



Lower Roanoke River Wetlands Game Land Management Plan



2015 – 2025

NC WILDLIFE'S CROWN JEWELS

North Carolina's game land system is based on science-driven management practices and is an exceptional asset for the people of the State of North Carolina. The 2 million acres of NCWRC owned and managed land create HIGH Ecosystem value in flood protection with positive effects on property values and air and water quality, while helping to prevent additional restrictive environmental regulations.

The primary purpose of our game lands is the conservation of North Carolina wildlife species and the provision of public hunting, trapping and fishing opportunities. Our game lands are important players in the preservation of rare, threatened and endangered species. Prescribed burning and early successional habitat management allow for healthy habitats for thriving wildlife. Fields left fallow and disked on alternating years promote natural herbaceous regeneration. Water levels of impounded wetlands are drawn down at appropriate times to create conditions beneficial to waterfowl. Protection of stream buffers ensures that precious fish species are protected and encouraged along with thriving game fishes. Heritage forest land is worked and preserved and rare forestlands are protected.

The game lands also provide broad expanses of public recreational opportunities. North Carolina has more acreage of managed game lands than all states east of the Mississippi, with the exceptions of Florida and Michigan, both of which include lake and ocean frontage as managed land. There is overwhelming public endorsement of conserving the land along with documentation of the economic benefits of doing so. According to the outdoor recreation industry, over \$3.3 billion is spent annually on wildlife related recreation in our state alone. As North Carolina transitions from a traditional economy based on tobacco, furniture and textiles to a global economy driven by knowledge-based enterprises, our managed public game lands help preserve our economy and our way of life.

Game lands include:

- A great treasure in the largest intact and least disturbed bottomland forest ecosystem in the mid-Atlantic Region and some of the oldest cypress-tupelo trees on the East Coast, many at least 800 years old;
- One of the largest, most intact remnants of longleaf pine ecosystems in North Carolina, a high priority wildlife habitat in the Lands Management program. Among the species dependent upon this type of habitat are bobwhite quail, a variety of songbirds, fox squirrels and the federally endangered red-cockaded woodpecker;
- The densest populations of black bear, white-tailed deer and turkey, and the highest density of nesting birds in the state. Most of our 32 black bear sanctuaries are on game lands;
- A system of floating waterfowl blinds, 19 public hunting blinds for disabled sportsmen, 32 public boating access areas, 33 public fishing areas, six wildlife observation platforms, four public WRC shooting ranges with plans to build and manage many more as opportunities occur;
- And some of the finest examples of multiple conservation collaborations in the country.

As in the past, it is anticipated that future projected expenditures will be funded by North Carolina's apportionment of Pittman Robertson Federal Assistance in Wildlife Restoration funding and license receipts, as well as from contributions from various conservation partners. The opportunity provided by these managed public game lands to our mission of conserving North Carolina's wildlife and habitat for future generations is priceless.

N.C. Wildlife Resources Commission staff has extensively contributed to the development and preparation of this plan through their various fields of professional expertise. All content, management strategies, recommendations, goals, and needs for change were developed using the best available science and professional working knowledge of the Lower Roanoke River Wetlands Game Land, its habitats, and terrestrial and aquatic species. Careful consideration has been given to all input received from the public, external agencies, and organizations that have an interest in or use the game land to ensure a that comprehensive management program is administered on the Lower Roanoke River Wetlands Game Land. The successful implementation of the plan will depend on the continued input and support from all interested parties.

Plan Development Team Members

- **David Allen**, Coastal Wildlife Diversity Supervisor, Division of Wildlife Management
- **Tyler Black, Ph.D.**, Eastern Aquatic Wildlife Diversity Biologist, Division of Inland Fisheries
- **Daniel Cabe**, Design Services Project Engineer, Division of Engineering and Lands Management
- **John Carpenter**, Avian Wildlife Diversity Biologist, Division of Wildlife Management
- **Richie Clark**, Central Coastal EcoRegion Management Biologist, Division of Engineering and Lands Management
- **Joe Fuller**, Migratory Game Bird Coordinator, Division of Wildlife Management
- **Jeff Hall**, Wildlife Diversity Biologist, Division of Wildlife Management
- **Isaac Harrold**, Program Manager, Division of Engineering and Lands Management
- **Doug Howell**, Waterfowl Biologist, Division of Wildlife Management
- **Tommy Hughes**, Coastal EcoRegion Supervisor, Division of Engineering and Lands Management
- **Jeremy McCargo**, District 1 Fisheries Biologist, Division of Inland Fisheries
- **Colleen Olfenbuttal**, Bear/Furbearer Biologist, Division of Wildlife Management
- **George Owens**, District 1 Area Sergeant, Division of Enforcement
- **Casey Phillips**, Central Coastal EcoRegion Wildlife Forester, Division of Engineering and Lands Management
- **Sara Schweitzer**, Coastal Waterbird Biologist, Division of Wildlife Management
- **Ken Shughart**, Southern Coastal EcoRegion Wildlife Forester, Division of Engineering and Lands Management
- **Evin Stanford**, Deer/Turkey Biologist, Division of Wildlife Management
- **James Strider**, Martin County Enforcement Officer, Division of Enforcement
- **Chris Turner**, District 1 Wildlife Biologist, Division of Wildlife Management
- **David Turner**, Northern Coastal EcoRegion Management Biologist, Division of Engineering and Lands Management

- **Chesley Ward**, Southern Coastal EcoRegion Management Biologist, Division of Engineering and Lands Management
- **Brian Watson**, Northern Coastal EcoRegion Technician Supervisor, Division of Engineering and Lands Management
- **Brent Wilson**, Northern Coastal EcoRegion Wildlife Forester, Division of Engineering and Lands Management
- **Craig Wolff**, Conservation Technician II, Division of Engineering and Lands Management

Executive Summary

The North Carolina Wildlife Resources Commission charged North Carolina Wildlife Resources Commission staff to develop Game Land Management Plans for all state-owned game lands. The creation of this plan was a joint effort from North Carolina Wildlife Resources Commission biologist and land managers, natural resource conservation groups and agencies, and the public. The primary goal for this plan was to establish a clear path for management activities for the Lower Roanoke River Wetlands Game Land for the next ten years and set a “Desired Future Condition” for habitat types beyond that ten year horizon.

Balancing increasing outdoor recreation demands with conservation objectives in protected areas provides a difficult challenge for land managers. The Lower Roanoke River Wetlands Game Land, like many other game lands, is being used by many user groups other than the traditional hunters, fishermen, trappers, and wildlife viewers. These non-traditional users put strains on the wildlife, habitats, traditional users, and infrastructure on the game land. Many of the non-traditional uses are acceptable on game lands at certain levels. However, unrestricted and unregulated use by any group can negatively affect the natural resources that draw people to visit the game land. Other than hunting and trapping, all other uses are not regulated on the Lower Roanoke River Wetland Game Land. Many of these uses may be more appropriately conducted on State Parks where conflicts between hunters and trappers do not exist and infrastructure is designed for such uses. Many of the amenities asked for during the public input process are already being offered by State Parks who receive land acquisition funding from many of the same sources as the North Carolina Wildlife Resources Commission.

The Lower Roanoke River Wetlands Game Land is a part of a sensitive ecosystem that has long been a part of conservation concern. The Roanoke River Basin is considered the largest intact and least disturbed bottomland forest ecosystem remaining in the Mid-Atlantic Region. The bottomlands are recognized as a Nationally Significant Natural Area. The Roanoke River floodplain has been the focus of many conservation groups including Ducks Unlimited, National Wild Turkey Federation, Partners in Flight, American Bird Conservancy, NC Natural Heritage, The Nature Conservancy, and the US Fish and Wildlife Service. Many times these conservation efforts are aimed at preserving the various habitat communities that are used by nearly 220 bird species. This plan cannot begin to acknowledge the work that has been done in the last five decades to conserve the great treasure called the Lower Roanoke River Basin. This plan sets a direction for the North Carolina Wildlife Resource Commission to preserve the hunting, fishing, trapping, and wildlife viewing tradition that so many people across the state come to enjoy on the Lower Roanoke River Wetlands Game Land.

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Introduction

North Carolina Wildlife Resources Commission

The North Carolina Wildlife Resources Commission, hereafter known as NCWRC, was established in 1947. Prior to 1947, the tasks of managing state owned Wildlife Management Areas were executed by the Department of Conservation and Development. General dissatisfaction with the program led to the creation of the Wildlife Resources Law in 1947 that established the North Carolina Wildlife Resources Commission.

Since 1947, the NCWRC has been dedicated to the conservation and sustainability of the state's fish and wildlife resources through research, scientific management, wise use, and public input. The NCWRC is the state regulatory agency responsible for the enforcement of fishing, hunting, trapping, and boating laws and provides programs and opportunities for wildlife-related educational, recreational, and sporting activities.

Game Land Program Mission Statement

Consistent with the original establishment legislation for the NCWRC, the mission of the game lands program is to enhance, facilitate, and augment delivery of comprehensive and sound wildlife conservation programs. Inherent in delivery of a land conservation program consistent with this mission is the feasibility and desirability of multiple uses on lands owned by the state within the system. In addition to hunting, fishing, trapping, and wildlife viewing as primary uses, we recognize the desirability of providing opportunities for other activities on state-owned game lands that are feasible and consistent with the agency's mission, and compatible with these traditional uses.

Game Land Program Management Objectives

- To provide, protect, and actively manage habitats and habitat conditions to benefit aquatic and terrestrial wildlife resources
- To provide public opportunities for hunting, fishing, trapping, and wildlife viewing
- To provide for other resource-based game land uses to the extent that such uses are compatible with the conservation of natural resources and can be employed without displacing primary users
- To provide an optimally sustainable yield of forest products where feasible and appropriate and as directed by wildlife management objectives

History

Prior to 1971, game lands in North Carolina were limited to designated and tightly controlled Wildlife Management Areas. In 1971, the current Game Lands Program was established. This change involved the expansion of game lands from about 700,000 acres to 1.5 million acres, changes in regulations, and reductions in fees to hunters and fishermen (Dean 1971). The old Wildlife Management Areas were incorporated into the new Game Lands Program, but the new program also allowed the Commission to lease/incorporate additional lands as game lands to expand the land base. Beginning in the 1980s, land owners (both corporate and private) realized they could lease their properties for a higher rate to hunting clubs and private individuals and began to do so. These properties were subsequently removed from the Game Lands Program. Fortunately, the Natural Heritage Trust Fund was established in 1987 and the Clean Water Management Trust Fund in 1996. These funds provided money for the fee simple acquisition of select properties, many of which have been incorporated into the Game Lands Program. These Funds greatly compensated for the loss of game lands leased from the private sector and currently over 2 million acres are enrolled in the Game Lands Program.

With the Management Area system, Commission staff was housed on each management area. These personnel were assigned both law enforcement and habitat management duties on their respective areas. Administration of the new Game Lands Program was assigned to the Division of Wildlife Management. Depot locations with equipment and habitat development crews were established and strategically located in the vicinity of all game lands in the state. All law enforcement on these properties was assigned to the Division of Law Enforcement. With some minor organizational changes this system remained intact until 2012. In 2012, land management staff in the Division of Wildlife Management and certain similar positions in the Division of Inland Fisheries were merged with Division of Engineering staff into the Division of Engineering and Lands Management. This organizational change was made to deliver a more comprehensive and efficient wildlife and fisheries management program on all public lands and waters in the state. Depots remained at former locations with the establishment of new depots/crews at certain remote locations that were not efficiently served under the former program.

