. 113-134; 113-270.1;*

14 *Eff. April 1, 1997;*

15 *Amended Eff. September 1, 2011; June 1, 2007; July 1, 1998.*

1 **15A NCAC 10G .0405 WILDLIFE SERVICE AGENT TERMS AND CONDITIONS**

2 (a) A Wildlife Service Agent's Agent shall comply with the following appointment and service is subject to the
3 following terms and conditions:

4 ~~(1) Public Service. Wildlife Service Agents shall serve all persons~~ individuals seeking assistance with
5 matters related to the duties of a Wildlife Service Agent. Agent during regular business hours.

6 ~~(2)(1) Training. New Wildlife Service Agents shall attend a training session at a location specified by the~~
7 ~~Commission prior to activation of agent status and prior to receiving any equipment or supplies from~~
8 ~~the Commission. Transfer funds and records to the Commission as specified in the Wildlife Service~~
9 ~~Agent Agreement;~~

10 ~~(3) Activation of Agent Status. Upon completion of training and receipt of equipment and supplies,~~
11 ~~Wildlife Service Agents shall have their equipment set up and ready for operation 10 days after the~~
12 ~~date they receive the equipment and supplies.~~

13 ~~(4)(2) Application. Each Wildlife Service Agent shall notify the Commission of any changes to the~~
14 ~~original application for appointment such as business name, address, agent contact information,~~
15 ~~bank account information, business hours and other information related to agent appointment, within~~
16 ~~five business days of it's the change.~~

17 ~~(5)(3) Business Change of Ownership, Location, or Management. If the ownership of the business,~~
18 ~~location or management changes, then the Agreement becomes null and void. Written provide~~
19 ~~written notice of any a change in business ownership, location, or management shall be sent to the~~
20 ~~Commission at least 10 business days prior to the change along with an application for a new~~
21 ~~Wildlife Service Agreement, if desired, pursuant to the rules in this Section. desired.~~

22 ~~(6)(4) Maintain five thousand dollars (\$5,000) in Agent transaction sales at the business location annually.~~
23 ~~Cancellation. A Wildlife Service Agent may cancel the Agreement at any time by sending written~~
24 ~~notice to the Commission. The Commission shall instruct resigning agents on the procedures for~~
25 ~~returning all equipment and supplies and to settle their account. Upon resignation of appointment~~
26 ~~as a Wildlife Service Agent, the former agent must return all consigned equipment and supplies to~~
27 ~~the Commission and settle the agent financial account within 10 days of the resignation letter's date.~~

28 (b) A Wildlife Service Agent may cancel the Agreement by sending written notice to the Commission. Consigned
29 equipment and supplies shall be returned to the Commission and the financial account shall be settled within 10
30 business days of the date of resignation letter receipt.

31 ~~(b) Suspension. The Commission shall temporarily suspend any Wildlife Service Agent appointment for:~~

32 ~~(1) Failure to deposit sufficient funds one or two times to cover the electronic transfer of funds each~~
33 ~~week.~~

34 ~~(2) Failure to operate as a public convenience as specified in the Agreement one or two times.~~

35 ~~(3) Failure to provide proper and correct information one or two times about wildlife transactions and~~
36 ~~related issues to customers as documented by customer complaints or agency inspections.~~

1 ~~(4) — Failure to submit or return all required documentation for transactions as outlined in the Agreement~~
2 ~~one or two times.~~

3 Temporary suspension is effective immediately upon communication of that fact to the Wildlife Service Agent. Such
4 communication shall state the grounds for temporary suspension and that the agent may request a hearing within 5
5 working days if he contests the grounds for temporary suspension. If the initial notification is not in writing, it shall
6 be followed by written notice of temporary suspension containing the same information. If the Commission
7 determines it is necessary to protect State property, an employee of the Commission may enter the premises and
8 impound all property and supplies issued or entitled to by the Commission such as equipment, moneys, record books,
9 reports, license forms, other documents and materials pertinent to the agent being suspended. The Commission must
10 make the impounded property, or copies of it, available to the agent during the period of temporary suspension. If a
11 hearing is requested, it shall be before the Executive Director or his designee and shall be held at a location specified
12 by the Executive Director.

13 Temporary suspension remains in effect until the hearing. A temporary suspension may not last longer than 30 days,
14 but additional suspensions may be imposed if, at the end of the suspension period, the agent has not corrected the
15 deficiency or deficiencies that resulted in the suspension. A Wildlife Service Agent may at any time after a hearing
16 appeal his suspension to the Commission. A new suspension shall comply with the provisions of this Paragraph.

17 ~~(c) Termination. The Commission shall terminate any Wildlife Service Agent appointment for any of the deficiencies~~
18 ~~listed below unless it determines that such deficiency may be corrected, is not likely to be repeated during the term of~~
19 ~~the current agreement, and not maintaining the Agent Agreement will result in insufficient Commission services to~~
20 ~~the public in the area served by the Agent. Deficiencies that may result in termination include:~~

21 ~~(1) — Failure to comply with the terms and conditions as outlined in the wildlife service agreement.~~

22 ~~(2) — Failure to deposit sufficient funds three or more times to cover the electronic transfer of funds each~~
23 ~~week.~~

24 ~~(3) — Failure to meet the minimum transaction sales requirement of one thousand dollars (\$1,000)~~
25 ~~annually.~~

26 ~~(4) — Failure to operate as a public convenience as specified in the Agreement three or more times.~~

27 ~~(5) — Failure to provide proper and correct information three or more times about wildlife transactions~~
28 ~~and related issues to customers as documented by customer complaints or agency inspections.~~

29 ~~(6) — Failure to submit or return all required documentation for transactions as outlined in the Agreement~~
30 ~~three or more times.~~

31 Notice of termination of the appointment may be sent to the Wildlife Service Agent in lieu of or in addition to
32 temporary suspension. The notice must state the grounds for termination of the appointment and the agent's right to
33 a hearing if he has not previously been afforded one. If the appointment is to be terminated, the notice must state the
34 effective date and hour of termination. If the agent has not been previously afforded a hearing, the agent is entitled to
35 a hearing within 14 days before the Executive Director or his designee to be held at a location specified by the
36 Executive Director. If the Executive Director upholds the decision to terminate the appointment, an agent may appeal

1 his termination to the Commission. Pending the hearing and any appeal from it, the termination is held in abeyance,
2 but no transaction may be made once the agent's termination effective date and time have passed.

3 Upon termination of appointment as a Wildlife Service Agent, the former agent must return all consigned equipment
4 and supplies to the Commission and settle the agent financial account within 10 days of the date of receiving written
5 notice from the Commission. Employees of the Commission may conduct inspections and audits when terminating an
6 agent.

7 The Executive Director or his designee holding any hearing under this Paragraph must keep a written record of
8 evidence considered and findings made. Upon appeal to the Commission, the Commission Chairman or another
9 presiding officer must cause such a written record of evidence and findings to be made and kept.

10 No person denied appointment or whose appointment was terminated under this Paragraph may apply again for an
11 appointment as a Wildlife Service Agent for two years. Upon application, the Commission may not grant the
12 appointment as a Wildlife Service Agent unless the applicant produces evidence, convincing to the Commission, that
13 he meets all standards and qualifications and will comply with all requirements of statutes and rules pertaining to
14 Wildlife Service Agents.

15 ~~(d)(c)~~ Use of customer identifying information. Customer identifying information for customers of the Commission
16 is protected by G.S. 143-254.5. A Wildlife Service Agents Agent shall not use or disclose any customer identifying
17 information specified in G.S. 143-254.5 to any third party without written authorization ~~of from~~ the Commission.
18 Wildlife Service Agents shall not use such customer identifying information for any purpose other than the processing
19 of Commission transactions requested by the customer. Failure to abide by provisions in this Paragraph is grounds for
20 termination of the agency.

21
22 *History Note: Authority G.S. 113-134; 113-270.1;*
23 *Eff. June 1, 2007;*
24 *Amended Eff. September 1, 2011.*
25
26

1 **15A NCAC 10G .0406 APPOINTMENT TERMINATION**

2
3 (a) The Commission may audit Wildlife Service Agent transactions. Agents shall comply with Commission requests
4 for records and information within 10 business days of the request.

5 (b) The Commission may suspend or terminate Wildlife Service Agent appointment for violation of provisions of G.S.
6 113-270.1, the rules of this Section, or the Wildlife Service Agent Agreement. The determination of whether to
7 suspend or revoke appointment shall be based on the severity and frequency of the violation, and may include failure
8 to:

9 (1) operate as a public convenience as specified in the Agreement;

10 (2) provide correct information about wildlife transactions to customers as documented by customer
11 complaints or agency inspections;

12 (3) submit or return required documentation for transactions;

13 (4) comply with the terms and conditions specified in Rule .0405 of this Section;

14 (5) deposit sufficient funds to cover electronic transfers; and

15 (6) meet the five thousand dollar (\$5,000) annual Agent transaction requirement.

16 (c) Upon termination of appointment, a Wildlife Service Agent shall return consigned equipment and supplies to the
17 Commission and settle the agent financial account within 10 business days of receipt of written of termination notice
18 from the Commission.

19 (d) Individuals denied appointment or whose appointment is terminated shall not reapply for appointment for two
20 years.

21
22 *History Note: Authority G.S. 113-134; 113-270.1;*
23
24
25

EASTERN BLACK RAIL
(*Laterallus jamaicensis jamaicensis*)



EASTERN BLACK RAIL

Conservation Plan for North Carolina

May 21, 2025

EXHIBIT L



HABITAT AND SURVEY IMAGES

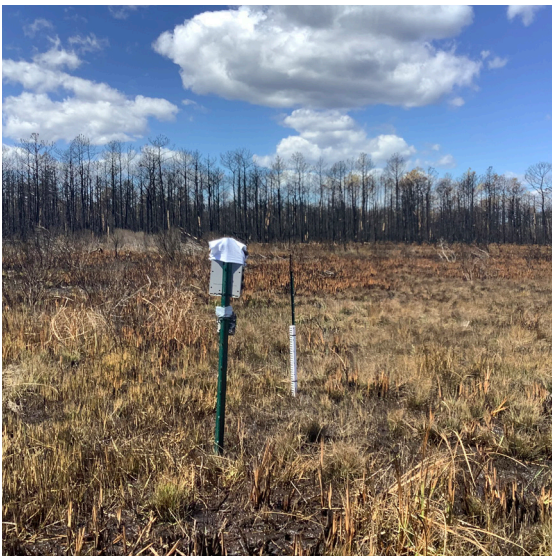


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Executive Summary

The goal of this plan is to provide steps that can increase the abundance and distribution of the Eastern Black Rail (*Laterallus jamaicensis jamaicensis*), a federally and state-listed threatened species, in North Carolina. Actions to conserve, restore, create, and manage Black Rail habitat will benefit many other species that also depend on coastal and freshwater marshes. This plan draws heavily from the Atlantic Coast Joint Venture’s (ACJV) Black Rail Conservation Plan (ACJV 2020), the Species Status Assessment Report for the Eastern Black Rail (USFWS 2019), and the Eastern Black Rail Management Guidance document (Watts 2022). Extensive work completed by the Black Rail Conservation Program of the South Carolina Department of Natural Resources also contributes to this plan. The North Carolina Wildlife Resources Commission (NCWRC) will lead and implement management actions on NCWRC managed lands in collaboration with partners and will support conservation of the Black Rail across the state.