Purpose and Need

The purpose of this Game Land Management Plan is to provide a guide for managers to follow in the creation of wildlife and land management prescriptions. Fish and wildlife habitat needs were given priority; outdoor and wildlife related requests/activities were considered individually depending on compatibility and appropriateness. All aspects of game land management were considered in the development of this Plan and include but are not limited to; fish and wildlife communities, forest management, infrastructure development and maintenance, public uses, fish and wildlife information needs, financial assets and future needs, future plans for acquisition,

regulations and enforcement, and existing and needed partnerships and collaboration. While this plan was written to a ten year horizon, it will remain a living document able to adapt to change.

More specifically, this plan will:

- Provide a clear direction for game land management.
- Provide the public, local, state, and federal officials with a better understanding of game land management and objectives.
- Provide clear management objectives to ensure that these actions are consistent with the game lands program goals.
- Provide a basis for future budgetary operational expenses and manpower needs.

Regional Context

The Lower Roanoke River Wetlands Game Land (LRRWGL) is located in the Mid Atlantic Coastal Plain. In North Carolina, a huge diversity of fish and wildlife habitats exist across the three distinctive regions of the state: the Coastal Plain, the Piedmont, and the Mountains. These regions fall within larger ecoregions that span state borders and link North Carolina to neighboring states (Fig. 1). Elevations ranging from sea level to over 6,000 feet provide habitat for over 1,000 species of birds, mammals, fish, reptiles, amphibians, mollusks, and crustaceans, in addition to thousands of other invertebrate species.

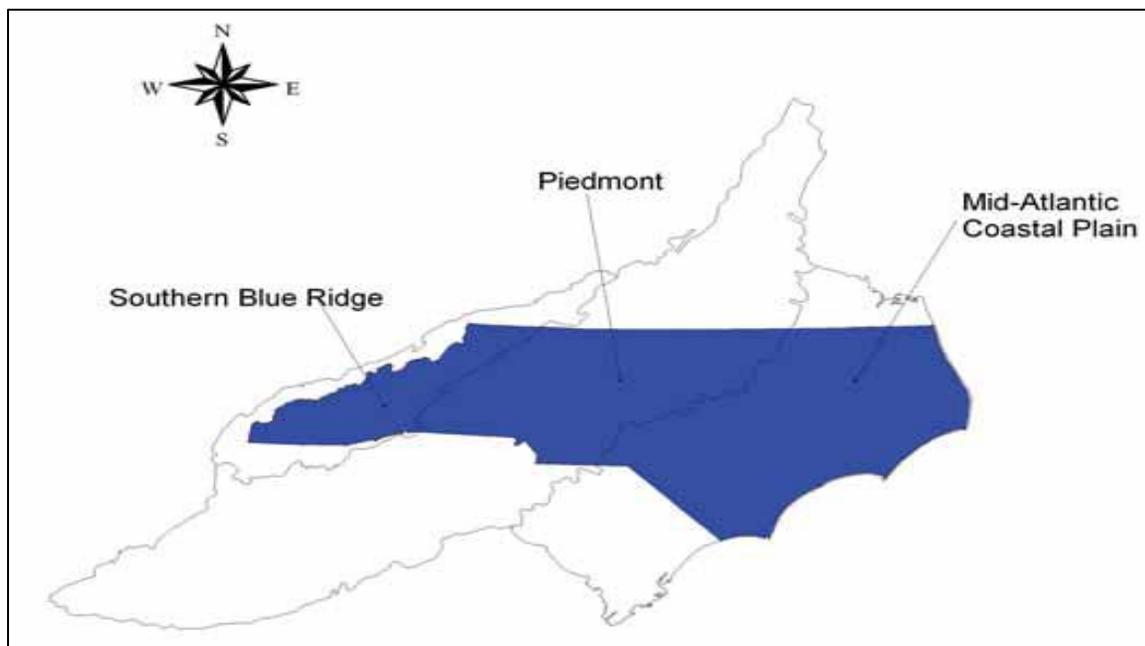


Fig. 1. Ecoregional delineations in North Carolina (Bailey 1995).

The Coastal Plain region is characterized by flat lands extending from the coast inland an average of 125 miles. Elevations in the region increase inland at approximately one foot per mile. The region covers almost two-fifths of the area of the state.

The Roanoke River, with its headwaters in the Blue Ridge Mountains of Virginia, flows 410 miles through Virginia and North Carolina before emptying into the Albemarle Sound at Bachelor Bay. Approximately 64% of the basin lies in Virginia. In North Carolina, the Roanoke River flows 137 miles and its basin comprises of 3,503 square miles. Along its course, three major dams have altered the hydroperiod on the lower reaches of the Roanoke below Roanoke Rapids. The floodplain in the lower reaches of the Roanoke River can be as much as 5 miles wide (Fig. 2).



Fig. 2. Map of the Roanoke River basin (García 2012).

Role of the Lower Roanoke River Wetlands Game Land in Regional Conservation

The Roanoke River Basin is considered the largest intact and least disturbed bottomland forest ecosystem remaining in the Mid-Atlantic Region. The Roanoke River Bottomlands are recognized as a Nationally Significant Natural Area by the N.C. Natural Heritage Program. Tracts of the Lower Roanoke River Wetlands Game Land listed as State Significant Natural Heritage Areas include the Conoho Creek slopes and floodplain, and the Conoho Neck Swamp. The LRRWGL are included in a patchwork of properties downstream of the Roanoke Rapids dam that account for nearly 98,000 acres of Significant Natural Heritage Areas. Within these

Significant Natural Heritage Areas, over 30,000 acres are Dedicated Nature Preserves. The lands included in the Roanoke River National Wildlife Refuge (RRNWR) are not listed as Dedicated Nature Preserves but contain similar habitats as that of the state-owned tracts.

Nationally significant natural areas contain examples of natural communities, rare plant or animal populations, or geologic features that are among the highest quality or best of their kind in the nation, or clusters of such elements that are among the best in the nation. Statewide significant natural areas contain similar ecological resources that are among the highest quality occurrences in North Carolina. There may be better quality representations or larger populations elsewhere in the nation, including possibly a few within the state (North Carolina Natural Heritage Program 2005).

Spurred by plummeting waterfowl populations, the North American Waterfowl Management Plan (1986) called for the protection, restoration, and enhancement of black duck migrating and wintering habitats on the east coast of the United States. The North American Waterfowl Management Plan (NAWMP) identified regions where partnerships could implement the goals of the NAWMP. The Atlantic Coast Joint Venture (ACJV) was formed in 1988 to offer a stepped down approach to fulfill the goals and objectives of the NAWMP. The original ACJV plan recognized the Roanoke River floodplain as an important waterfowl migrating and wintering area as well as an important wood duck breeding and wintering area (Atlantic Coast Joint Venture 1988).

The LRRWGL encompasses 10,077 acres that are based off of Geographic Information System data. The RRNWR comprises 20,978 acres in Bertie County. Other game lands that lie in the Roanoke River Basin include Bachelor Bay Game Land, Bertie Game Land, Tillery Game Land, Upper Roanoke River Wetlands Game Land, and a portion of Van Swamp Game Land. The Nature Conservancy owns and/or has easements on another 20,000 plus acres of land in the basin. Through the collaborative efforts of groups like the North Carolina Natural Heritage Program, The Nature Conservancy, Ducks Unlimited, North Carolina Department of Transportation, Clean Water Management Trust Fund, US Fish and Wildlife Service (USFWS), Easton Waterfowl Festival, and the NC Wildlife Resources Commission, large parts of the Roanoke River basin have been protected.

With the approach set forth by the NAWMP-ACJV to protect, restore, and enhance large acreages of wetland and upland buffer habitats, many wildlife species and plant communities have benefited from land protection. At least 220 bird species, of which 88 are residents, can be found in the Roanoke River floodplain. The Lower Roanoke River Wetlands Game Land lies in the center of the lower Roanoke River basin and contains some of the best examples of levee forest, cypress-gum swamps, and bottomland hardwoods in the state. These habitats support some of the highest densities of eastern wild turkey and white-tailed deer in the state.

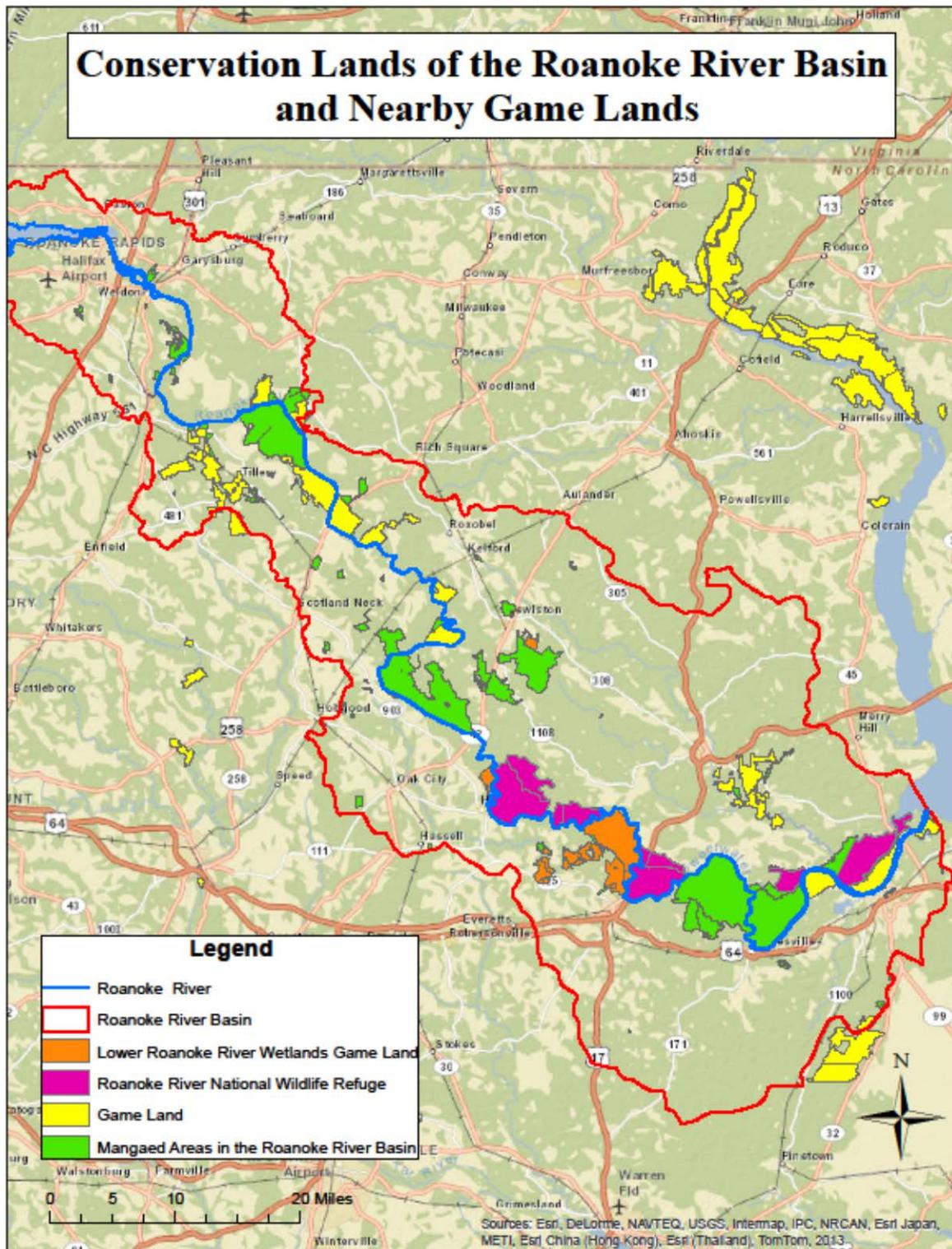


Fig. 3. Conservation Lands of the Lower Roanoke River Basin and Nearby Game Lands.

Game Land Specific Information

Location and Size

The Lower Roanoke River Wetland Game Land lies in Martin and Bertie counties and encompasses 10,077 acres (Fig. 4). Roquist Pocosin Tract is located in Bertie County, 2 miles southeast of Lewiston-Woodville, North Carolina. Roquist is a small tract at 331 acres but is part of the Roquist Pocosin Significant Natural Heritage Area.