The Eastern Black Rail (hereafter, Black Rail) is one of four subspecies of *Laterallus jamaicensis*. Black Rails are the smallest rails in North America, measuring only 10-15 cm (3.94 to 5.90 inches) in length. These secretive “feathered mice” walk and run under dense herbaceous marsh vegetation in preference to flying. As scant research exists about Black Rails, much information on the species comes from field observations. Historically, their range extended from east of the Rocky Mountains to Massachusetts and along the Atlantic and Gulf Coasts.

The Black Rail is a marsh dependent bird that breeds in freshwater marsh and high elevation brackish and saltwater marshes dominated by water depths less than 3 cm (1.18 inch), with dense, grassy vegetative cover and few trees or shrubs. Historically, occasional fires maintained their habitat’s dense, grassy structure. Black Rails appear to construct nests close to the ground in regions with low-growing marsh vegetation, such as North Carolina’s coastal marshes. The Center for Conservation Biology comprehensively assessed Black Rail status using literature reviews and field survey results from the last 150 years (Watts 2016) and determined 90% of detections were in coastal marshes and 10% of detections were in inland freshwater marshes.

The species’ range contraction and population decline have been significant. Since 1990, the northern extent of the range has contracted 450 km (about 280 miles) from New England where they are effectively extirpated, south to New Jersey. Population levels are categorized as effectively zero in the Appalachian Plateau and Central Lowlands North American Physiographic Provinces. The population in Maryland has declined by 90%. Surveys in New Jersey, Delaware, Maryland, and North Carolina in the late 1980s and early 1990s, and repeated in the mid-2010s, showed a 64% decline in occupancy and an 89% decline in birds detected, equating to a 9% annual rate of decline (USFWS 2019). During surveys in North Carolina in the 1970s, more than 80 Black Rails were heard calling in one night at Cedar Island National Wildlife Refuge (NWR, [Watts 2016]), whereas fewer than 10 were heard in the same locations during surveys between 2014 and 2017 (Wilson et al. 2015, Smith et al. 2018). As a result of these findings, Black Rails are listed as threatened under the U.S. Endangered Species Act and in North Carolina (NCAC 10I .0104).

The Species Status Assessment population projection model predicts that the Southeast Coastal Plain Physiographic Province, which had robust available data, and Mid-Atlantic Coastal Plain regions, both of which occur in North Carolina, were projected to have 35 to 50 years to extinction from present (USFWS 2019). Extinction, as predicted by the model, was driven primarily by habitat loss.

Historic declines in Black Rail populations were likely caused by human impacts to marshes from filling and development, ditching and draining for mosquito control, and alterations to hydrology for agriculture, transportation, and flood control (Watts 2016). Causes of the recent dramatic declines in the Black Rail population are attributed, at least in part, to marsh loss from global sea level rise, which has increased about 20-23 cm (7.87 - 9.06 inches) since 1880, with the rate of increase doubling (about an 8-cm rise [3.15 inches]) from 1993 to 2017 (Sweet et al. 2017). To offset coastal marsh loss, the ACJV’s Black Rail Conservation Plan (ACJV 2020) focuses on restoring or creating moist-soil, herbaceous marsh habitat in non-tidal areas in addition to conserving high elevation tidal coastal marsh. Since 2016, the ACJV named the Black Rail as one of three focal species and coordinates Black Rail conservation partners on the Atlantic Coast to promote conservation actions for this species. Population losses due to sea level rise will be unsustainable if Black Rail habitat is not created and restored in non-tidal areas (Watts 2022). Significant conservation actions are needed to recover Black Rail populations.

In North Carolina, needed conservation actions mirror those outlined in the ACJV Plan (2020) and include the following:

- Identify areas and initiate projects where non-tidal Black Rail habitat can be created.
- Employ and promote appropriate prescribed fire Best Management Practices (BMPs) to maintain and increase the amount of Black Rail habitat.
- Develop and implement BMPs to facilitate coastal marsh migration with partners.
- Employ land conservation programs including land acquisition, NCWRC’s Wildlife Conservation Lands Program, and other incentives to safeguard current and potential Black Rail habitat.
- Assess the potential of existing impoundments to provide Black Rail habitat.
- Offer landowner assurances programs such as Safe Harbor agreements.
- Work with the North Carolina Department of Agriculture and Consumer Services and other partners to develop, employ, and promote beneficial agricultural practices.



Biological Information

LISTING STATUS

State

- Threatened¹
- Species of Greatest Conservation Need²
- S1, Critically Imperiled³

Federal / Global

- Federally listed as Threatened
- IUCN Endangered⁴
- G3T1, Critically Imperiled⁵



Description and Taxonomic Classification

The Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) was described by Browne and Edwards from individuals discovered in Jamaica in 1760 and formally classified by Gmelin in 1789 (*Rallus jamaicensis*; Allen 1900, USFWS 2019). Audubon (1838) described the Eastern Black Rail found in North America from live specimens obtained near Philadelphia, Pennsylvania. The Black Rail is in the family Rallidae and order Gruiformes (American Ornithologists’ Union 1998), which contains 34 genera and 134 species. The genus *Laterallus* includes nine species, and the Eastern Black Rail is one of four recognized subspecies. The Eastern Black Rail (hereafter, Black Rail) and California Black Rail (*L. j. coturniculus*) occur in North America, while the other two subspecies of *L. jamaicensis*, *L. j. murivagans* and *L. j. salinasi*, occur in South America in Peru, Chile, and Argentina (Taylor and van Perlo 1998, USFWS 2019).

The Black Rail is the smallest of the rails in North America with a total length of 10–15 cm (3.94-5.90 inches) and wingspan of 22–28 cm (8.66-11.02 inches). The average weight is approximately 35 g (1.23 oz) and tarsal length is 2.24 cm (0.88 inches) in females, and 2.29 cm (0.90 inch) in males (Eddleman et al. 2020). Overall, males and females are similar in size and appearance. Adults are pale to blackish gray, with a small black bill and bright red eyes. The chin and throat are lighter gray; nape and upper back are chestnut-brown or rufous; and back, remiges, and upper rectrices are dark gray to black with small white spots and sometimes a light amount of chestnut-brown or rufous coloration (Taylor and Van Perlo 1998). Males are typically darker than females, with females having pale gray to white throats (Davidson 1992, Eddleman et al. 2020). Tarsi and toes are brownish gray, or gray to blackish brown (Meanley and Stewart 1960).

¹ North Carolina Administrative Code. 15A NCAC 101 .0104. (a) 2. A. 2023.

² NC Wildlife Resources Commission, NC Wildlife Action Plan, 2015

³ NC Natural Heritage Program, List of Rare Animal Species of North Carolina, 2024

⁴ BirdLife International. 2021. *Laterallus jamaicensis*. The IUCN Red List of Threatened Species 2021: e.T22692353A178666347. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22692353A178666347.en>. Accessed on 28 February 2024.

⁵ NatureServe. 2025. NatureServe Network Biodiversity Location Data accessed through NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available <https://explorer.natureserve.org/>. (Accessed: May 13, 2025).

Juveniles look like adults but have duller plumage and fewer and smaller white spots and flank markings (Bent 1926, Eddleman et al. 2020). Juveniles’ eyes are darker and become red at three months (Flores 1991, Eddleman et al. 2020).

Chicks have black down with an “oily greenish sheen” and eyes are dark brownish-olive. The chick’s bill is reddish-brown with a small (2-5 mm wide [0.08-0.20 inches wide]) pinkish spot around the nostril (Eddleman et al. 2020).

Black Rail eggs are smooth and buff to pinkish-white, with evenly distributed, fine, brownish or drab spots (Bent 1926, USFWS 2019). Mean dimensions of 157 eggs were 26.0 mm (1.02 inches) in length, ranging from 24.4-28.1 mm (0.96-1.10 inches), by 19.8 mm (0.78 inches) in width ranging from 18.9-20.4 mm (0.74-0.80 inches, [Eddleman et al. 2020]).

Life History

Although we know little about the life history of these diminutive and highly secretive birds, including the age of sexual maturity, this plan summarizes known information from several research studies. Mate selection, breeding, and nesting occur from March through August. Nesting begins in May and continues through mid-August, with the peak in mid-June (Table 1, USFWS 2019, Watts 2020). Egg laying has been documented as early as 19 March in Coastal Texas (Haverland et al. 2021) and mid-April in South Carolina (Hand et al. 2021). Watts (2020) obtained 170 historic and current Black Rail breeding records from 1836 to 2016, which showed that eggs were found between 3 May and 15 August, with 85% of clutches discovered in June and July. He suggests that egg dates do not differ regionally along the Atlantic Coast, though there is uncertainty in breeding phenology in the Everglades Ecosystem of South Florida.

Females lay one egg per day during the laying period. Average clutch size from 49 clutches was 7.6 ± 1.3 eggs, with a range of 4 to 13 eggs. Both the male and female incubate eggs and defend the nest. Adults incubate the clutch for 19 to 20 days in Florida (Legare and Eddleman 2001), and in South Carolina, adults incubated clutches for 26 days (Hand et al. 2021). Double and triple brooding has been recorded in Florida and South Carolina (Flores and Eddleman 1993, Hand et al. 2021). Black Rails can re-nest after nest loss (Legare and Edleman 2001).

Few studies exist of Black Rail population parameters due to their secretive nature, difficulty in accessing marsh nesting habitat, and low numbers of breeding pairs. A study of 17 nests in Florida by Legare and Eddleman (2001) estimated a 43% nest success and 0.968 daily nest survival rate. Flooding after significant rainfall events caused four nest failures and two failures were from predation. Biologists do not know how long Black Rails live and no banding return data exist for the species to date.

Chicks hatch synchronously and remain in the nest for about 24 hours (Davidson 1992a). They are semi-precocial, remain in the nesting territory, and are fed by their parents for the first few days (Taylor and van Perlo 1998, Hand et al. 2021). Hatch dates from 33 nests in South Carolina ranged from 13 May to 20 August (Hand et al. 2021). Adults were observed with 23 different broods of chicks from 11 May to 22 August, with half of the observations occurring before 26 June and the remaining half to 22 August (Watts 2020). Only one study (Hand et al. 2021) has been published on brood

size and chick development to date. Mean brood size from 16 broods observed in South Carolina was 3.4 chicks per pair ± 1.8 chicks (Hand et al. 2021).

Chicks obtain their first juvenal feathers at 42 to 45 days; thus, they may become fledglings as early as mid-June and as late as September depending on when eggs are laid (Hand et al. 2021). Fledging can be synchronous or asynchronous, resulting in up to three days’ difference in fledging dates in the same brood. Fledglings partially molt after three months and have their first pre-basic plumage by winter (Taylor and van Perlo 1998, Pyle 2008, Hand et al. 2021). Juveniles partially molt during March or early April into their first pre-alternate plumage. Two to three months later, they molt into their alternate plumage.

Following the breeding season and on the breeding grounds, there is a period of flightless molt in adults, during which they are extremely vulnerable to predation and environmental perturbations such as fire or flooding. In South Carolina, the flightless molt period was 15 August to 11 October (Hand et al. 2021). During this time, adult Black Rails molt all remiges and rectrices simultaneously, leaving them unable to fly for approximately three weeks (Flores 1991, Pyle 2008, Hand et al. 2021).

It appears that juvenile California Black Rails typically disperse 10 km (6.21 miles) but may disperse up to 28 km (17.40 miles) within their metapopulation and more widely up to 100 km (62.14 miles) between metapopulations (Hall et al. 2018). Therefore, Eastern Black Rails may exhibit similar behavior and be able to colonize new areas with appropriate habitat. Some populations of Black Rails appear to migrate south in the winter and north in the spring. Stable isotope analysis showed that Black Rail populations in Colorado and Kansas likely migrate, wintering in Texas (USFWS 2019). Biologists suspect, based on data from Black Rails killed by collisions with radio and television towers, that northern populations on the Atlantic Coast migrate to the Carolinas and farther south for the winter (Watts 2016). However, birds have been found in New Jersey in winter (Eddleman et al. 2020); thus, not all Black Rails migrate south. Watts (2020) compiled 55 records of Black Rails that indicated migratory behaviors occur from mid-March through early May and from early September to mid-November.

Black Rails vocalize before and during the breeding season and are most vocal when they are not nesting (Weske 1969, Legare et al. 1999). Calling birds tend to group, apparently locating near one another (Kerlinger and Wiedner 1990). Vocalization patterns differ by population and by individual. In Florida, Legare et al. (1999) found that birds call most in July, whereas in New Jersey, calling peaks from April to mid-May (Kerlinger and Wiedner 1990). Additionally, calling peaks at various times in the diel cycle. Some populations vocalize more in the morning, within two hours before and after sunrise, some only vocalize during the two hours before and after sunset, and others only vocalize during night hours (Legare et al. 1999, Bobay et al. 2018, Eddleman et al. 2020, Butler et al. 2023). Biologists usually detect Black Rails using call-response surveys and recorded-call analyses using Autonomous Recording Units (ARUs). ARUs are weatherproof recording devices deployed in habitats to record the vocalizations of any species of interest. Both sexes respond to call-response survey recordings, although males respond more often than females, and response vocalizations differ between the sexes (Legare et al. 1999). In a study done in the Pamlico Sound region of North Carolina, detection by ARUs was highest from midnight to 4 a.m. (Bobay et al. 2018). However, Bobay et al. suggest that this peak detection window for ARUs could reflect a time-period with less background noise from other species that vocalize during daylight hours. Call-response surveys conducted by observers from 30 minutes before sunrise to two hours after sunrise

resulted in similar detection probabilities as those of ARUs, and overall detection probability was increased by using ARUs (Bobay et al. 2018). Call-response surveys done by observers in the morning and evening hours in Florida revealed that detection was highest in the morning within three hours of sunrise (Legare et al. 1999). Detecting breeding birds can be confounded by an overlap in migration and breeding which could occur from March through April. During this period, a small proportion of birds (2.4%) migrates (Watts 2020). However, habitats are generally considered to be occupied if they have multiple detections, so this counting of migrants and breeders is likely a minor issue.

Table 1. The annual life-cycle of the Black Rail across the global range, including all subspecies of Laterallus jamaicensis. Dates are likely to vary with latitude (USFWS 2019).

Life Stage	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Egg			Laying and Incubation (26 days)									
Chick					Parental Care							
						Molt (by 1.5 mos)						
Juvenile		Molt (by ~ 12 mos)					Molt (by ~ 3 mos)					
							Dispersal?*					
Adult			Mating									
			Laying and Incubation (26 days)									
				Parental care								
			Molt?**				Molt (flightless)					
			Migration***						Migration***			
	Wintering									Wintering		

* Specific timing of juvenile dispersal is unknown.
** Ongoing studies indicate flightless molt begins around 1 August and finishes by 31 October in SC (Hand 2023).
*** Not all individuals migrate.

Dietary generalists, Black Rails forage mostly on small animal prey during the growing season and on seeds in the winter (USFWS 2019). A literature review by Ehrlich et al. (1988) notes that Black Rails eat insects, crustaceans, and seeds of aquatic vegetation. Black Rails in South Carolina glean invertebrates including spiders, snails, beetles, katydids, and clams from vegetation and shallow puddles, and appeared to forage on seeds on the soil surface (C. Hand, personal communication, 5 Mar. 2024). The most comprehensive study of the California Black Rail’s spring and summer diet to date from 30 birds, documented that birds consume prey in proportion to its presence in marsh habitats. Consistent with other geographic regions, arachnids were the most common prey item followed by amphipods, gastropods, heteroptids, and coleoptids (Hall et al. 2020).

Resource quality, regional conditions, and density-dependent factors likely determine home range size (Table 2). The following information is a summary of the details in Table 2 below. Males in Florida had significantly larger home ranges than females ($p = 0.0024$) during the breeding season (Legare and Eddleman 2001). In Texas (Haverland et al. 2021) and Louisiana (Johnson and Lehman 2021), home range size before the breeding season did not differ by sex. Legare and Eddleman (2001) suggest that Black Rail home range size may differ by season in regions where water levels fluctuate widely.

Life history traits that may affect management actions such as timing of prescribed fire, impoundment management, and other habitat management activities are depicted in Table 1 and include:

Table 2. Home range¹ sizes of the Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) in salt and brackish marsh along the Atlantic and Gulf coasts.

Home Range Size		n ²	State	Sex	Season	Habitat Type	Reference
Mean (ha)	Range (ha)						
1.3, SD = 0.52	0.82 - 3.1	9	FL	M	Breeding (during egg laying and incubation)	High elevation salt marsh ³ , non-tidal relict salt marsh ⁴	Legare and Eddleman 2001
0.62, SD = 0.27	0.51 - 0.86	6	FL	F			
0.52, SD = 0.36	0.11 - 1.22	13	TX	No difference by sex	Winter	Salt and brackish high tidal marsh, salty prairie, and <i>Baccharis</i> (spp.) shrubland ⁵	Haverland et al. 2021
0.71, SE = 0.13	0.22 - 1.59	13	LA	No difference by sex	Winter and Spring	<u>Saltmeadow Cordgrass</u> (<i>Sporobolus pumilus</i>) in high marsh	Johnson and Lehman 2021
3.24	-	1	MD	<u>Unkown</u>	Breeding	Tidal salt marsh	Weske 1969

¹Mean 95% Minimum Convex Polygon
²Number of Black Rails
³Dominated by Black Needlerush (*Juncus roemerianus*), Spikegrass/Saltgrass (*Distichlis spicata*), and Silverling (*Baccharis angustifolia*)
⁴Dominated by Cordgrass (*Sporobolus bakeri*), Wax Myrtle (*Morella* [*Myrica*] *cerifera*), and Sawgrass (*Cladium jamaicense*)
⁵Dominated by Gulf Cordgrass (*Sporobolus spartinae*), Saltmeadow Cordgrass (*Sporobolus pumilus*), Sea Ox-eye Daisy (*Borrichia frutescens*), *Batis* (*Batis maritima*), Eastern *Baccharis* (*Baccharis halimifolia*) and Glassworts (*Salicornia* spp.)

- Black Rails prefer running and walking over flying.
- Nesting begins in mid-April in SC.
- The range-wide peak clutch period is mid-June.
- Adults incubate eggs for approximately 19 to 26 days.
- February burns in South Carolina delayed hatching by 23 days. Late winter and early growing season prescribed burns may delay nesting enough to subject chicks hatched on those breeding grounds to hurricanes which peak in mid-September.
- Chicks become immatures or fledglings at 40 days post-hatch when the first preformative molt is complete and they can fly.
- The adult flightless molt period lasts for three weeks and may peak in mid-September, coinciding with peak hurricane season.

Habitat

In one of the first modern accounts of the Black Rail, Todd (1977) describes the species as “a bird of wet meadows.” Currently, populations of Black Rails breed in high elevation salt and brackish marsh, which is the zone of coastal marsh that has infrequent or no tidal influence, or inland freshwater marshes and wet prairies. Ninety percent of Black Rail populations inhabit coastal regions, mostly in high elevation salt and brackish marsh (Watts 2016). Various projects yielded no Black Rail detections even in seemingly suitable habitat, suggesting biologists do not understand all factors influencing habitat selection (Watts 2016, ACJV 2020, Eddleman et al. 2020, Neice and McRae 2021a). Most often, Black Rails inhabit remote locations that are inaccessible to people (ACJV 2020).

In general, Black Rails use higher marsh elevations than other marsh birds. They occur along the gradient from shallow, constantly inundated strata to moist-soil in high marsh where the soil moisture is maintained either by rain or king tides (extreme high and low tides that happen during the full or new moon) in coastal marshes, or rainfall in



freshwater marshes (Eddleman et al. 1988, Nadeau and Conway 2015). Three main factors characterize Black Rail habitats: a) moist-soil dominated by variable, gently sloping topography with sheet water flow and/or areas of very shallow surface water (less than 3 cm [1.18 inch]); b) very high-density herbaceous vegetation allowing travel under cover; and c) dense herbaceous cover with relatively high ground for escape from flooding and dense fine-stemmed herbaceous vegetation for nesting. Small size, short tarsus length, and the Black Rail’s propensity to run rather than fly determine its habitat needs (Flores and Eddleman 1995, Legare and Eddleman 1995, Legare and Eddleman 2001,

ACJV 2020, Eddleman et al. 2020, Haverland et al. 2021, Watts 2022). In an arid Sierra Nevada landscape, irrigated and spring fed wetlands hold significantly higher numbers of Black Rails, underscoring the necessity of a permanent, shallow, and dynamic sheet water source (Richmond et al. 2010).

Gently sloping and variable topography is a necessary component of Black Rail breeding habitat. This feature offers high ground to keep nests dry, and areas for chicks and molting adults to escape flooding from rain or tides (USFWS 2019, Legare and Eddleman 2001, Haverland et al. 2021). Subtle topographic variation provides wet areas during dry periods and higher biodiversity across variable microhabitats for foraging (USFWS 2019, Legare and Eddleman 2001, Haverland et al. 2021, Watts 2022). Black Rails will inhabit tidal or non-tidal impoundments that are actively or passively managed, if sufficient area of the habitat conditions discussed above is present.

In marshes with the conditions described above, dense herbaceous vegetation structure and cover are correlated with Black Rail presence more than vegetative species composition. Because they occupy various inland and coastal marsh types, plant species composition is thought to be less important than structure (USFWS 2019). Vegetation height in Black Rail habitat ranges from ≤ 1 m (3.2 feet) in coastal areas to taller cattail (*Typha* spp.) and bulrush (*Scirpus* spp.) in freshwater marshes (Davidson 1992, Legare and Eddleman 2001). Across the range, detection increases as vegetation cover and density increase (Flores and Eddleman 1995, Kane 2011, Legare and Eddleman 2011, Tolliver et al. 2019, Butler et al. 2023). In Louisiana, Black Rail occupancy rates were highest with increasing stem density when the number of stems at 0-10 cm (0-3.94 inches) above ground was a count of six or greater stems and had a moderate positive relationship to the number of stems at 20–30 cm (7.87-11.81 inches). Vegetation height above ground and above layers of dead vegetation was also positively correlated with Black Rail presence (Butler et al. 2023). In Kansas, total dead vegetation thatch cover at 10–20 cm (3.94-7.87 inches) above ground was correlated with Black Rail detections (Kane 2011). Vegetation at nest sites was found to be denser than surrounding habitat (Spautz and Nur 2002). Occupied sites are dominated by open, dense grassy marsh and are not typically comprised of more than 20-30% shrubs or trees. The presence of woody vegetation indicates higher elevation where Black Rails can escape flooding (USFWS 2019, Haverland et al. 2021) which may explain why Black Rail occupancy tends to be higher in herbaceous marsh vegetation near shrubs and trees or upland forest edge (Roach and Barret 2015). However, there is evidence that this proximity may lead to increased predation rates (Watts 2022).