Beach House Swamp is located 2 miles north-northeast of Hamilton, North Carolina in Martin County. Accessible by the public by boat only, Beach House Swamp sits on the Roanoke River. This 619 acre tract has over 2 miles of river front.

Deveraux Swamp lies between the Roanoke River and Conoho Creek. The main tract of Deveraux is 5,204 acres and like Beach House is accessible only by boat. Three other tracts are part of Deveraux Swamp locally known as the Rodgerson and Rogers Tract, 122 and 220 acres respectively, are located off of Popular Point Road, 5 miles northeast of Williamston. The last Deveraux tract, the Whitaker Tract, is accessible to the public only by small boat or canoe by paddling Conoho Creek downstream 0.6 miles from Popular Pont Road. The Whitaker Tract is 427 acres in size. Conoho Creek separates the Conoho Farms tracts from the Deveraux Swamp tracts. The tracts south of Conoho Creek are part of Conoho Farms.

Conoho Farms tracts include locally known tracts Everett, Roberson, Nicholson, Lindsley, and Whitley. The Everett Tract is 5.5 miles west-northwest of Williamston located on NC Highway 125. The NCWRC Williamston Depot is on this 638 acre tract. The Roberson and Nicholson tracts are accessible by vehicle from View Nicholson Road. Acreages are 146 and 657 respectively. The main tract of Conoho includes the Lindsley Tract and the Whitley Tract. The Whitley Tract is accessible from NC Highway 125. Mostly tupelo gum swamp, this 538 acre tract has two managed waterfowl impoundments converted from a former agricultural field. The Lindsley Tract, 1,178 acres, is accessible from a game land road by the Roanoke River at Moratoc Park in the town of Williamston. The Conoho Farms main tract with 1 mile of river frontage and a good road make this a popular fishing area of locals.

Lower Roanoke River Wetlands Game Land

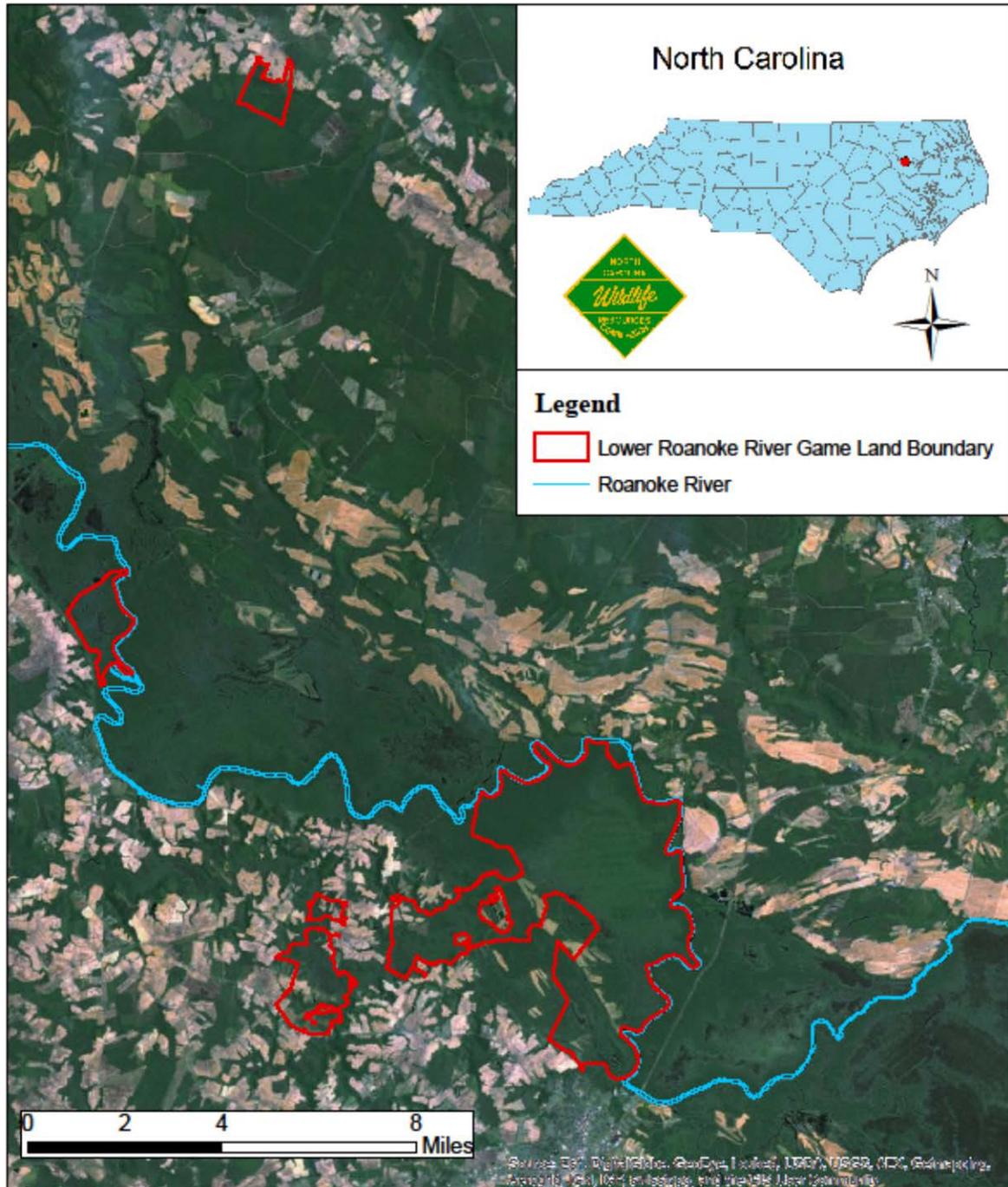


Fig. 4. Lower Roanoke River Wetlands Game Land.

Climate

Martin and Bertie counties fall into the humid subtropical climate zones as does most of North Carolina. Average annual temperature for years 1981-2010 is 60.7 degrees Fahrenheit. July and August typically being the warmest months with daytime temperatures close to 90 degrees Fahrenheit (National Oceanic and Atmospheric Administration 2013). The average yearly precipitation is 50.13 inches, with June, July, August, and September being the wettest months. November is typically the driest month with just over 3 inches of precipitation (National Oceanic and Atmospheric Administration 2013). The first freeze for Williamston averages November 5th and the average last freeze is March 26 (National Oceanic and Atmospheric Administration 2013). Winds are typically out of the west and northwest during the fall and winter months and south and south west through the spring and summer (State Climate Office of North Carolina 2013).

Significant rainfall occurs with tropical systems. Hurricanes that have severely impacted the area in recent history were Floyd in 1999, Isabel in 2003, and Irene in 2011.

Soils

The Roanoke River has had a pronounced impact on the soils over much of the bottomlands on the Lower Roanoke River Wetlands Game Land. Hydrology is the driving force in these bottomland systems. The historic unchecked floods prior to the Kerr Dam closure in 1953 and the current regulated floods have shaped the landscape as we now know it. When the river overtops its banks, the heaviest, largest sediments fall out first. This creates a natural levee next to the river channel. Once the water is ponded behind the levee, the finer silts and clays begin to settle out of the slow moving water.

The predominant soil type is Chastain. Nearly all of the soils and Beach House Swamp, the majority of the swamps on the main tract of Conoho Farms, and the entire main tract of Deveraux between the Roanoke River and Conoho Creek are classified as a Chastain silt loam. Chastain soils are characterized by being poorly drained with 0-2 percent slopes. Common tree species found are cypress and water tupelo.

Moving away from the river on Conoho Creek, a Bibb loam is the predominate soil found in the swamps. Water tupelo and cypress are found in these areas.

Most of the agricultural lands and managed wildlife openings on Conoho Farms and Deveraux Swamp are classified as Altavista, Bonneau, Conetoe, Norfolk, or Wickham Series. Each of these series is characterized by sandy loams or loamy sands and being moderately well to well drained.

Other soils series found on the Lower Roanoke River Wetlands Game Land in Martin County include Augusta, Goldsboro, Lynchburg, Roanoke, Seabrook, Stallings, Tarboro, and Winton. With the exception of the Winton series, these soils generally have a slope of less than 6 percent and are classified as a loamy sand or a sandy loam. Winton soils can have a slope as much as 60 percent and are found on the Lower Roanoke where upland habitats fall off into the swamps. USDA-NRCS online Web Soil Survey data were used to create the maps below (U.S. Department of Agriculture 2013b)(Fig. 5.).

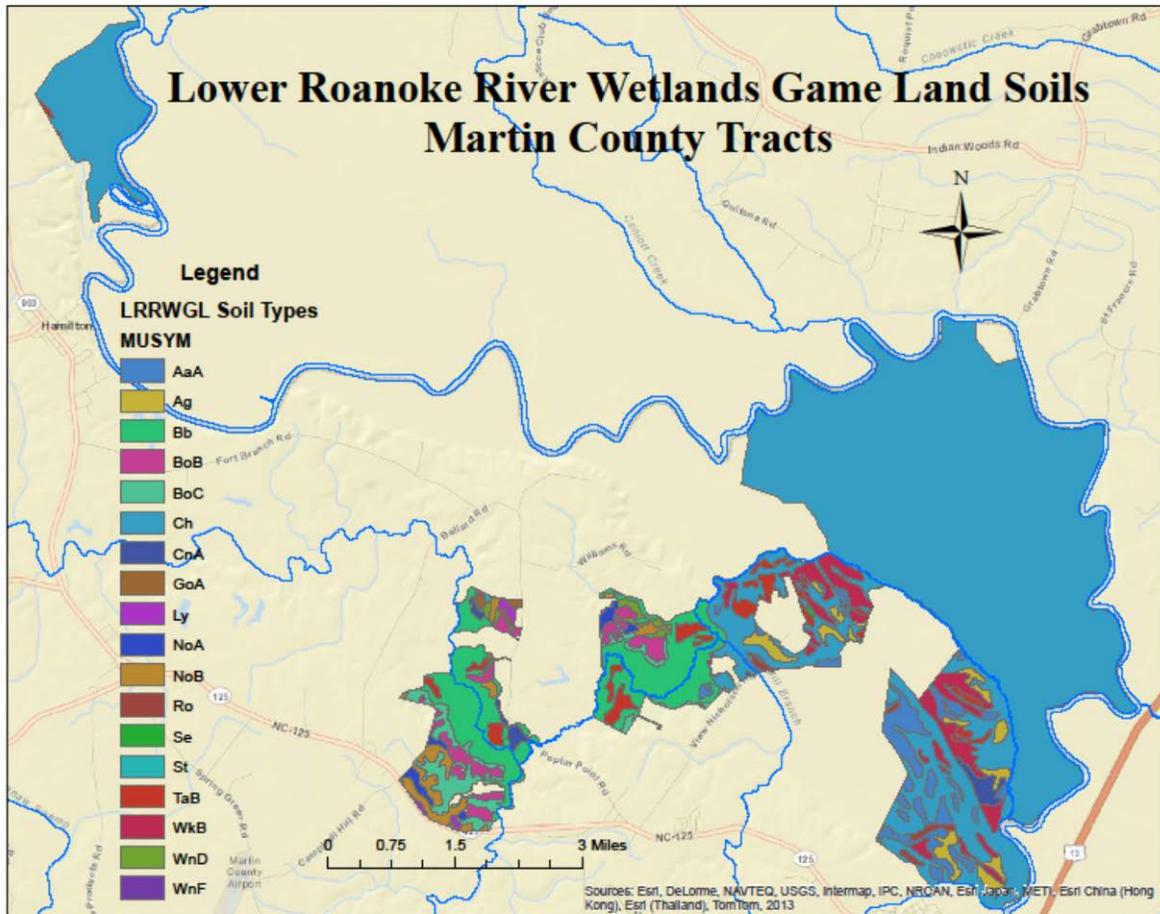


Fig. 5. Soils of the LRRWGL in Martin County.