Plant species in high elevation brackish and salt marshes occupied by Black Rails in the Carolinas include areas dominated by Saltmeadow Cordgrass (*Sporobolus pumilus*), Sand Cordgrass (*Sporobolus bakeri*, [not native to NC]), Coastal Saltgrass (*Distichlis spicata*), and Black Needlerush (*Juncus roemerianus*, [USFWS 2019]). Hand (2023) has since documented Saltmarsh Bulrush (*Scirpus robustus*) and Marsh Fimbry (*Fimbristylis castanea*) to be characteristic of Black Rail high elevation brackish and salt marsh habitat in South Carolina. High coastal marsh in North Carolina may contain a significant component of Sawgrass (*Cladium jamaicense*), which has been documented in breeding habitat in Florida (Legare and Eddleman 2001). Although vegetation structure (cover and density) has a stronger positive relationship to Black Rail presence than species composition, plant species composition indicates water level and fluctuation. Thus, vegetation types used by Black Rail, especially for breeding, are those that thrive in shallower, more stable water levels (Conway and Sulzman 2007, Tolliver 2019, Butler 2023). *Juncus roemerianus* tolerates a wide variety of water and salinity levels and may not be a reliable indicator of Black Rail breeding habitat, although it may act as breeding habitat where water levels and water level variability are low. Elevation and vegetation alone do not explain Black Rail presence. It is suspected that Black Rails are most abundant in appropriate conditions

described here and in areas that have a degree of sheet water flow (Evens et al. 1991, Richmond 2010). It is unknown whether sheet water flow provides higher quality habitat as opposed to a thin layer of surface water that does not flow, or whether it is merely correlated with optimal water depth (Watts 2022).

Nests are bowl-shaped and made of live and dead fine-stemmed emergent grasses, rushes, or other herbaceous plants. Nests often have a canopy and ramp made also of fine-stemmed herbaceous vegetation (Harlow 1913, Flores and Eddleman 1993) and are constructed under dense vegetative cover on or near the ground (Legare and Eddleman 2001). Nests have also been found over very shallow water (< 3 cm [1.18 inches]; Flores and Eddleman 1993). The mean nest height above ground from 17 nests was $6 \text{ cm} \pm 2.3 \text{ cm}$ (2.36 inches \pm 0.91 inches) in Florida (Legare and Eddleman 2001) where the herbaceous vegetation height is similar to conditions found in North Carolina.

Herbaceous emergent wetlands are maintained by disturbance such as fire and changes in water levels. In the coastal context, salinity introduced by tides and storms is an important factor in vegetation composition as it can kill shrubs and trees. The disturbance factors that maintain herbaceous wetlands are therefore required to maintain appropriate Black Rail habitat. Further discussion of habitat disturbance regimes can be found in the Conservation Objectives and Actions sections.

The ACJV defines target Black Rail habitat in the Carolinas as follows (ACJV 2020):

Tidal habitat is comprised of Saltmeadow Cordgrass (*S. pumilus*) and Coastal Saltgrass (*D. spicata*). They define secondary vegetation of tidal habitat in the Carolinas as having a significant component of Eastern Baccharis (*B. halimifolia*) at the highest elevations. Marsh Fimbry (*Fimbristylis castanea*), Chairmaker's Bulrush (*Schoenoplectus americanus*), Sand Cordgrass (*S. bakeri* [not known in NC]), Black Needlerush (*J. roemerianus*), and Sea Ox-eye Daisy (*Borrchia frutescens*) are important components of habitat at elevations just below those where shrubs typically grow (Hand 2018).

Managed tidal impoundments are comprised of Sand Cordgrass (*S. bakeri* [not known in NC]); Chairmaker's Bulrush (*S. americanus*); Saltmeadow Cordgrass (*S. pumilus*); Coastal Saltgrass (*D. spicata*); Sturdy Bulrush (*Bolboschoenus robustus*); and Cattails (*Typha* spp. [Roach and Barrett 2015, Hand 2018]). Tidal impoundments are not likely to be a long-term habitat option for Black Rails in North Carolina, however, due to the increased rate of sea level rise, and availability of better habitat restoration and creation options.

Managed non-tidal impoundments, wet meadows, and freshwater marshes are dominated by native bulrush, sedge, and spikerush species, and/or cattails, and have a secondary component of dense overhead grassy vegetation of any native species.

Black Rail habitat features described above are summarized as follows.

- Water and pools less than 3 cm (1.18 inches) in depth.
- Grass-dominated high elevation coastal marshes or freshwater marshes with less than 20% shrub or tree cover, naturally maintained by occasional fire and hydrology.
- Dense herbaceous vegetative cover.
- Moist-soil.
- Gently sloping and variable topography.
- Fine-stemmed dense herbaceous vegetation for nesting above water level.

Distribution and Population Status

Black Rail populations may have always been low in abundance and patchily distributed due to their specific habitat niche requirements (Watts 2022). A recent assessment of the status of Black Rails in the Atlantic and Gulf states by Watts (2016) and Watts et al. (2017) reviewed 150 years of literature and records for the species. Historically, the Black Rail ranged from Massachusetts to Florida along the Atlantic Coast, Florida to Texas on the Gulf Coast, and into the interior of the United States to Colorado (Watts 2016, Watts et al. 2017, USFWS 2019, Figure 1). The geographic range has contracted recently by 450 km (about 280 miles) along the Atlantic Coast, limiting it to disjunct marshes from New Jersey, south to Florida, and to marshes in Texas (Watts et al. 2016) and Louisiana (Butler et al. 2023). Breeding populations also remain in Colorado and Kansas (USFWS 2019). Historically, 90% of Black Rail detections have been in salt or brackish coastal marsh and the remainder in freshwater inland sites (Watts et al. 2017). Overall, records of birds from the interior have always been uncommon; however, inland areas are under-sampled (Watts 2016). In North Carolina, data from hundreds of call-response surveys from 2014 to 2018 have documented the Black Rail in a handful of coastal marshes, but not elsewhere (Wilson et al. 2015, Smith et al. 2018, Neice and McRae 2021a).

These studies reveal that the Black Rail population in North Carolina has declined significantly. Most historic records actually came from the Mountains and Piedmont where they were found in wet meadows and hayfields, which replaced cleared forests (Watts 2016). However, there have been no records outside the Coastal Plain since 2005 (Watts 2016). Extensive breeding season surveys for Black Rails on the Coastal Plain of North Carolina were conducted by the Center for Conservation Biology (CCB) in 2014, 2015, 2017, and 2018 (Wilson et al. 2015, Smith et al. 2018). These data and those from other studies (e.g., Watts 2016, Bobay et al. 2018, Neice and McRae 2021a) indicate the current presence of the Black Rail in only a few areas on the mid-coast of North Carolina including Swanquarter and Cedar Island National Wildlife Refuges (NWR), Piney Island, and five other locations. In 1973, there were more than 80 Black Rails calling within accessible areas of Cedar Island NWR on one night (Watts 2016). Davis et al. (1988) heard 96 calls of the Black Rail in Cedar Island NWR during transect surveys. In the 1980s, approximately 74 Black Rails were detected from the bridge across Cedar Island NWR (J. Fussell, personal communication, 23 Sept. 2023). During surveys of Piney Island in 1992, 19 birds were detected (Watts 2016). There have since been five surveys at Piney Island from 2011 to 2022 and detections ranged from 6 in 2014 to 42 in 2018 (USMCAS unpublished data). In 2014 and 2015, the CCB detected 22 individual Black Rails at Swanquarter NWR, Cedar Island NWR, and five other locations, including two sites in Northeast North Carolina. Surveys in 2017 by the CCB of the same areas surveyed in 2014 and 2015 resulted in the detection of only 9 individuals at Cedar Island NWR (Smith et al. 2018). No Black Rails were detected during CCB surveys in 2018, which focused on inner Coastal Plain potential Black Rail habitat, sites where Black Rails were previously detected along the coast and transects within Cedar Island NWR.

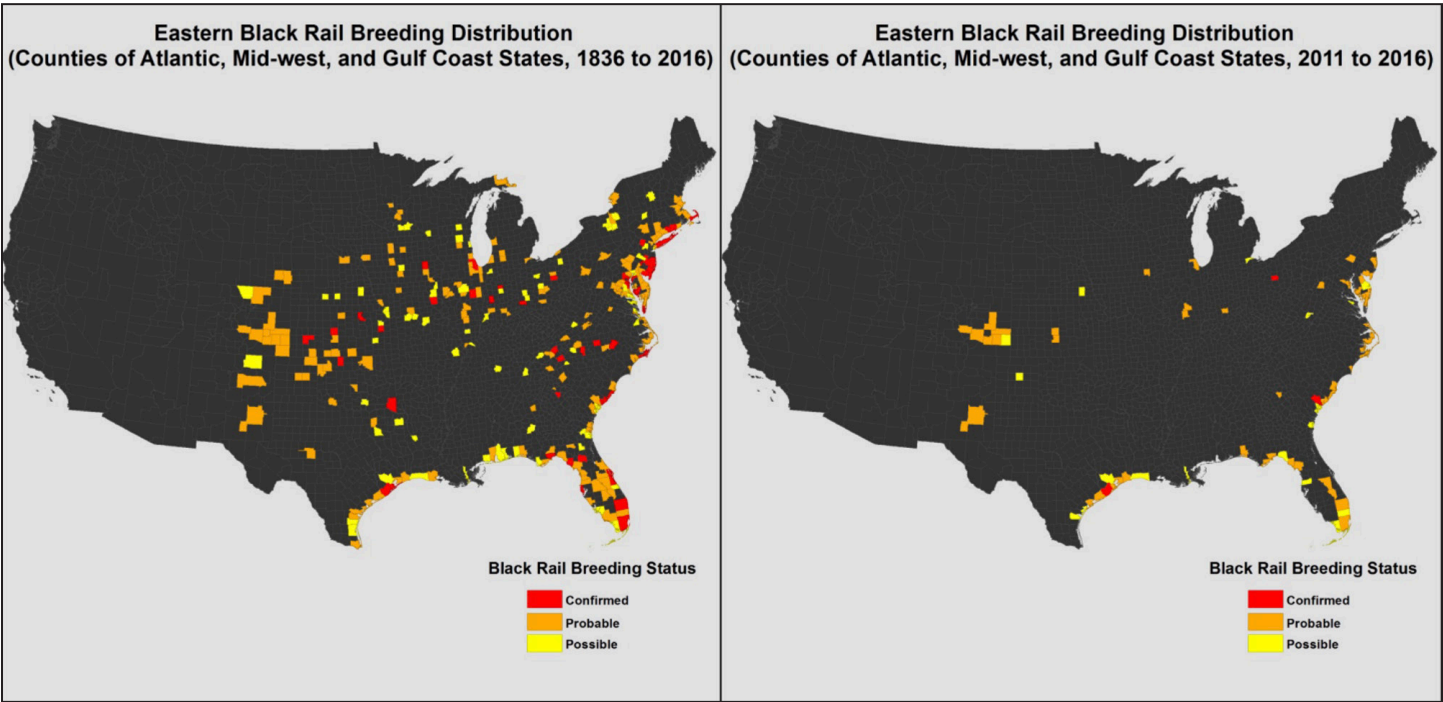


Figure 1. Historic and current breeding distribution of the Eastern Black Rail (USFWS 2019).

THREAT ASSESSMENT

Reason for Listing

Black Rails are listed as threatened under the U.S. Endangered Species Act. Current estimates of breeding pairs for each Atlantic and Gulf state are: 0 pairs from Massachusetts to New York, and 0 pairs in West Virginia, District of Columbia, Tennessee, Alabama, and Mississippi; 40–60 pairs in North Carolina; 40–60 pairs in New Jersey; 15–30 pairs in Maryland; 0–10 pairs in each of Delaware, Virginia, and Louisiana; 50–100 pairs in South Carolina; 100–500 pairs in Texas; and 200–500 pairs in Florida. Populations have experienced an average annual decline of 9% since the 1990s (Watts 2016).

The Species Status Assessment projection model consisted of 5,000 simulations of model replicates for various habitat condition scenarios and found that all populations are projected to go extinct by 2100 if no action is taken. The Southeast Coastal Plain Physiographic Province, which had robust available data, and Mid-Atlantic Coastal Plain regions, both of which North Carolina is a part, were projected to have 35 to 50 years to extinction from present conditions in these scenarios. Extinction was driven by habitat loss (USFWS 2019).

Sea level rise is likely causing coastal Black Rail declines, and Black Rails using high elevation brackish and salt marsh may have reproductive rates that are too low to sustain populations due to higher-than-normal flooding (Watts 2022). Given the steep decline in numbers of Black Rails in North Carolina and the rates of sea level rise and coastal development, it is likely that the subspecies will continue to decline in North Carolina if no actions are taken to conserve, restore, and create habitat. In fact, increased sea level coupled with more frequent and extreme flooding from tropical storm systems have likely contributed to the significant fall in Black Rail numbers (Watts 2022).

Factors considered as causes for Black Rail declines:

- Global sea level has increased 20–23 cm (7.87–9.06 inches) since 1880 at a rate of 0.114–0.14 cm (0.045–0.055 inches) of rise per year to 1993. From 1993 to 2016, the rate of rise doubled to 0.28 cm (0.11 inches) per year, equating to an 8-cm (3.15-inch) rise (Sweet et al. 2017).
- Sea level rise along the North Carolina coast is effectively three to four times the global rate due to the Atlantic Meridional Overturning Current along the northeast Atlantic Coast. The associated low-pressure conditions of this current result in increased sea level (Sallenger et al. 2012).
- Ninety percent of Black Rail breeding season records are from coastal high marsh habitat and the species is sensitive to extremely small, centimeter-level changes in water depth.
- Population declines became evident in the 1990s about the same time as the rate of sea level rise started increasing. Most populations could be extirpated by sea level rise if habitat is not created and restored (USFWS 2019, ACJV 2020, Watts 2022).
- It is evident from historical and current breeding records that Black Rails declined significantly before the 1990s due to filling of high marsh areas and development for housing and transportation, marsh draining and ditching for mosquito control, and hydrological manipulation for agriculture and flood control (Watts 2016). More than 90% of native grasslands and their associated wetlands in the eastern United States have been lost due to agricultural expansion (Sampson and Knopf 1994) and 50% of wetlands in the conterminous United States have been converted to agriculture and other uses (Dahl 1990).
- Much coastal marsh habitat in North Carolina has been altered by agricultural and other development practices, decreasing its function as Black Rail habitat. Activities that alter habitat function include draining by ditching, planting row crops or pine trees, development (residential, business, industrial), road construction, and modification of hydrology (channelization of streams and creeks, drainage ditches, dredging channels).
- In the last nationwide reporting period (2004 to 2009), salt marsh losses were three times greater than losses recorded from 1999 to 2004. Eighty-three percent of these declines were related to sea level rise (Dahl 2011).
- Because coastal marsh elevation changes are minute and elevation conditions of adjacent uplands are relatively unknown, it is highly uncertain whether Black Rail coastal marsh habitat conditions will migrate inland as sea levels rise.

Present and Anticipated Threats

Conservation partners conducted a rigorous Black Rail threats analysis in 2018 which culminated in the Black Rail Conservation Plan (ACJV 2020) and determination that sea level rise is the greatest threat to Black Rails currently and in the future. The latest Sea Level Rise Technical Report (NOAA 2022) projects a 0.6- to 2.2-m (1.97- to 7.21-foot)

sea level rise for the U.S. (above 2000 levels) by 2100, with east coast levels being 0-5 cm (0-1.97 inches) above the U.S. average. In the U.S., moderate, typically damaging flooding (0.85 m [2.79 feet] above mean higher high water [MHHW]) is expected to increase from 0.3 events per year to four events per year by 2050. Major flooding (1.2 m [3.94 feet] above MHHW) is expected to increase to 0.2 events per year from the current 0.04 events per year.

Residential development is the second highest threat to Black Rails because brackish and saltmarshes in many areas cannot migrate inland due to hardened shorelines, roads, and development activities. Increased temperatures and drought further threaten Black Rails because warming temperatures and changing precipitation patterns will affect habitat parameters Black Rails are dependent on, including availability of a constant source of shallow water. Increased temperatures not only lead to drying of soils but are related to reduced precipitation and extreme storms. This boom-and-bust pattern of precipitation could easily extirpate Black Rails, especially from lower quality habitats. Additionally, Red Imported Fire Ants (*Solenopsis invicta*), prevalent in North Carolina, can kill chicks (Legare and Eddleman 2001) and are an additional source of mortality.

The Black Rail relies on open, grassy, and wet early successional habitat, which requires regular disturbance to limit growth of shrubs and trees. Because population levels of the Black Rail are low, habitat management activities intended to mimic the disturbance needed to maintain appropriate habitat can pose a significant threat of direct and indirect mortality from which populations may not recover. Poorly timed prescribed fire poses a threat to Black Rail populations if the fire return interval is too brief and if fire occurs shortly before or during peak nesting season or during the adult flightless molt period. The species appears to nest in a clumped, semi-colonial distribution and nests are likely placed at relatively higher elevations. As a result, groups of nests have been destroyed during fires (Legare and Eddleman 2001). Flightless young and adults may not be able to escape rapidly moving, unbroken fire. Prescribed burns conducted during dry conditions could reduce marsh elevation by burning through soil and the root systems of vegetation. In addition, if prescribed fire is conducted shortly before the nesting season reproductive success and survival could be reduced because vegetation cover will be inadequate (USFWS 2020). The subsequent summary of threats lists additional threats from high to lower risk.

Summary of Threats

- Summary of threats in North Carolina identified in Black Rail Conservation Plan (ACJV 2020):
- Sea level rise:
 - Loss of nests, hatchlings, and fledglings from an increase in tidal flood days and flooding during extreme storm events.
 - Habitat loss from conversion of high elevation brackish and saltmarsh to low salt marsh or open water.
- Increased temperatures, drought, and extreme rain events will both dry and flood habitats.
- Land use practices and shoreline hardening that preclude coastal marsh migration, especially residential, transportation, and other development of or near high marsh habitat. These practices effect “coastal squeeze” such that high marsh areas are confined between hardened shorelines and migrating low marsh, resulting in decreased total area of high marsh habitat and decreased capacity for high marsh migration toward the uplands.
- Agricultural practices that result in loss of wet meadows and other nontidal herbaceous wetlands.

- Prescribed fire practices conducted during the nesting, chick-rearing, and flightless adult molt periods, and that do not leave sufficient areas of refugia, or use ignition tactics that create large, fast-moving fires with few escape routes for Black Rails.
- Shrub encroachment into herbaceous marshes due to a lack of prescribed fire.
- Disease (e.g., West Nile Virus [Beissinger et al. 2022], highly pathogenic avian influenza).
- Harassment of Black Rails by people (e.g., using call-back audio lures, presence in nesting habitat, and flushing birds).
- Increased abundance of invasive animal and plant species in marsh habitats.

Historic and Ongoing Conservation Efforts

A thorough source of information on historic conservation efforts can be found in Watts (2021), which was used as a reference for the information in this section. Virtually no information was collected about the Black Rail until 100 years after its species description. Work to assess the status of the Black Rail was not initiated until the late 1980s after most habitat destruction had already occurred. This first attempt at assessment consisted of a report titled, “Migratory Nongame Birds of Management Concern”

(USFWS 1987), after which three baseline surveys were completed by the early 1990s in New Jersey, Maryland, and South Carolina. During the subsequent 15 years, while the rate of sea level rise was increasing, very little work was done on Black Rails in the eastern United States. The Maryland Department of Natural Resources conducted Black Rail surveys in 2007, which showed a dramatic decline in detections and led the Center for Conservation Biology at the College of William and Mary to form the Eastern Black Rail Conservation and Management Working Group in 2009. The Atlantic Coast Joint Venture (ACJV) chose the Black Rail as one of three focal species for conservation action and assumed coordination of the Black Rail Working Group in 2016, which led to the Black Rail Conservation Plan (ACJV 2020). Surveys and research conducted by the ACJV partners and the Center for Conservation Biology informed the Federal Species Status Assessment (SSA) published in 2019 and the Federal listing in 2020. This conservation plan draws from all documents produced by the historic conservation efforts, and the North Carolina state listing was changed in 2022 to mirror the federal listing. The U.S. Fish and Wildlife Service (USFWS) is currently updating the SSA and may reconsider whether to list the species as federally endangered.

There were no systematic surveys for the Black Rail in North Carolina before the 2000s and the most comprehensive surveys began in 2014. Five years of extensive surveys for the Black Rail were conducted by the Center for Conservation Biology (Wilson et al. 2015, Smith et al. 2018, Paxton 2023) in the coastal region of North Carolina.

To date, there has been limited habitat management and no population manipulation directly intended to enhance the population of the Black Rail in North Carolina. However, staff working on NCWRC game lands report that prescribed fire on one game land may have facilitated migration of the high elevation brackish marsh more than 91 m (100 yards) in some areas where marsh-edge forested wetlands were burned. There have been efforts by NCWRC to acquire land for Black Rail habitat, with hundreds of acres of brackish marsh acquired in the Cedar Island area. Other land acquisition projects are being pursued near other core Black Rail population areas.