The Roquist Pocosin tract in Bertie County has three main soil types (Fig. 6). The Leaf series consist of poorly drained soils. Leaf accounts for nearly one-third of the acreage on the southern end of the Roquist Pocosin tract. It is here that you will find a stand of mature hardwoods, mainly moist soil tolerant oaks. Pantego loam accounts for nearly another one-third of the area. Like the Leaf series, Pantego soils are also poorly drained. The third main type is Rains and like Pantego and Leaf, Rains is also a poorly drained soil. Much of this area has been clear cut and replanted in hardwoods. On most of the Norfolk soils, longleaf pines have been planted. Other soils present on Roquist include Bonneau, Goldsboro, Lynchburg, Udorthents, and Winton

series. The Udorthents series soils are characterized by a surface layer that has been removed due to borrow pits or landfills. Evidence of a landfill or a concrete dump site from an old saw mill in Lewiston exist; however, most of this area has been reseeded in loblolly pine. The map was created using data from the USDA-NRCS online Web Soil Survey (U.S. Department of Agriculture 2013a).

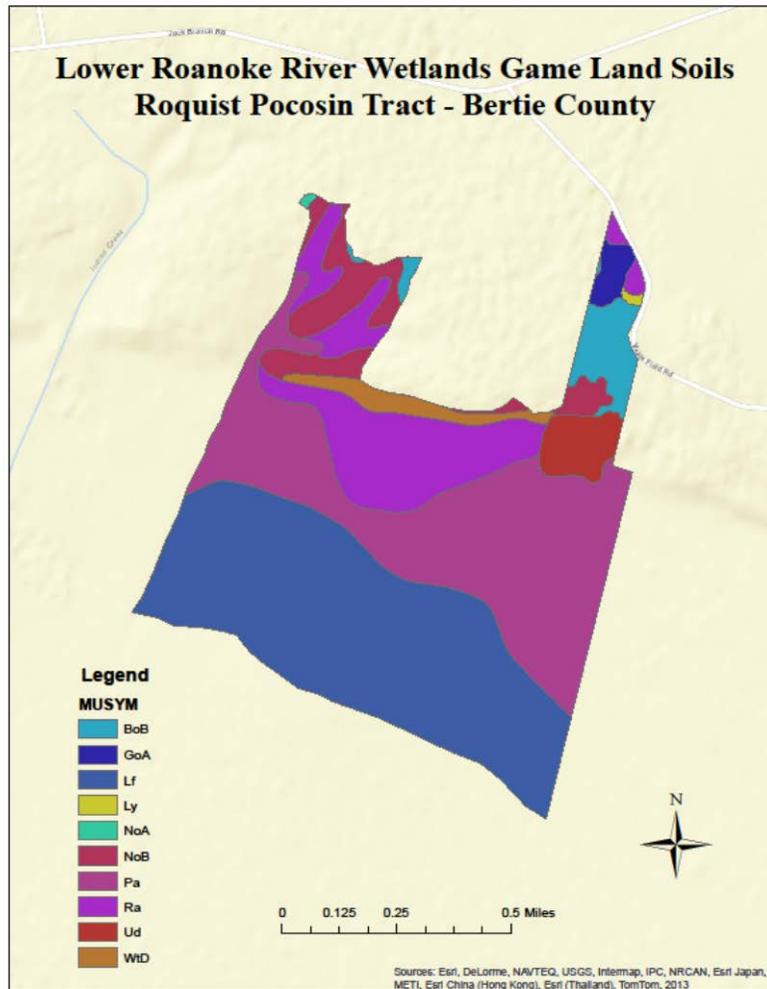


Fig. 6. Roquist Pocosin tract soils.

Table 1. Table of soil series and abbreviations for the Lower Roanoke River Wetlands Game Land.

Abbreviation	Soil Series
AaA	Altavista fine sandy loam, 0-3 percent slopes
Ag	Augusta loam, occasionally flooded
Bb	Bibb loam, frequently flooded
BoB	Bonneau loamy sand, 0-6 percent slopes
BoC	Bonneau loamy sand, 6-10 percent slopes
Ch	Chewacla loam, frequently flooded
CnA	Conetoe loamy sand, 0-3 percent slopes
GoA	Goldsboro sandy loam, 0-3 percent slopes
Lf	Leaf loam
Ly	Lynchburg sandy loam
NoA	Norfolk sandy loam, 0-2 percent slopes
NoB	Norfolk sandy loam, 2-6 percent slopes
Pa	Pantego loam
Ra	Rains sandy loam
Ro	Roanoke fine sandy loam, frequently flooded
Se	Seabrook loamy sand
St	Stallings loamy sand
TaB	Tarboro loamy sand, 0-5 percent slopes
Ud	Udorthents, loamy
WkB	Wickham fine sandy loam, 2-6 percent slopes
WnD	Winton fine sandy loam, 8-15 percent slopes
WnF	Winton fine sandy loam, 15-60 percent slopes
WtD	Winton fine sandy loam, 8-15 percent slopes

Hydrology

With most of the Lower Roanoke River Wetlands Game Land lying in the floodplain of the Roanoke River, the river and its upstream dams have a significant effect on the hydrology of the game land. Three major dams upstream of the game lands have altered the hydroperiod of the floodplain. Moving upstream from the game lands the Roanoke Rapids Dam became operational in 1955, Gaston Dam became operational in 1963. Both are owned and operated by Dominion Power. A record flood in 1940 on the Roanoke paved the way for construction of the John H. Kerr Dam which was completed in 1953. Built by the United States Army Corps of Engineers, the dam provides flood control and hydroelectric power. Figure 7 shows the effects the dams

have on discharges on the Roanoke River (U.S. Fish and Wildlife Service 2013). As evident by Figure 7, the dams have reduced the short-term high flows with lower flow rates that inundate the landscape longer. The Roanoke River main channel moves across the landscape over time as evident by the ridge-swell topography. This brown-water system carries sediments downstream and deposits those sediments as the water slows. Figure 8 demonstrates the effects of a river that overflows its banks on the topography of the floodplain (Wharton et al. 1982).



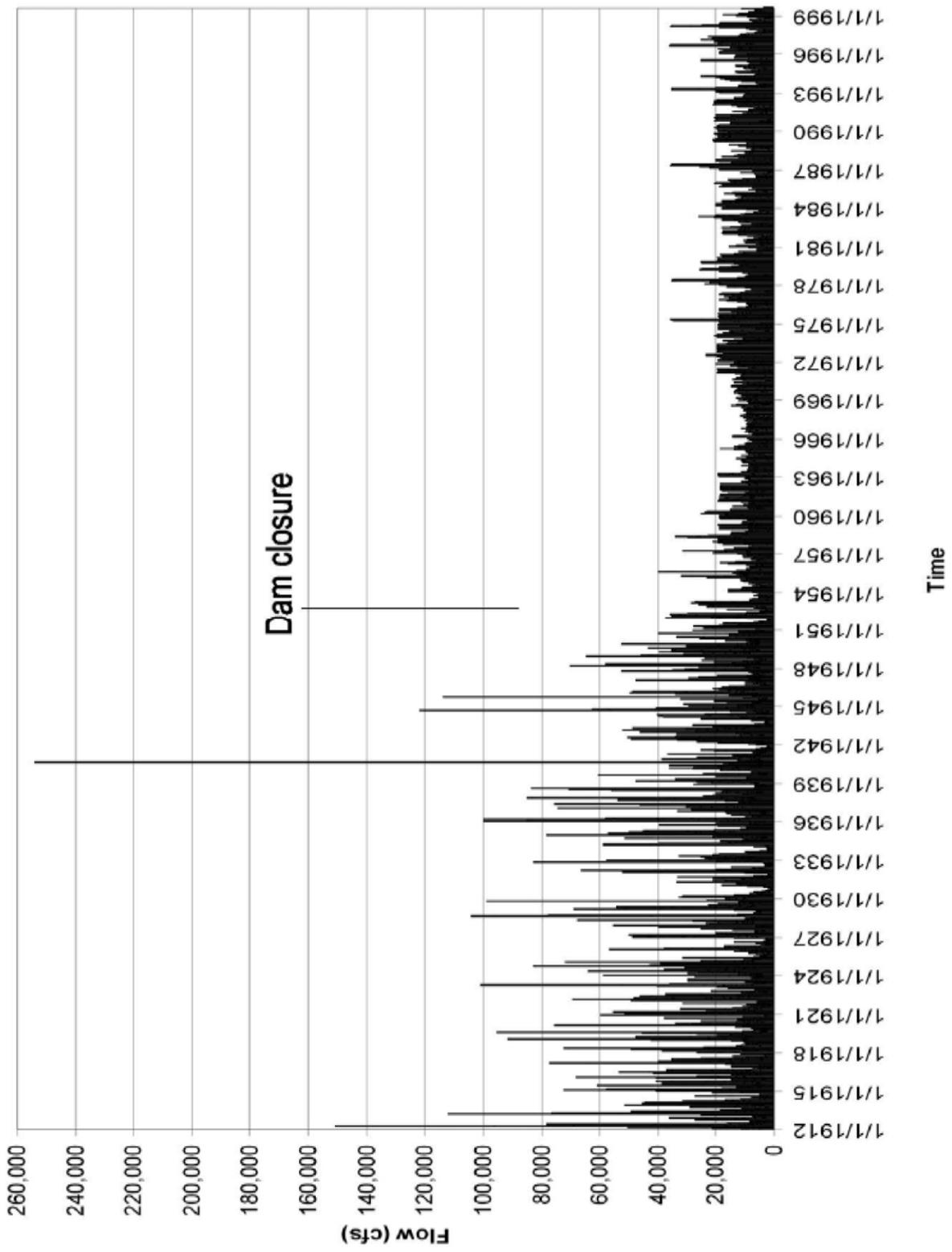


Fig. 7. Daily average discharges from Roanoke Rapids Dam from 1912 through 1999.

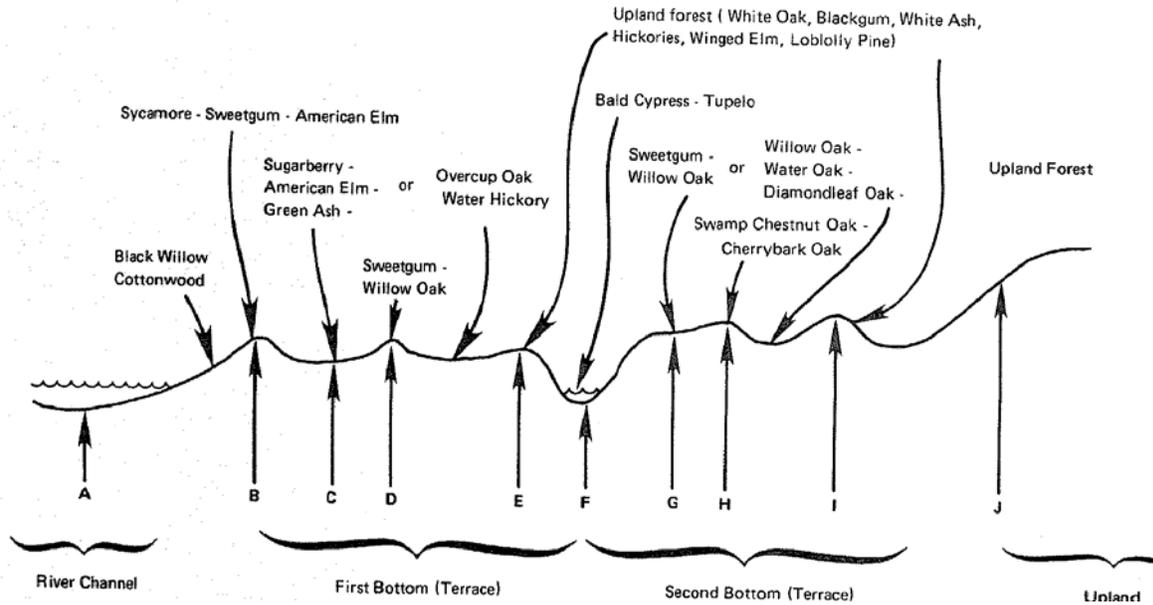


Fig. 8. The correspondence between alluvial floodplain microtopography and forest cover types. (A) = river channel; (B) = natural levee (front); (C) = backswamp or first terrace flat; (D) = low first terrace ridge; (E) = high first terrace ridge; (F) = oxbow; (G) = second terrace flats; (H) = low second terrace ridge; (I) = high second terrace ridge; (J)= upland. The vertical scale is exaggerated. (Wharton et al. 1982).