CONSERVATION GOAL AND OBJECTIVES

Conservation Goal

The conservation goal and objectives of this plan mirror those of the Atlantic Coast Joint Venture’s Black Rail Conservation Plan (BRCP [ACJV 2020]). The goal over the species’ range is to prevent further decline in Black Rail population levels and to increase the population three to seven times above current levels by 2056. The BRCP states that North Carolina, South Carolina, and Georgia should collectively aim for a minimum of 625 pairs by 2056, with half occurring in non-tidal areas and half in tidal areas. These areas correspond to a total habitat acreage among these states of 728 hectares (1,800 acres) of non-tidal habitat and 728 hectares (1,800 acres) of tidal habitat. For North Carolina, assuming the current population is 40 breeding pairs, this would equate to a goal of increasing the number of breeding pairs to 167 by 2056; an increase of 5.5 breeding pairs per year on average in North Carolina.

In terms of additional habitat acreage goals of the BRCP, North Carolina must restore or create about 16 hectares (39 acres) per year; a total of 243 hectares (600 acres) of non-tidal and 243 hectares (600 acres) of tidal habitat by 2056. These habitat targets are based on a conservative estimate of home range size (Table 2). However, conserved habitats must be embedded in a significantly larger landscape of suitable wetland habitats. Large areas of habitat should be prioritized for conservation actions over small patches of apparently suitable habitat. However, small habitat patches that occur adjacent to large areas of potentially suitable habitat are likely important to manage and conserve.

Conservation Objectives

Objectives needed to achieve these goals are derived from the Black Rail Conservation Plan (ACJV 2020). Specific North Carolina objectives for Black Rail conservation are:

1. Implement and promote prescribed fire BMPs that are beneficial to Black Rails, their habitat, and prey resources.
2. Protect high elevation coastal marsh from effects of sea level rise to the maximum extent possible. Contribute to the development and implementation of BMPs to facilitate coastal marsh migration.
3. Restore or create shallow water herbaceous wetlands in non-tidal and inland areas near Black Rail detections.
4. Conduct and promote targeted impoundment management.
5. Contribute to the development and implementation of compatible agricultural BMPs.
6. Conserve lands with existing or potential Black Rail habitat.
7. Conduct surveys and research to identify breeding habitat, breeding phenology, prey resources, and the adult flightless molt period, to inform timing of habitat restoration and management actions.
8. Engage and collaborate with conservation partners and private landowners in Black Rail surveys and habitat creation, restoration, and management.

The Role of Fire in Black Rail Habitat

Black Rail habitat has suffered from fire suppression and subsequent encroachment of woody vegetation into herbaceous wetlands. Prescribed fire is an important tool used to manage and restore habitat (USFWS 2020). However,

little is currently known about the effects of prescribed fire on Black Rail habitat and populations. Because Black Rail habitat likely benefits from fire, but species populations are dangerously low and relatively large groups of birds can be killed, directly or indirectly, by poorly timed fire, adhering to BMPs in the 4(d) rule (USFWS 2020) and researching prescribed fire regimes and Black Rail response is extremely important. The relationship of fire to Black Rail occupancy and optimal habitat conditions is an active topic of adaptive management research.

Historically, Black Rail habitats would have burned periodically during lightning strikes and growth of shrubs was suppressed (Nyman and Chabreck 1995, Grace et al. 2005). Black Rails have been found to display a clumped spatial distribution (Taylor and Van Perlo 1998, Watts 2016, USFWS 2019), so burns covering large areas without wet escape habitat with dense cover may kill entire groups of birds (Legare et al. 1998). The need to maintain or enhance marsh elevations relative to sea level rise conditions further complicates the use of prescribed fire. Improperly timed fires that occur in dry conditions or when marshes are not flooded can destroy marsh soils and plant root systems, leading to elevation decrease. Fires in peat soils that lack sufficient moisture can result in wetland conversion to open water. Too frequent or improperly timed burns can decimate prey resources by preventing prey recolonization (Nyman and Chabreck 1995). Fire lines placed in Black Rail habitat can also lead to unintended habitat damage. If prescribed fire can be planned to avoid or sufficiently minimize Black Rail mortality and negative breeding habitat impacts while producing the prey source, vegetation, and elevation conditions necessary for Black Rail population growth, then prescribed fire will be beneficial to the Black Rail.

The best available information currently suggests Black Rail abundance may not be negatively impacted by properly timed fire and that fire is necessary in Black Rail habitat to maintain dense herbaceous vegetation with a low proportion of shrubs (Legare et al. 1998, Conway et al. 2010, Tolliver et al. 2019, Haverland et al. 2021, Butler et al. 2023). Due to the threat of direct mortality, it is essential to implement slow-moving, patchy burns that result in sufficiently large, unburned areas within a management boundary at the minimum frequency required to reduce shrubs to less than 20% coverage of the high marsh. Fires should be conducted at times when marshes are flooded or soils are wet, when dense herbaceous vegetation regrowth would occur most quickly, and when shrubs would be killed (USFWS 2020). Regardless of the Black Rail’s ability to fly, it favors running and rarely takes flight, so special care to allow escape by foot is important. It is essential to avoid fire practices that would directly kill significant numbers of Black Rails such as ring fires or complete burns over large areas (Legare et al. 1998, Grace et al. 2005). Fire prescriptions that leave some areas of dense vegetation (escape cover) unburned are also important to reduce predation. One study found that Black Rails were depredated by multiple bird species when vegetation was made sparse (Evens and Page 1986). Patchy burns that occur during the growing season may also be used to achieve the desired prescribed fire outcomes. A slow-moving prescribed burn in Florida during August, under proper soil and weather conditions, resulted in a burn that left 0.04- to 0.81-hectare (0.1- to-2.0-acre) habitat patches intact and resulted in no observed Black Rail mortality (Legare et al. 1998). Conway et al. (2010) recommend that less than 15% of marsh habitat be burned at any one time. The USFWS 4(d) Rule (USFWS 2020) states that for tracts greater than 259 hectares (640 acres), 50% of Black Rail habitat on the tract should be maintained as unburned in any given calendar year. The USFWS 4(d) Rule further states that within each burn unit, 10% of the burn unit should be left as unburned, dispersed patches of habitat that should be no smaller than 9.29 square meters (100 square feet) in size.

Early growing season burns will likely limit shrub encroachment most effectively (Streng et al. 1993, Drewa et al. 2002, Barlow et al. 2015). However, if fires are conducted too close to the peak of nesting, Black Rail populations could experience reduced productivity for that season. Early growing season burns should result in a mosaic of small, burned areas interspersed with appropriate habitat for renesting (USFWS 2019). Prescribed fire early in the growing season likely causes delay in nesting. Burns conducted in February in South Carolina resulted in a later mean hatch date from nine nests of 18 July \pm 28.1 days, compared to areas that were not burned where the mean hatch date from 24 nests was 25 June \pm 30.8 days (Hand et al. 2021). Moreover, this timing may result in more flightless young at risk of flooding during peak hurricane season in September. Once the response of Black Rails to prescribed fire is better understood in North Carolina, changes to management actions can be made in an adaptive management framework.

Objectives of Prescribed Fire in Black Rail Habitat Management

Objectives include the following:

- During fire line creation, avoid placing fire lines in Black Rail breeding habitat (herbaceous wetlands adjacent to the tree line or areas not dominated by *J. roemerianus*) and avoid lowering the elevation of high marsh soils during fire line creation.
- Minimize mortality at all life stages.
- Reduce shrub coverage to 20% or less and prevent succession to shrubland.
- Promote rapid regrowth of dense herbaceous cover by the time of nesting.
- Increase plant diversity, especially in areas dominated by *S. pumilus* and *D. spicata*.
- Maintain or increase marsh surface elevation.
- Conduct prescribed fire when wetlands and wetland vegetation are wet enough to result in a patchy burn.
- Maintain or increase Black Rail prey.
- Aid coastal marsh migration.

CONSERVATION ACTIONS

1. Habitat Management

A. Prescribed Fire

Guidance in the USFWS 4(d) Rule will be followed (USFWS 2020) for conservation actions that call for prescribed fire. The following includes the 4(d) Rule guidance regarding using caution when implementing prescribed fire and other fire management activities in high marsh habitats, especially in or near breeding habitat.

- 1) To the maximum extent possible, avoid placing fire lines in Black Rail high marsh breeding habitat or potential breeding habitat. Avoid creating fire lines in areas with herbaceous marsh grasses not dominated by Black

Needlerush (*Juncus roemerianus*) or areas adjacent to the tree line. If impacts are unavoidable, only cross habitat in a perpendicular manner in the narrowest band of habitat when machinery cannot go around potential breeding habitat.

- 2) Maintain a fire return frequency at a rate necessary only to limit shrub cover to less than 20% in the high marsh.
- 3) Conduct prescribed fire in winter or as early in the growing season as possible to reduce woody vegetation cover to less than 20% of the high marsh and to minimize the loss of eggs and chicks.
- 4) Apply prescribed fire in weather conditions that will result in very slow moving, patchy burns with broken fire boundaries.
- 5) Use tactics that provide unburned refugia and avoid complete burns.
- 6) Avoid fires with long, unbroken boundaries and fires that come together in a short period of time (e.g., ring fires).
- 7) When using aerial ignition, avoid large, fast-moving fires.
- 8) Ignition tactics, flame lengths, and rate of spread should avoid trapping Black Rails by allowing escape routes.
- 9) Aim to achieve patchy fires with unburned refugia, including approximately 10% of the burn unit with dispersed patches of unburned area at least 9.29 square meters (100 square feet) in size.
- 10) For tracts greater than 259 hectares (640 acres), follow all guidance above and conduct burns such that less than 50% of habitat and breeding habitat is burned in any calendar year.
- 11) For smaller tracts, follow all guidance in i to viii above, but such that at least 10% of the burn unit is unburned and can serve as escape habitat for Black Rail.

B. Marsh Migration

- 1) Once effectiveness of coastal marsh migration techniques is better understood, facilitate coastal marsh migration through methods deemed appropriate, which may include prescribed fire, terracing and contouring slopes on degraded lands adjacent to high elevation coastal marsh, and other techniques.
- 2) Facilitate state and federal permitting for coastal marsh protection by:
 - a. Working with regulatory agencies, the ACJV, and the NCWRC Habitat Conservation Division to reduce federal and state regulatory barriers to coastal marsh management techniques such as, but not limited to, thin layer sediment placement and runneling.
 - b. Once a state regulatory framework is in place, employ methods to protect high elevation coastal marsh from sea level rise in Black Rail breeding habitats.
 - c. Partner with and provide Black Rail technical guidance to entities that are employing thin layer sediment placement and other coastal marsh protection techniques.

C. Marsh Restoration and Creation

Shallow-water herbaceous marsh habitat should be restored and created to replace Black Rail habitat losses due to flooding. In and near lands where Black Rails occur, appropriate inland non-tidal areas should be modified to act as wet meadow-like marsh breeding habitat.

Black Rails use habitats with a degree of sheet water flow. Therefore, establishing or restoring sources of sheet water

flow is necessary when creating inland habitat. Sheet water flow offers a constant source of moist-soil and shallow pools. Any seeps and springs should be identified for habitat restoration or creation that results in large areas of open herbaceous cover. Drained wetlands should be restored as herbaceous wetlands. Grasslands, pastures, old pine plantations, and old agricultural lands with hydric soils and appropriate hydrology can be converted to herbaceous freshwater marsh. In some areas, irrigation has been used successfully for inland habitat creation in areas with insufficient wetland soils. The South Carolina Department of Natural Resources is testing a solar powered fallow field irrigation system to provide inland habitat. The system is affordable and consists of a solar powered pump connected to a water source, with irrigation tubes dispersed through the field. Constant low volume irrigation creates sheet water flow and should allow dense herbaceous wetland vegetation to dominate the field.

- 1) Restore non-tidal herbaceous marsh habitat.
 - a. Restore shallow herbaceous wetlands in pastures or other agricultural fields.
 - b. Use prescribed fire to reduce and limit shrub coverage, and dead trees (snags).
- 2) Create non-tidal herbaceous marsh habitat.
 - a. Convert lands, including pine plantations, with hydric soils near Black Rail breeding habitat to herbaceous marsh.
 - b. Where it is possible to closely manage water levels, convert significant areas of impoundments to moist-soil, herbaceous high marsh.
 - c. Create, gently sloping herbaceous wetlands via topographic modification, with or without supplemental irrigation.
 - d. Convert pastures or grasslands without sufficient hydric soils to wet meadows through irrigation.
 - e. Use prescribed fire to reduce and limit shrub coverage, and dead trees (snags).

2. Habitat Conservation and Protection

- A. Conserve unprotected lands with suitable or potentially suitable Black Rail habitat. Prioritize protection of high elevation coastal marsh breeding habitat, areas with potential for coastal marsh migration, and lands near Black Rail detections that can be converted to non-tidal, herbaceous marsh or wet meadow.
 - 1) Focus land conservation, including conservation easements, incentives, and acquisition, in areas with Black Rail detections or potential Black Rail habitat within a reasonable dispersal distance of Black Rail detections (e.g., within buffers in the ACJV Black Rail Habitat Tool [ACJV 2022]).
 - 2) Conserve high elevation coastal marsh or land that will convert to it, and adjacent undeveloped lands through acquisition and conservation easements.
 - 3) Purchase lands (pasture, grassland, pine plantations, and agriculture) and conservation easements from willing landowners, adjacent to or near existing Black Rail habitat. Preference should be given to lands with wetlands and hydric soils. These lands may be converted to breeding habitat and/or will convert to high elevation coastal marsh as sea level rises.

3. Habitat Management, Restoration, and Creation on NCWRC Game Lands

The NCWRC owns or manages hundreds of acres of potentially suitable Black Rail habitat consisting of high

elevation coastal marsh, impoundments, and areas that could be converted to larger freshwater wetlands. Black Rail habitat should be created, restored, and managed in as many suitable areas on game lands as possible, in areas with or near Black Rail detections. NCWRC should consider acquiring lands with hydric soils and appropriate hydrology near occupied Black Rail habitat from willing landowners, including pine plantations, pastures, and old agricultural fields. NCWRC could convert all or part of these lands to herbaceous marsh Black Rail breeding habitat that will not be affected by storm surge or flooding.

Black Rails have been detected on or near several NCWRC game lands. The game lands with Black Rail habitat, impoundments, or potential habitat are Alligator River, Buckridge, Carteret County, Goose Creek, Gull Rock, Neuse River, and North River game lands. The game lands that are near core Black Rail populations and include potentially suitable Black Rail habitat or impoundments are Croatan (impoundments near Catfish Lake), Dare, J. Morgan Futch, Northwest River Marsh, Pungo River, and Texas Plantation game lands. Voice of America Site A should be surveyed for Black Rails and managed for them if they are detected. The NCWRC Wildlife Diversity Program should coordinate often with the Land and Water Access Division’s game land managers to implement Black Rail conservation measures outlined herein on game lands or portions of game lands where NC Natural Heritage Program Dedicated Nature Preserves agreements allow.

4. Incentives

The following incentive programs and other wetlands related programs through the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service and United States Farm Bill, may benefit landowners who are willing to conserve and/or manage for the Black Rail:

- The Wildlife Conservation Lands Program of the North Carolina Wildlife Resources Commission,
- Partners for Fish and Wildlife and Safe Harbor programs of the USFWS,
- USDA Wetland Reserve Easements,
- Other conservation easements offered by the North Carolina Coastal Land Trust or other land trusts, Ducks Unlimited, and The Nature Conservancy, which may provide incentives for the landowner to offset changes in use that may result when protecting and/or enhancing land for the Black Rail.

These incentive programs are likely advantageous to private landowners of existing and future brackish and salt-marsh, because coastal marsh is not typically used for grazing in North Carolina. It would be beneficial to work with private landowners willing to implement occasional prescribed fire.

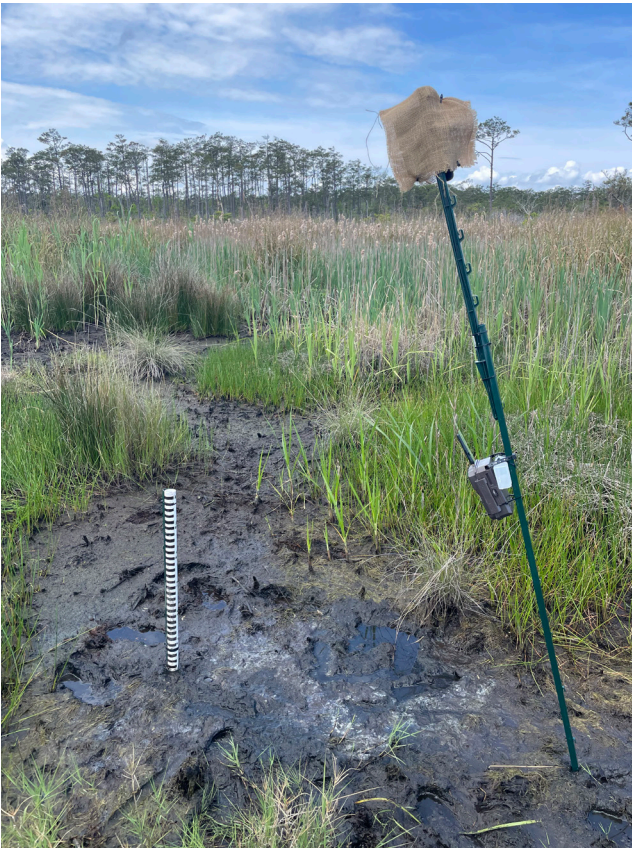
In areas with potential habitat identified in the Atlantic Coast Joint Venture Black Rail Habitat Tool (ACJV 2022):

- A. NCWRC should market the Wildlife Conservation Lands Program (WCLP) directly to private landowners of high elevation coastal marsh, through mailings and phone calls. The WCLP will likely benefit landowners by reducing their tax burden on this land type.

- B. Market all other incentive programs directly to private landowners of high elevation coastal marsh. Other financial incentive programs can also be employed. The benefits are additive for landowners who receive a property tax reduction through the WCLP and then receive habitat management cost-share through other incentive programs.
- C. Work with appropriate landowners to create and restore wet hay fields and marshy meadows.

5. Monitoring and Research

- A. Better understand and identify likely breeding habitat on game lands and other lands to inform population status and habitat conservation, management, and restoration decisions.
 - 1) Prioritize areas for surveys near or at sites where Black Rails have been detected.
 - 2) Employ call back surveys, Autonomous Recording Units, and other techniques to identify areas where Black Rails are likely breeding.
 - 3) Establish water level monitoring arrays to better understand Black Rail occupancy and necessary habitat factors.
 - 4) Evaluate elevation and topographic characteristics of occupied and unoccupied sites.
 - 5) Monitor changes in vegetation, topography, and hydrology from habitat management activities such as prescribed fire.
- B. Collect and share data with the USFWS regarding the population status of Black Rails.
 - 1) Follow the USFWS Black Rail monitoring protocol to estimate relative Black Rail abundance and occupancy over time.
- C. Quantify the response of Black Rails to prescribed fire, creation of wet meadows, and other habitat management and restoration activities.
 - 1) Conduct Black Rail occupancy surveys before and after habitat restoration and management activities.
 - 2) During the Black Rail breeding season or the adult flightless molt period, walk transects immediately after conducting a prescribed fire or after wildfires to document any Black Rail mortality.
- D. Gather information on the life history and productivity of Black Rails in North Carolina to inform population and habitat management decisions.
 - 1) Employ camera traps and other techniques in Black Rail breeding habitat to document breeding phenology, productivity, and the adult flightless molt period.
 - 2) Once and if population levels are sufficient to trap and band birds, conduct banding and radiotelemetry to find and monitor nests, and estimate population parameters.



Water level monitoring station and ARU for Black Rail surveys NCWRC. Burlap cover over ARU to protect from over-heating.jpg

- E. Employ Unoccupied Aerial Systems (UAS) to improve management of high elevation coastal marsh habitat where appropriate.
 - 1) Use vegetation-penetrating Lidar-equipped UAS to assess and map fine-scale marsh topography of coastal marshes to better understand Black Rail occupancy and prioritize habitat protection and management activities.
 - 2) Use Lidar data to avoid placing fire lines at higher elevations in high marsh where Black Rails could breed.
 - 3) Evaluate use of Lidar and multispectral imaging cameras to monitor vegetation changes in response to pre-scribed fire and other habitat management actions.
- F. Evaluate Unoccupied Aerial Systems (UAS or drones) as a means to survey for Black Rails and their nests and to gather habitat data. UAS equipped with super high-resolution thermal cameras have identified Black Rails to species on the Gulf Coast (Olsen et al. 2023). A test of this technique conducted by NCWRC identified Black Rail and a nest of a different marsh bird species in high brackish marsh.
- G. Collect eDNA samples in areas with apparently suitable habitat where Black Rail presence is uncertain to evaluate Black Rail presence in previously unknown sites.
- H. Collaborate and share information with all partners conducting Black Rail monitoring and research efforts in the state.

6. Education and Outreach

- A. Inform and support NCWRC, conservation partners, and private landowners regarding Black Rail habitat restoration and management.
 - 1) Refer these entities to this conservation plan, the resources referenced in this plan, and the South Carolina Department of Natural Resources Black Rail website.
 - 2) Support the North Carolina Black Rail Working Group and ensure its membership includes habitat managers and the appropriate private landowners.
 - 3) Provide technical guidance and assistance to NCWRC, conservation partners, and private landowners to help them survey for and create, restore, and manage breeding habitat.
 - a. Share locations of likely Black Rail habitat with these groups to facilitate habitat conservation.
 - b. Support and work with the range-wide Black Rail Working Group coordinated by the ACJV to provide information for decision makers and the public to better inform them about the Black Rail and its conservation needs. Outreach information on the Black Rail exists on websites (e.g., Center for Conservation Biology, William & Mary / Virginia Commonwealth University), and additional articles are planned.
- B. Publish posts on social media to inform stakeholder groups about the ecology and conservation needs of the Black Rail.
- C. Engage the local media to inform them about Black Rails and related conservation activities.