Conoho Creek drains 124 square miles and is the only major tributary to the Roanoke River on the LRRWGL (U.S. Geological Service 2007). Parts of 43 mile long Conoho Creek have a Natural rating by the North Carolina Division of Water Quality (North Carolina Division of Water Quality 2010). Conoho Creek divides the Deveraux Swamp from the Conoho Farms main tracts and splits Conoho Farms from the Deveraux Swamp tracts located off of Popular Point Road.

Habitats

The Lower Roanoke River Wetlands Game Land is mostly forested. Typical of many brownwater systems, the LRRWGL floodplain forest include levee forest communities next to the river channel, bottomland hardwood communities with moist soil oaks and green ash, and cypress-gum swamps of bald cypress and tupelo gum. Nearly the entire floodplain located on the game lands will fall into one of these habitats.

Mesic forest and oak forest habitats can be found outside the floodplain with the rise in elevation. Mesic forests are characterized by moist uplands that are protected from fire. Typical trees species include white oak, American beech, and yellow popular (Schafale and Weakley

1990). Oak forests on the drier sites include species such as white oak, hickory, and loblolly pine, and sweetgum (Schafale and Weakley 1990).

Dry coniferous woodlands make up only a small part of this game land. Dominated by loblolly pine, these habitats offer land managers the greatest flexibility in habitat manipulation of the forest types existing on the LRRWGL. Mechanical harvest and prescribed burns can reduce basal area to promote a ground vegetative layer that typically does not exist in today's unmanaged stands.

Overgrown fields, field borders, native warm season grass/forb plantings, and thinned forest stands are all examples of early successional habitats. Most of the fields on the LRRWGL are bordered by a 30 foot buffer of natural vegetation. Numerous fields are planted in native warm season grass/forb mixes and others managed as fallow fields are scattered across Conoho Farms and Deveraux Swamp. These habitats require some of the most intensive management including fire, disking, or mowing. Left unchecked, early successional habitats will revert to pine or sweetgum stands.

Unique to coastal game lands is the large agricultural land component that is found on the LRRWGL. Nearly 300 acres are enrolled in a cooperative program with local farmers. The Everett Tract devotes 40 acres to dove fields. Conoho Farms includes 84 acres managed as wildlife openings.

There are five managed waterfowl impoundments located on Conoho Farms totaling 97 acres. These impoundments are hunted and offer resting/feeding areas to waterfowl migrating north in the spring and offer foraging areas for shorebirds and wading birds in the spring and summer as water levels are being drawn down. Each of these habitat types will be discussed in greater detail in subsequent sections.

Surrounding Land Use

Martin and Bertie counties are mostly rural counties. Martin County's 2012 population estimate was 23,961 and Bertie County's 2012 estimate was 20,653 (U.S. Department of Commerce 2013). Both counties are reporting a population decline, most likely due to younger workers leaving the area to find better paying jobs. Williamston, in Martin County, is the county seat and borders the main tract of Conoho Farms to the north. The town of Windsor is Bertie's county seat.

Agriculture accounts for 89,371 acres or 30.5% of the land area in Martin County (U.S. Department of Agriculture 2013c). The 2012 planted acres in Bertie County were 105,200 acres, or 22%, of Bertie's total land area (U.S. Department of Agriculture 2013c). Major crops for both counties were cotton, soybeans, peanuts, corn, and wheat. Acres planted in sage are beginning to increase in both counties and may displace some wheat crops.

Martin and Bertie counties are heavily forested. Bertie County has 304,900 forested acres accounting for 64% of the county's land area with nearly 50.9% of forests owned by farmers or private individuals. Corporate and forest industry landowners make up another 43%. Sixty percent of Martin County is forested with corporate and forest industry landowners accounting for 41% of the forested area (Brown 2002). Private landowners own 49% of Martin County forest (Brown 2002).

Private forest and agricultural lands are the primary land uses that border the game lands. Several game land tracts share boundaries with residential housing. The Everett Tract of Conoho Farms surrounds a small hog operation. The hogs are house kept and the operation includes a 16 acre spray field.

Cultural Resources

North Carolina is not only known for its natural history, but also its rich historical/cultural resources. Several archaeological sites have been identified on Lower Roanoke River Wetlands Game Land that provides tangible evidence of the varied use of the property by the past residents of the area. These archaeological sites include prehistoric Indian habitation sites. Because the sites can be easily damaged, unauthorized artifact collecting activities on all state owned property including Commission owned lands are prohibited by the Archaeological Resources Protection Act (G.S 70 Article 2)(Appendix I). Two cemeteries exist on the Everett Tract of Conoho Farms. One cemetery consists of unnamed stones located at N 35.88040, W77.14537. The second cemetery has legible stones and is located at N 35.87486, W 77.13521.

Acquisition History

The North Carolina Natural Heritage Program and The Nature Conservancy identified tracts of the Roanoke River bottomlands and cypress-gum swamps that contained old-growth timber stands and unique fish and wildlife resources (Lynch and Crawford 1980, Lynch 1981). The North Carolina Wildlife Resources Commission began acquiring lands in the Roanoke River basin in the mid 1980's. Early acquisitions included Great and Goodman Islands and Sunken Marsh Islands in 1984. Partnering with the NC Nature Conservancy in 1985 and 1986, 5 tracts totaling 9,100 acres were purchased. These tracts include Broadneck Swamp, Company Swamp, Speller-Outlaw, and Conine Island. The fifth tract, Urquhart, is part of the Upper Roanoke River Wetlands Game Land in Halifax County.

In the *Congressional Record* of October 14, 1986 and in House Report 99-86, Part 1, filed in May 1985, the U.S. Congress identified the Roanoke River as a national priority under the Emergency Wetlands Resources Act (16 U.S.C. 3901 et seq.). The Emergency Wetlands Resources Act authorized the purchase of wetlands using monies from the Migratory Bird Conservation Fund (Federal Migratory Bird Hunting and Conservation Stamp) and cited large contiguous bottomland hardwoods as examples of areas that should be considered for funding.

In 1988, The USFWS began public meetings on the potential of establishing a National Wildlife Refuge to protect the bottomland hardwoods of the Roanoke River floodplain. Local opposition to a refuge in Martin County allowed for the partnership with the NCWRC. In a Memorandum of Understanding, dated August 14, 1989, the USFWS and the NCWRC agreed to a land exchange and cooperative management of the joint venture (Appendix II). The Roanoke River National Wildlife Refuge was established on August 10, 1989.

As part of the land exchange, the USFWS agreed to exclude from proposed acquisition all lands in Martin County. The USFWS “exchange” involved the NCWRC selling lands in Bertie County to the Nature Conservancy and then to the USFWS for “like kind” and “like value” properties. The MOU consolidated the refuge properties to Bertie County and the NCWRC properties to Martin County. Broadneck Swamp, Conine Island, Company Swamp, Great Island, Goodman Island, and Sunken Marsh Islands were transferred through the Nature Conservancy in 1992, 1993, 1993, 1997, 1997, and 1997 respectively.

With funds received from the land transfer with the USFWS, the Deveraux, Nicholson, and Lindsley tracts were purchased in 1992 and 1993. Other acquisitions include: Whitaker in 1990, Whitley in 1991, Rodgerson in 1992, Beach House Swamp in 1993, Everett in 1995, Roberson in 1997, and Rogers in 1998. The NCWRC added Roquist Pocosin Tract in Bertie County in 2008.

Purpose of the Lower Roanoke River Wetlands Game Land

The LRRWGL ecological importance stretches beyond that of waterfowl habitats. The North Carolina Natural Heritage Program recognizes 1 bird, a dragonfly, a mussel, a fish, 2 bats, a moss, and 3 plants that are State listed or rare species occurring on the game lands (Table 2). Other State or Federally listed species that have been observed or potentially could be on the game land include bald eagle (*Haliaeetus leucocephalus*), little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), wood stork (*Mycteria americana*), star-nosed mole (*Condylura cristata parva*), and timber rattlesnake (*Crotalus horridus*). Great blue herons (*Ardea herodias*) and great egrets (*Ardea alba*) have historically had a heronry on Conoho Farms.

Table 2. NC Natural Heritage Program State-listed species found on the Lower Roanoke River Wetlands Game Land. See Appendix XVI for Status and Ranking descriptions.

Taxonomic Group	Scientific Name	Common Name	NC Status	US Status	NC Ranking	US Ranking
Bird	<i>Setophaga cerulea</i>	Cerulean Warbler	SC	SC	S ₂ B	G ₄
Dragonfly	<i>Coryphaeschna ingens</i>	Regal Darner	SR		S ₂ ?	G ₅
Freshwater Bivalve	<i>Leptodea ochracea</i>	Tidewater Mucket	T		S ₁	G ₃ G ₄
Freshwater Fish	<i>Enneacanthus chaetodon</i>	Blackbanded Sunfish	SR		S ₂	G ₄
Mammal	<i>Corynorhinus rafinesquii macrotis</i>	Rafinesque's Big-eared Bat - Coastal Plain subspecies	SC	SC	S ₃	G ₃ G ₄ T ₃
Mammal	<i>Myotis austroriparius</i>	Southeastern Myotis	SC	SC	S ₂ ?	G ₃ G ₄
Moss	<i>Brachythecium rotaeanum</i>	Rota's Feather Moss	SR-D		S ₁	G ₃ G ₄
Vascular Plant	<i>Schisandra glabra</i>	Magnolia Vine	T		S ₁	G ₃
Vascular Plant	<i>Stachys tenuifolia</i>	Smooth Hedge-nettle	SR-D		S ₁	G ₅
Vascular Plant	<i>Leersia lenticularis</i>	Catchfly Cutgrass	SR-P		S ₂ ?	G ₅

The North Carolina Department of Natural Resources has designated large parts of the LRRWGL as Dedicated Nature Preserves. The Articles of Dedication designations recognize the importance and many times the sensitive nature that the habitats have to human interference (Fig. 9). The Articles of Dedication terms and conditions guide land managers on appropriate uses of the land (Appendix III).