7. Regulations

The Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) was listed as Threatened under the U.S. Endangered Species Act in 2020. The species is federally regulated under a 4(d) Rule, which outlines prohibitions, best management practices, and exemptions (USFWS 2020). The species is also protected by the Migratory Bird Treaty Act administered by the USFWS. In North Carolina, it is classified as a nongame species and State Threatened. The NCWRC lists the Black Rail as a Species of Greatest Conservation Need; thus, conservation for and research on it is supported by the North Carolina Wildlife Action Plan and State Wildlife Grant program (NCWRC 2015).

8. Population Management

Actions such as translocation and captive breeding and release have not been recommended yet by Black Rail experts, the Black Rail Working Group, or other entities and do not appear in management or species assessment plans. If such efforts are determined to be effective and necessary in the future, the NCWRC will work with USFWS and the Black Rail Working Group to consider population management options in North Carolina.



SUMMARY OF ACTIONS NEEDED

ACTION	OBJECTIVES	PARTNERS / FUNDING*	DESIRED OUTCOMES
Mimic habitat disturbance using techniques such as prescribed fire and other methods to clear shrubs and trees.	Follow BMPs to minimize Black Rail mortality and reduce shrubs and trees to less than 20%. Significant acreage of <i>Sporobolus pumilus</i> and <i>Distichlis spicata</i> .	Partners: Universities, colleges, research institutes, TNC, USFWS, DOD, State Parks, private landowners. Funding: Pittman-Robertson (PR) and State Wildlife Grant (SWG) funds administered by the USFWS and grant sources such as America the Beautiful, NFWF, NRCS.	High quality Black Rail habitat and insignificant Black Rail mortality. Four-hundred and eighty-seven ha (1,200 ac) of additional Black Rail habitat from 2024 to 2056, with half in tidal areas and half in non-tidal areas.
Pursue land acquisition and conservation easements.	Conserve appropriate lands with or near Black Rail detections.	Partners: NC Coastal Land Trust, TNC, Ducks Unlimited, State Parks. Funding: NAWCA, NCLWF, USFWS Cooperative Endangered Species Fund Grants, Open Space Institute, National Coastal Wetland Conservation Grants, NRCS, USFWS Recovery Land Acquisition, DOD REPI Challenge.	Four-hundred and eighty-seven ha (1,200 ac) of additional Black Rail habitat from 2024 to 2056.
Respond to sea level rise.	Facilitate coastal marsh migration into uplands with appropriate topography, using prescribed fire. Support efforts to increase the elevation of coastal marshes where Black Rails are breeding.	Partners: TNC, USFWS, DOD, State Parks, NCDEQ, private landowners, NC Coastal Federation, ACJV, USACE. Funding: NFWF, federal funds from agencies such as NOAA and USACE.	A significant portion of the 243 ha (600 ac) of additional tidal habitats are protected from 2024 to 2056.
Respond to sea level rise.	Work with partners toward a national and state regulatory framework for saltmarsh restoration.	Partners: ACJV, universities, NC Coastal Federation, TNC, USACE, NCDEQ. Funding: See funding sources for SLR response above.	A functioning regulatory framework for saltmarsh restoration techniques.
Evaluate or use specialized cameras on UAS to evaluate topography and vegetation and to conduct Black Rail surveys.	Reasonable cost, practical application of UAS to improve understanding of Black Rail habitat conditions, abundance, and nesting.	Partners: NCDOT Aviation Division, UAS Section, entities that can share UAS, universities, State Parks. Funding: Section 6, SWG, PR, USGS SSP, CSWG.	More accurate data on Black Rail relative abundance and nest locations related to topography and vegetation.
Measure hydrology at occupied and unoccupied sites in tidal and non-tidal habitats, and in high coastal marsh upland migration zones.	Work with partners to gather hydrology data during the breeding season, at occupied and unoccupied sites.	Partners: Universities, colleges, research institutes, DOD, State Parks, private landowners. Funding: PR funds administered by the USFWS and grant sources such as America the Beautiful, NFWF, NRCS.	Understand the hydrology of Black Rail breeding habitat in tidal, non-tidal areas, and coastal marsh migration zones.

Summary of Actions Needed Continued.

ACTION	OBJECTIVES	PARTNERS / FUNDING*	DESIRED OUTCOMES
Manage impoundments as Black Rail breeding habitat in non-tidal areas.	Increase the amount of non-tidal Black Rail breeding habitat.	Partners: USFWS, private landowners, USFS. Funding: See funding sources for habitat restoration above.	Impoundments that are not needed or are not completely needed for waterfowl act as Black Rail breeding habitat.
Create wet meadows in non-tidal areas.	Increase appropriate Black Rail habitat inland away from the threats of SLR.	Partners: USFWS, TNC, private landowners. Funding: See funding sources for habitat restoration above.	Pastures and other lands near high coastal marsh act as Black Rail wet meadow breeding habitat.
Black Rail habitat creation, restoration, and management on NCWRC game lands.	Increase the amount of tidal and non-tidal Black Rail breeding habitat.	Partners: TNC, Ducks Unlimited. Funding: NCWRC federal funds sources for habitat restoration above.	Significant progress toward the goal of 487 ha (1200 ac) of additional Black Rail habitat from 2024 to 2056.
Market habitat conservation and management incentive programs directly to private landowners.	Increase the amount of tidal and non-tidal Black Rail breeding habitat.	Partners: Habitat cost-share incentive programs listed in this plan's text.	Hundreds of acres of additional Black Rail habitat receive some form of protection and / or management to reduce shrub and tree cover and to create and restore habitat.
Conduct monitoring and research.	Inform Black Rail conservation and management decisions.	Partners: USFWS, TNC, NPS, universities, ACJV, DOD.	An adaptive management framework that increases Black Rail abundance and distribution in North Carolina.
Provide education and outreach.	Increase awareness of the need to conserve Black Rails among partners and private landowners.	Partners: ACJV, North Carolina Black Rail Working Group, social media and media outlets.	Partners and landowners are working to conserve Black Rails.



GLOSSARY

Autonomous Recording Unit (ARU) - ARUs are weatherproof recording devices deployed in habitats to record the vocalizations of any species of interest.

Brackish Marsh – A marsh that is fed by a mix of fresh and salt water (brackish water). Lower elevations of the brackish marsh are inundated by brackish water for longer periods and are dominated by Black Needlerush (*Juncus roemerianus*). High elevation brackish marsh is dominated by moist-soil, experiences infrequent inundation or tidal influence, is mainly rainwater fed, and has a higher diversity of plant species. When inundation or fire are too infrequent, shrubs can dominate high brackish marsh.

Breeding Habitat – Breeding habitat includes freshwater herbaceous marshes or high elevation salt or brackish marsh with shallow water (moist-soil to 3 cm [1.18 inches] deep). Habitat has dense herbaceous cover, limited woody cover, and topographic variation (gentle slope or topographic highs/lows) that provides refugia when conditions are too wet, and moist areas for foraging when conditions are dry. Currently in North Carolina, Black Rails are found in high elevation brackish and saltmarshes dominated by Saltmeadow Cordgrass (*Sporobolus pumilus*) and Coastal Saltgrass (*Distichlis spicata*). However, Black Rails also may breed in Sawgrass (*Cladium jamaicense*), other grasses and herbaceous vegetation, and Black Needlerush (*Juncus roemerianus*) in North Carolina, provided water is shallow enough.

Breeding Phenology – Timing of breeding related cyclical or seasonal events.

Call-response Survey – A survey done with an audio player and speaker where a species’ vocalizations are played to elicit a response from the species of interest in a potential habitat area.

Clutch Period – A period when eggs are in the nest.

Coastal / Salt Marsh Migration – A process during which sea level rise causes salt intolerant vegetation to die, allowing salt-tolerant marsh plants to move inland and up the elevation gradient.

Conservation Easement – A voluntary agreement by a landowner to restrict specific uses of a property for a specified amount of time. The easement is either voluntarily donated or sold by the landowner to an entity that is legally responsible to enforce the easement, usually a type of land trust. Financial incentives are usually received by landowners that donate conservation easements.

eDNA – Environmental DNA is the DNA in cellular material shed by organisms (via skin, excrement, etc.) into aquatic or terrestrial environments that can be sampled from environmental materials (e.g., soil, water) and identified to the originating species.

Extirpation – Local extinction that occurs when a species ceases to exist in a defined geographic area, though it still exists elsewhere.

Fire Line – A line of varying width that is cleared of vegetation to remove combustible materials down to mineral soil to prevent fire from passing through it.

Ghost Forest – Areas of dead trees killed by saltwater intrusion into soils and/or increased water levels.

High Marsh / High Coastal Marsh – High elevation zones in herbaceous marshes near or adjacent to the coast or an estuary. A marsh zone situated above the mean high water level, inundated only during rain events, extreme high tide (such as spring and king tides), and storm surge produced by coastal storms.

Inland Habitat – Habitat that is not affected by any tides or storm surge, but which serves as Black Rail habitat.

Landowner Assurance Program – A voluntary agreement between a landowner and the U.S. Fish and Wildlife Service or other authorized wildlife agency, whereby the landowner agrees to certain conservation practices that will benefit a species, in exchange for limited liability for the fate of the species that occupies their land.

Lidar (Light Detection and Range) – A laser-based remote sensing method that can be used to plot or map three-dimensional topographic or vegetative characteristics on the ground.

(MCP) Minimum Convex Polygon – One of many ways to measure or map the area an animal uses (e.g., its home range) throughout a defined period of time. It reflects the smallest polygon that encloses a set of points; in this case, multiple known locations of a single animal.

Microhabitat – Small scale characteristics or properties within an area used by a species to secure resources for their survival over a period of time.

Prescribed Fire – An intentionally set fire or “controlled burn” that is planned with specific vegetation management objectives, conducted during safe weather conditions by highly trained personnel.

Runneling – A marsh restoration process in which shallow channels are created in the marsh to drain pools of water, promote revegetation, and restore tidal hydrology.

Sheet Water – A thin layer of surface water that forms large areas of shallow (no more than 1 inch) inundation.

Sheet Water Flow – Water that flows over land in a thin sheet.

Shoreline Hardening – Construction of artificial structures such as seawalls, revetments, riprap, and bulkheads designed to block or inhibit landward movement of a shoreline, typically used to protect structures and infrastructure from erosion and coastal hazards.

Subspecies – A population of a species in which individuals do not interbreed due to geographical separation or by habitat use. Sometimes subspecies have genetic differences to other populations of the same species.

Vegetation Composition – The variety and relative proportions of plant species found in an area.

LIST OF ACRONYMS

- Atlantic Coast Joint Venture (ACJV)
- Autonomous Recording Unit (ARU)
- Best Management Practice (BMP)
- Department of Defense (DOD)
- National Fish and Wildlife Foundation (NFWF)
- National Oceanic and Atmospheric Administration (NOAA)
- National Park Service (NPS)
- National Wildlife Refuge (NWR)
- North American Wetlands Conservation Act (NAWCA)
- North Carolina Department of Environmental Quality (NCDEQ)
- North Carolina Land and Water Fund (NCLWF)
- Pittman-Robertson (PR)
- Sea Level Rise (SLR)
- The Nature Conservancy (TNC)
- U.S. Army Corps of Engineers (USACE)
- Unoccupied Aerial Systems (UAS)
- U.S. Department of Agriculture (USDA)
- U.S. Fish &Wildlife Service (USFWS)

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