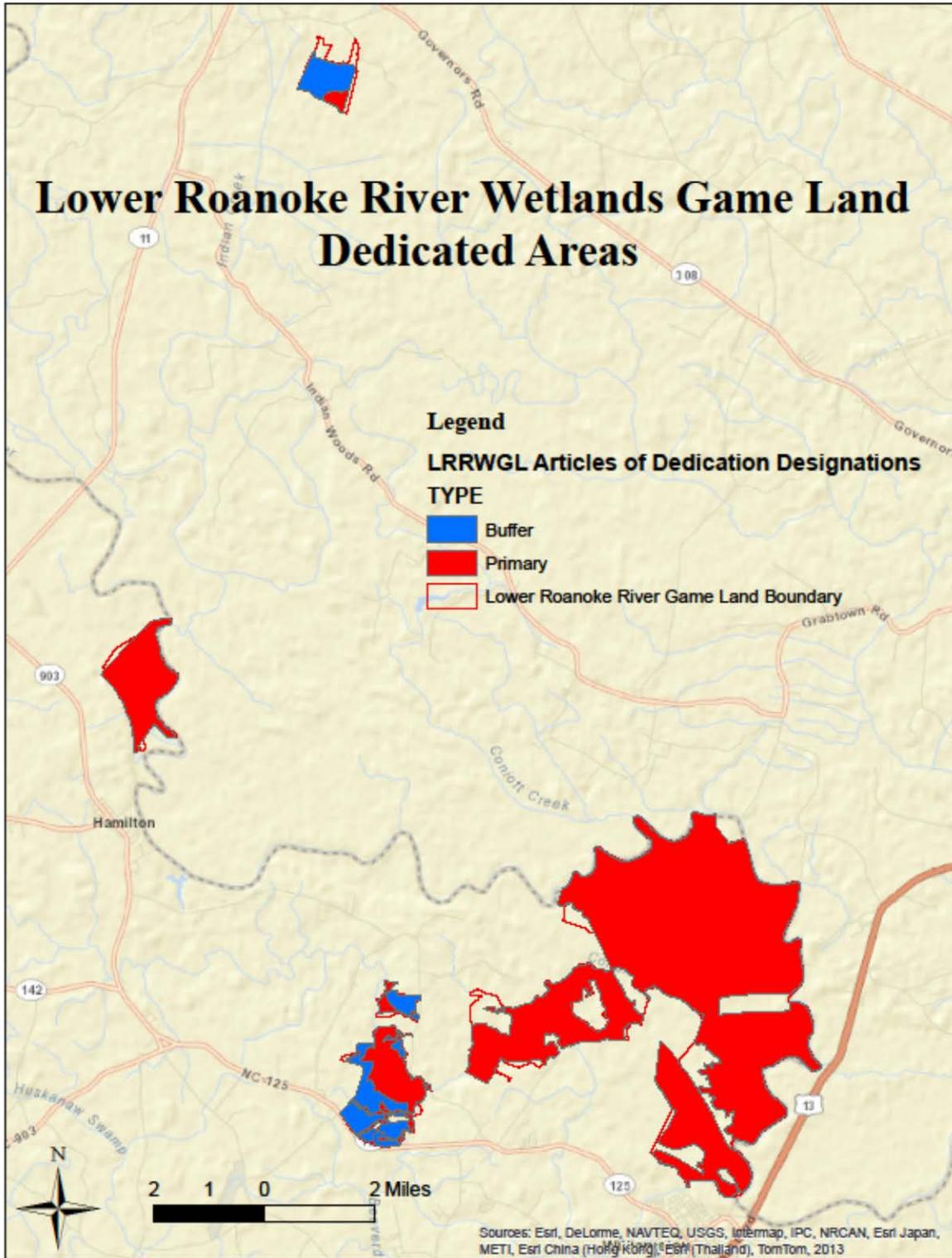


Fig. 9. Dedicated Areas on the Lower Roanoke River Wetlands Game Land.

High quality bottomland hardwoods forest, cypress-gum swamps, agricultural fields, and early-successional fields create a mosaic of habitats that both animals and people are attracted to. The richness of the land and wildlife diversity had led people to use the area for logging, farming, and hunting. The LRRWGL was acquired primarily to provide public hunting, trapping, and wildlife observation opportunities. Hunting has a long tradition on the Lower Roanoke River Wetlands. With some of the highest concentrations of deer and turkey populations in the state, hunters from across the state have come to Martin and Bertie counties to hunt these great resources. The game lands offer hunters the opportunity to camp at remote sites along the Roanoke River and hunt without the disturbance of vehicular noise. Hunters can also take advantage of the hundreds of acres of agricultural land that is somewhat unique to coastal game lands. With the addition of the waterfowl impoundments, many waterfowl hunters are applying for permits to hunt the impoundments and adjacent swamps.

The diverse habitats and species richness also attracts wildlife viewers. In 2001, the American Bird Conservancy designated the Roanoke River Bottomlands as an Important Bird Area for its global significance due to its diversity of birds and amount of vital habitats for wildlife of all types. Although large areas are remote where public access is by boat only, the game land also has several miles of roads that allow users vehicular access. The good access to the river for bank fishermen and access to the agricultural fields for hunters also is desirable for hiking and horseback riding. It is a goal of this document to lay out a path forward that will first conserve the natural resources and recognize the hunters, fishermen, trappers, and wildlife viewers as primary users and consider other game land uses to the extent that such uses are compatible with the conservation of natural resources and can be employed without displacing primary users.

The NCWRC began permit hunts on the LRRWGL during the 1987-1988 hunting season and currently covers deer, turkey, waterfowl, doves, and small game hunting. Archery Deer Hunts take place the entire archery only season by point-of-sale permit. Muzzleloader/Archery hunts are offered by lottery draw. There are 2 hunts, one for the first week and one for the second week of the Muzzleloader Firearm Deer Season. Applicants are able to apply for the week and tract that they want to hunt. The quota is set at 380 hunters for all the LRRWGL tracts including the tracts owned by the USFWS. The Gun Either Sex Deer Season hunts are also by lottery draw. Hunters select which 3-day hunt they want and the tract including RRNWR tracts. Hunters can pick up to 5 choices. There were a total of 2,680 permits available during the 2013 gun season. On some tracts like Deveraux Swamp, Broadneck Swamp, Great/Goodman Island, and Hampton Swamp the quotas may not be reached. These tracts have high quotas and many times the quotas are not reached for a variety of reasons. The LRRWGL also offers two types of Disabled Sportsman Hunts. The Tier II hunts are held during the Archery and the Gun Either Sex Season. These hunters and their companion must hunt from a designated Huntmaster lift blind that has been set up and identified in the map book. These hunts are held on Mondays and Tuesdays by permit only. The Tier III hunt is a NCWRC staff assisted hunt that currently allows

5 permitted disabled sportsmen and companions to hunt. This is a two day hunt held once a year on the game land. The hunters hunt from the Huntmaster lift blinds.

Turkey hunts are split into three types. All turkey hunts are issued by lottery draw. With the recent rule changed allowing youth to hunt turkey the entire week prior to the Statewide Spring Season, youths are allowed to apply for a Saturday, Monday, and Tuesday hunt and/or a Wednesday, Thursday, and Friday hunt. For the 2014 turkey season, there were 74 permits available. The Youth-Adult hunt is held during the opening Saturday of the Statewide Spring Season. This hunt is held only on the state-owned tracts and 30 permits were available for 2014. The regular turkey season hunts take place on the Thursday, Friday, and Saturday of each week. There were 126 permits available for the 2014 hunts. All of the turkey hunts are popular and nearly all of the quotas, including the youth hunts, are filled.

The early season and late season waterfowl hunts are by lottery draw permit only. There were 40 party hunts available for the early waterfowl season on the state-owned tracts and 400 party hunts available for the late season hunts. The late season hunts included some the refuge tracts. Being that most waterfowl hunters hunt together, parties are used instead of individual hunter quotas. Each party can consist of up to 3 hunters. Most of these party hunts are allocated.

The first 4 or 5 dove hunts are by lottery draw. There are 50 permits awarded for these hunts. There can be up to 250 permits awarded for the dove hunts. After the permit only hunts, hunters can purchase a small game permit to pursue doves defined by the dates listed on the permit and on those dates which fall in to the dove season framework. Small game hunting is by point-of-sale permit. There are no quotas for these hunting opportunities. The dates that can be hunted are defined in the Permit Hunting Opportunities booklet.

Game Land Goals and Measures of Success

Goals

- Provide for a diversity of habitat types through science based land management practices to ensure that a wide variety of terrestrial and aquatic wildlife species are conserved on the game land.
- Conserve popular game species at huntable levels through science based land management and sound regulations.
- Provide quality habitat across the game land for endangered, threatened, and rare species to promote sustainable and perpetual populations.

- Provide sufficient infrastructure and opportunity to allow game lands users a quality experience while on the game land with minimal habitat degradation and minimal conflict among user groups.

Measures of Success

- Increase early successional habitats by 9% by identifying 20 acres of open lands that can be converted to early successional habitats and convert those acres within ten years.
- Progress is being made to achieve Desired Future Condition in Oak Forest Habitats through management strategies outlined in the *Habitat Communities* section.
- Progress is being made in achieving Desired Future Condition in Dry Coniferous Woodland Habitats through management strategies outlined in the *Habitat Communities* section.
- Develop a horseback riding working group to set acceptable levels of riding on the Lower Roanoke River Wetlands Game Land and present recommendations as regulation proposals.
- Surveys and inventories of target sport fish and game species indicate that population levels of these species are being managed at sustainable levels.
- Surveys of game land users indicate a high level of user satisfaction.
- Efforts are made to monitor and provide information from the Green Growth Toolbox to planners for long range transportation planning and local land use planning that may affect habitat quality and the ability to manage habitats on the game land.

Habitat Communities

Floodplain Forest

Bottomland Hardwood, Levee Forest, and the Brownwater subtype of Cypress-Gum Swamp (Schafale and Weakley 1990) are the community types classified as Floodplain Forest on the LRRWGL and comprise the bulk of the property at 81.8 % (8,239 ac.). The Floodplain Forest type on the game land tracts are a small portion of a relatively intact river floodplain system. Flooding regimes on the Roanoke River, rather than rainfall, are a larger influence on soil

hydrology and seasonal inundation. Floodplain Forests on the game land occur on relatively diverse loam soils including sand, silt, and organic types.

Dominant tree species of bottomland hardwood communities on the Roanoke include: laurel oak, water oak, willow oak, overcup oak, red maple, sweetgum, and blackgum. Mid-story species indicative of this type include paw paw and musclewood. Switchcane is a common understory species on some sites, while shrub layers are dominant elsewhere. This forest type appears to be susceptible to invasion by Japanese honeysuckle and privets, which are invasive exotics. Generally, these sites on the Roanoke are flooded only during very high water events. Fire is infrequent in this community type, typically only impacting these sites during droughts.

The Levee Forest shares some of the same canopy species as the Bottomland Forest community with a few additions such as hackberry and sycamore. In contrast to the Bottomland Forest community, the Levee Forest community is situated adjacent to the river on water deposited materials. Flooding is not as frequent and long lasting as in the Cypress-Gum Swamps.

The Brownwater Cypress-Gum Swamps are characterized by seasonal flooding, typically with a closed canopy and a poorly-developed understory. The brownwater characteristic is indicative of silt-laden flood waters, which carry a nutrient load making this community relatively productive despite inundation periods. Flood tolerant canopy species dominants are bald cypress and tupelo. Fringe areas with shallower and shorter inundation periods have more tree species diversity including green ash. Due to environmental conditions requiring unconventional logging, historical timber harvesting targeted large high value trees, so rotation ages are longer than on adjacent uplands. Consequently, large diameter trees that develop hollows important for cavity-dwelling species are more abundant in this stand type.



A. Location and condition of habitat (Fig. 10)

The floodplain forest is a widespread type across the LRRWGL, occurring on all the game land tracts, on elevations ranging from 4-20 feet above sea level. The different community types of Floodplain Forest are segregated primarily by landscape position and consequently hydrology. Bottomland Hardwood communities are situated on large flats usually well away from the river

channel, Levee Forests on terraces adjacent to the river, while Cypress-Gum Swamps are in basins adjacent to the river or its tributaries.

Most of the game land's Brownwater Cypress-Gum Swamps are categorized as similar in age class with a few exceptions. The most notable exception is a 109 acre stand on the Deveraux Swamp tract that naturally regenerated following a harvest by the previous landowner about 20 years ago. The uniformity of the timber stands and lack of canopy openings to generate habitat diversity has negatively impacted waterfowl use over what was historically observed on the tracts. Occasionally, there have been past logging practices which removed only the highest value trees in some of the timber stands. This practice of "high-grading" has reduced the timber value and tree species diversity of the stands but has increased the age distribution as natural regeneration has filled the canopy gaps. Habitat quality for cavity-oriented species continues to improve as timber stand ages increase.

More workable ground than the Cypress-Gum Swamps, Levee Forest types were subject to logging in the past when the river served as a transportation corridor to the mill for raw forest products. Unless they have road access or a direct connection to other uplands Levee Forest are less likely to be harvested conventionally today. Most of the LRRWGL Levee Forests have not been under a harvest regime for some time, therefore most are mature stands with high wildlife habitat value.

Age class variability in the Bottomland Hardwood type is more likely with the youngest stands on the most accessible sites and older stands in more remote locations less amenable to logging activity. None of this stand type has been logged since acquisition by the State. The oak dominated stands of this type are significant contributors of mast and are seasonally important wildlife food sources. In contrast to the other LRRWGL tracts, the Roquist tract has an area of planted bottomland oak species on an organic loam soil. This tract is also unique from the others in that precipitation and depth to groundwater influence soil hydrology, rather than riverine dynamics. Usually the Bottomland Hardwood types were harvested predominantly by clear cutting, so naturally regenerating stands are relatively even-aged.

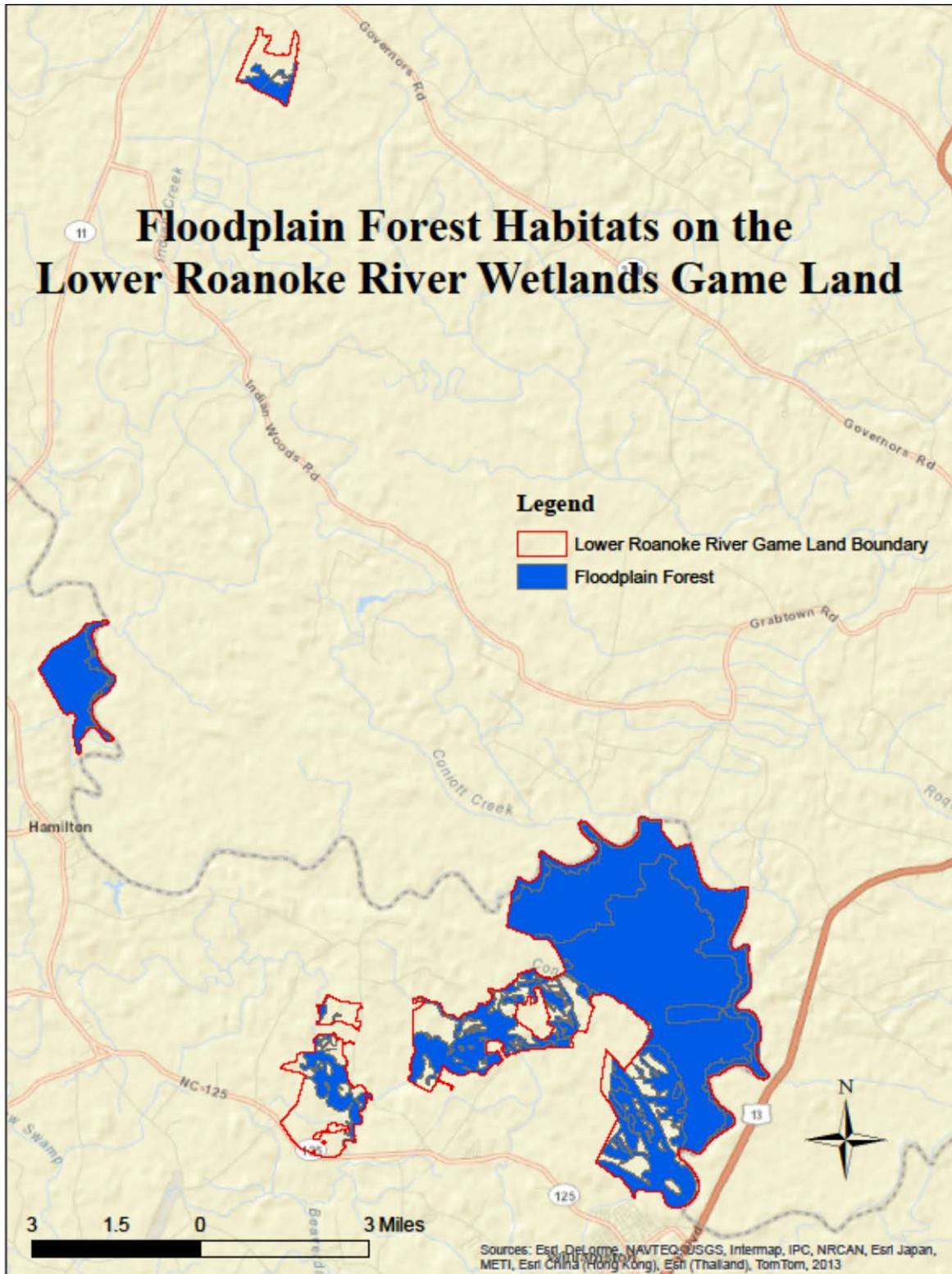


Fig. 10. Floodplain Forest Habitats on the LRRWGL.

B. Priority Species

The Floodplain Forests of the LRRWGL are recognized for its value to species requiring extensive forest tracts and been subjected to reduced habitat availability across their ranges, such as Cerulean and Swainson’s warbler. The priority game species identified for the Floodplain Forest type include: river otter, beaver, white-tailed deer, black bear, raccoon, gray squirrel, wood duck, woodcock, and wild turkey. The following table lists nongame species potentially found in this habitat type and their conservation status.

Table 3. Listed non-game species associated with floodplain forest habitat.

Taxonomic Group	Common Name	Scientific Name	State Status (Federal Status)	Natural Heritage State and Global Rank
Birds	Cerulean Warbler	<i>Setophaga cerulea</i>	SC	S ₂ , G ₄
	Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	S ₃ B, S ₃ N, G ₅
Mammals	Star-nosed Mole	<i>Condylura cristata</i>	SC	S ₂ , G ₅ T ₂ Q
	Southeastern Myotis	<i>Myotis austroriparius</i>	SC	S ₂ , G ₃ G ₄
	Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>	T	S ₃ , G ₃ G ₄ T ₃
Amphibian	Dwarf Salamander	<i>Eurycea quadridigitata</i>	SC	S ₂ , G ₅
Reptile	Timber (Canebrake) Rattlesnake	<i>Crotalus horridus</i>	SC	S ₃ , G ₅

C. Management Challenges

Due to the extensive and relatively intact floodplain system of the Roanoke River, some of the habitat fragmentation issues plaguing floodplain communities in other river systems have not been realized on the Roanoke. The upstream dam system constructed for flood control has resulted in prolonged flooding and has impacted wildlife use of this forest type, as well as negatively impacted tree regeneration.

The Articles of Dedication that apply to these tracts are designed to specifically address Floodplain Forest types for plant community restoration or water quality preservation purposes. The provisions that protect these areas from degradation also restrict potentially beneficial active management practices.

D. Management Strategies & Needs

The Articles of Dedication would limit timber management activities to a salvage operation of damaged trees following a catastrophic event, such as a hurricane. Since large rain events typically accompany a hurricane, timber salvage operations in these flood-prone sites are an unlikely scenario. Therefore, passive management retaining mature trees for their mast production and cavity potential with minimal site disturbance is the intended strategy. In the event a salvage endeavor was undertaken, water quality buffers with no equipment operation a minimum of 300 feet from the Roanoke River and 100 feet from tributaries would be maintained.

Suppression of exotic plant species would be a desirable and a conservation easement permissible activity within the bottomland forest type. Initially, monitoring to identify affected areas, species identification, and determination if control is feasible is the current priority. Development and implementation of a control plan before an infestation is too widespread could be within the temporal scope of this document with specific treatment measures formulated in annual planning documents.

The North Carolina Forest Service (NCFS) recommends that inspections should take place to detect insect or disease outbreaks. The NCWRC is not capable of annually inspecting the vast remote acreages on the game land. It is recommended that the NCFS incorporate the game land in their aerial surveillances. Once an outbreak is detected, the NCWRC should work with NCFS Forest Health Specialists and the NC Natural Heritage Program to develop an action plan.

E. Desired Future Conditions

In most cases the desired future conditions in the Floodplain Forest of ample mast production, adequate numbers and size of tree cavities, an abundance of coarse woody debris, and conditions for habitat specialists have been met or are proceeding in that direction without additional active management activities.

Agricultural Fields and Wildlife Openings

Early acquisitions of the Roanoke River Wetlands Game Land such as Broadneck Swamp and Company Swamp had excellent examples of floodplain forest. Open land habitats were non-existent across the game land landscape. As a result of the land swap outlined in the MOU with the USFWS for the establishment of the Roanoke River National Wildlife Refuge, the NCWRC was able to acquire properties with a significant open land component. Currently, there are 443 acres of agricultural fields and managed wildlife openings on the LRRWGL. These open lands are one aspect that makes this game land an attractive place for hunters. Valuing the importance of the agricultural lands to wildlife, the NCWRC implemented a Cooperative Farm Lease Program (Co-op) to continue farming operations on these lands.

Recognizing agriculture and wildlife management can be integrated, the NCWRC instituted a Co-op Farm Lease Agreement. The Co-op Farm Lease is a contract which specifies the area, lease period, acceptable practices, and payment. The lease addresses the use of pesticides, acceptable crops, and the amount of crop that must be left in the field. Another aspect of the lease is that the farmer must maintain a 30 foot field border around all edges of the field. Sealed bids are solicited every three years and the highest bidder wins the lease. Full lease details can be found in the Co-op Farm Lease in Appendix IV.

Acquisitions of agricultural lands have given the NCWRC an opportunity to manage large amounts of open land for wildlife with little cost to the agency. Through the Co-op Farm Program, locals, hunters, and wildlife have benefited from the open lands.

Similar to the agricultural lands described above, the NCWRC actively manages 84 acres of wildlife openings on the LRRWGL. Commonly referred to as “food plots”, these openings may or may not be planted in a given year. Depending on staff recommendations, common crops include sunflower, milo, millet, iron-clay cowpeas, chufa, clover, wheat, and oats.

Although agricultural lands and wildlife openings can offer habitat qualities similar to early successional habitats, their management differs significantly. Agricultural lands and wildlife openings by nature are void of cover during establishment and through the young growth stage of the crop. Peanuts and clover have virtually no vertical cover yet are highly valuable to deer and turkey. On the other hand, crops like sunflowers, corn, milo, and soybeans offer excellent cover where ground feeding birds can utilize the open type structure. Once established, early successional habitats provide cover the entire year, whereas, agricultural fields are ephemeral and supply cover only after sufficient growth has occurred and prior to harvest. What agricultural fields lack in cover, their importance to wildlife for nutritional value cannot be stressed enough.

A. Location and condition of habitat (Fig. 11)

There are 274 acres of agricultural lands enrolled in the Co-op Farm Lease Program. The majority (131 acres) are on the main tract of Conoho Farms. Typical crops include corn, soybeans, wheat, and peanuts. Sixty-seven acres are in a different Co-op lease on the Everett Tract. The Deveraux Co-op Farm lease includes 3 different tracts, Rodgerson, Rogers, and Whitaker, and comprises of 76 acres. Past crops planted on Deveraux include corn, soybeans, and milo.

Managed wildlife openings are interspersed around Conoho Farms. The Everett Tract includes 41 acres of former agricultural production fields now planted and managed as



dove fields. The dove fields are typically planted in white proso millet, browntop millet, sunflowers, milo, and occasionally corn. Corn has not been planted in the dove fields for several years but may be planted if necessary to help control undesirable/noxious vegetation. Anecdotal observations from the crops of harvested doves at the Everett Tract revealed that pokeberry and tropic croton were the preferred seeds eaten by doves at that location. The highest volumes of seeds found in the doves were from pokeberry and tropic croton followed by the millets then sunflower. Corn was found only in 2 of the birds. These observations were taken in a year where corn was planted in 9 of the 41 acres in the dove fields. Tropic croton, although considered a weed, grows very well in some of the sunflower fields and doves find the mix of sunflowers and croton attractive for the vertical structure and bare ground underneath.

Other wildlife openings are managed mainly for deer and turkey. Warm-season crops include soybeans, milo, sunflowers, chufa, and iron-clay cowpeas. Ladino clover and red clover are cool-season perennials that are commonly planted. Typical plot lifespan is about three years for these clovers. Crimson clover is a reseeding annual. Wheat or oats are commonly mixed with the clovers during establishment. Oats are commonly planted on the game lands and offer excellent late winter forage for deer. Turkeys find oat plots attractive in the spring and summer.

Although there are no wildlife openings on Deveraux Swamp, there are 100 acres of agricultural fields surrounded by managed field borders. Beach House Swamp has no openings. Roquist Pocosin does not have any openings but NCWRC staff has planted one of the trails in clover.

B. Priority Species

Priority game species identified for these habitats include: white-tailed deer, black bear, wild turkey, cottontail and marsh rabbit, Northern bobwhite, and mourning dove. The following table lists non-game species potentially found in these habitats and their conservation status.

Table 4. Listed non-game species associated with agricultural fields and open lands.

Taxonomic Group	Common Name	Scientific Name	State Status (Federal Status)	Natural Heritage State and Global Rank
Mammal	Star-nosed Mole	<i>Condylura cristata</i>	SC	S ₂ , G ₅ T ₂ Q

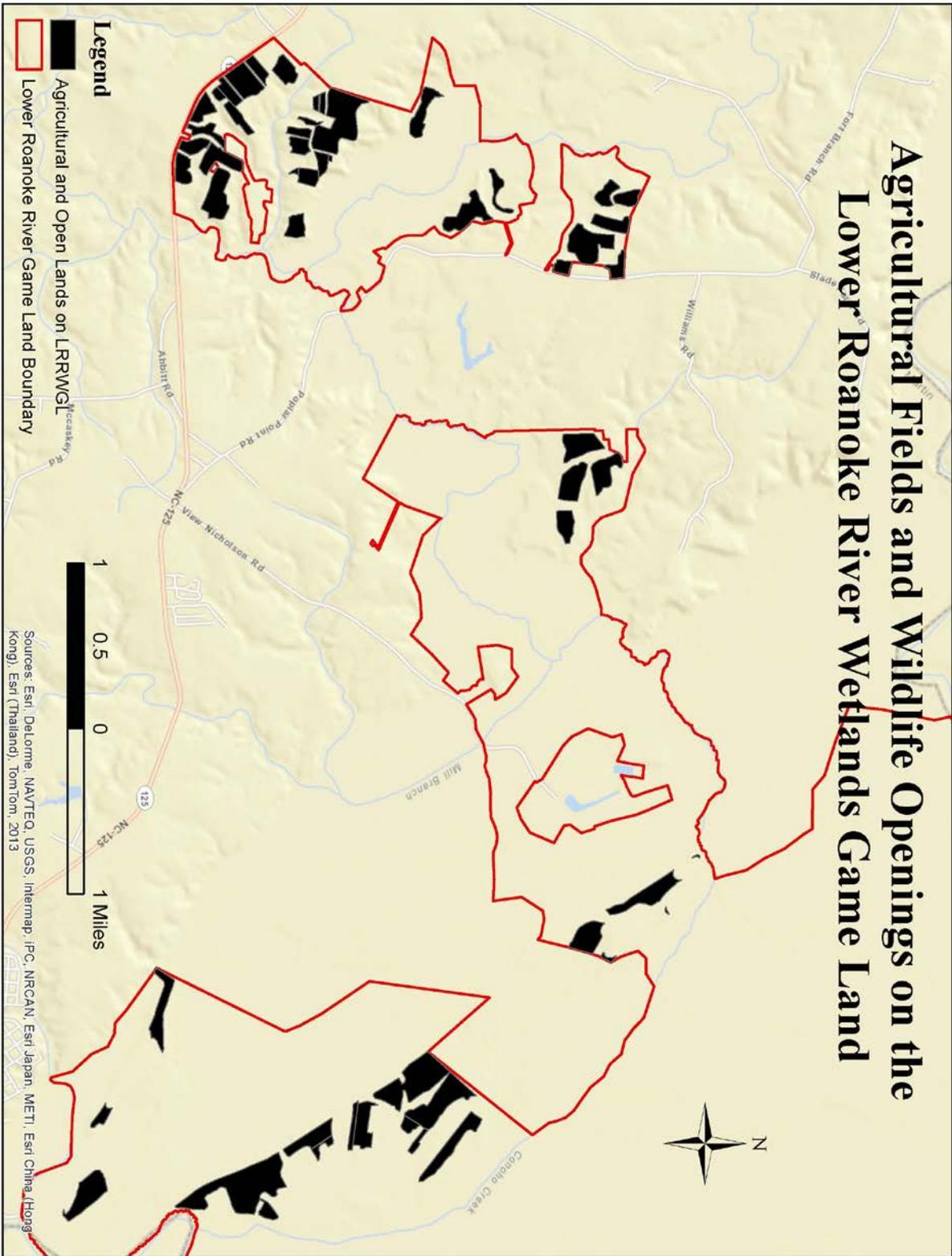


Fig. 11. Agricultural Fields and Wildlife Openings on the LRRWGL.

C. Management Challenges

One major challenge that affects agricultural fields and wildlife openings are noxious and unwanted weeds. Sicklepod has become a major weed species on the Conoho Farms tracts. The seeds and foliage are toxic and therefore are of no value to wildlife. Herbicides are available that can be used to control sicklepod. At the dove fields, pigweeds, and Palmer amaranth have been a continuous problem. Gains have been made in recent years to reduce the amount of pigweed and Palmer amaranth. Pre and post-emergent herbicides have been successfully used on the pigweeds. “Round-up Resistant” pigweed species are on the game lands. This fact has only little bearing on the establishment of crops in the dove fields as other herbicides are available to help control these broadleaf weeds. Other weeds that are common on different areas of the Co-op leases and food plots are bermudagrass and cocklebur. With the possibility of injury to nearby cotton and tobacco crops, 2,4-Dichlorophenoxyacetic acid (2,4-D) based herbicides are rarely used. These herbicides are effective in killing broadleaves; however, the adjacent agricultural fields limit the use of 2,4-D as a late spring herbicide. Further discussion on control of some of the common weeds will continue in the *Management Strategies and Needs* section.

When the river floods, nearly all access to the main tract of Conoho is cut off. When the USGS water level gauge at the Williamston reaches 11 feet, there is nearly 2 feet of water on Conoho Road. This amount of water limits personnel’s ability to manage the crops in Conoho. At that same water level, some of the crop land and wildlife openings are inundated with water. The graph below depicts the water level at Williamston from time period October 1, 2009 to October 31, 2010 (Figure 12). Water covered Conoho Road for over 6 months limiting access by NCWRC staff, the Co-op farmer, and hunters.

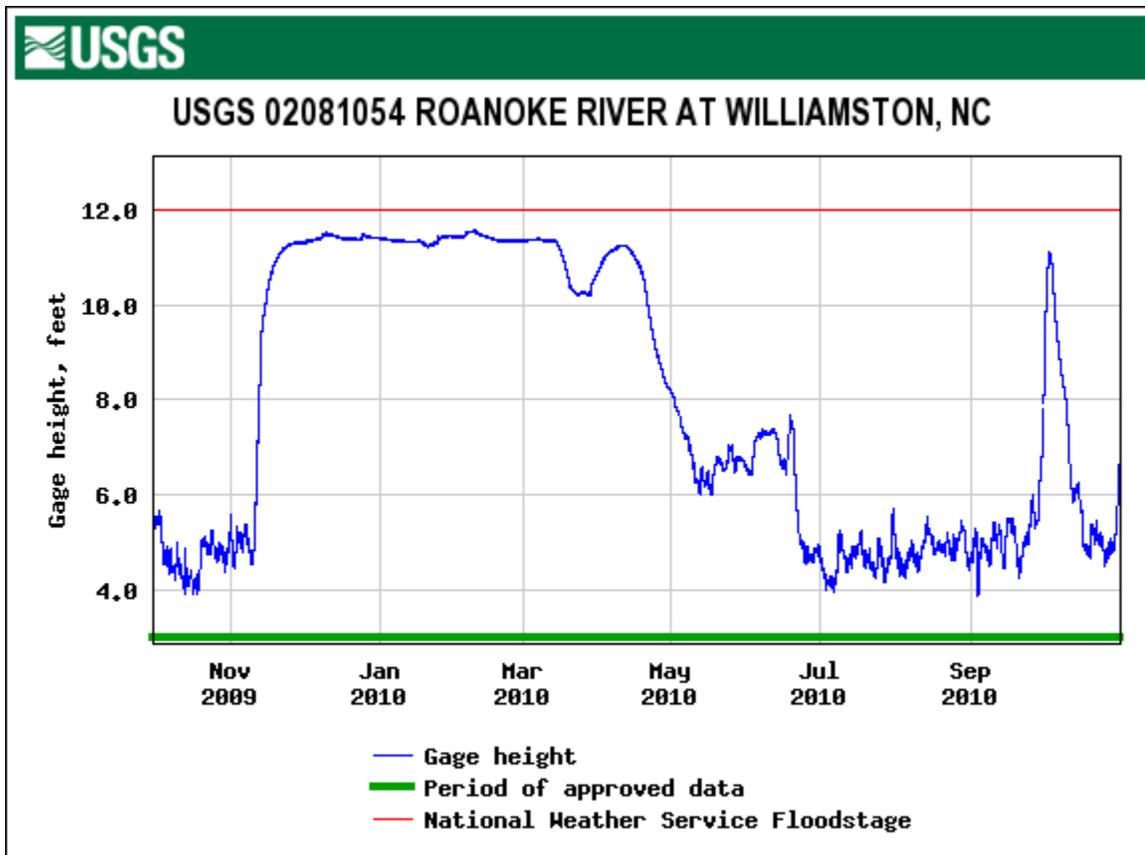


Fig. 12. Water level in Williamston October 2009 through October 2010.

Feral hogs are becoming an increasing problem on the LRRWGL. Roquist Pocosin has had hogs for many years. The Deveraux Swamp main tract and the Whitaker Tract on Deveraux Swamp both have hogs using the property. Some damage has been noted in the agricultural fields and wildlife openings on the Whitaker Tract. Hunters are able to harvest feral hogs provided they are hunting with a valid permit for the game lands and are hunting with a weapon for the species they were drawn to hunt.

D. Management Strategies and Needs

Two problems commonly effecting both agricultural fields and wildlife openings are high water issues and feral hogs. Releases from the dams upstream of the game lands are determined by the US Army Corps of Engineers. Continued involvement with Kerr 216 Study to evaluate alternative flow regime models may help address the issue of the long duration of floods on the ecosystem.

Feral hogs control will be the responsibility of NCWRC staff. NCWRC staff should encourage hunters to harvest hogs if the opportunity arises. If substantial damage is found and hunter harvest is not proving effective to reduce damage, then other control methods will be considered. This may include trapping and/or shooting. The main tract of Deveraux is accessible by boat

only and any trapping effort by NCWRC staff will be both labor and financially costly. The Whitaker Tract is accessible; however, feral hog sign is irregular. Utilizing groups to hunt feral hogs with dogs outside of a game species hunting season has been discussed and at this point not allowed.



Management of the agricultural fields will be done through the Cooperative Farm Leases. The Co-op farmer will be responsible for planting the fields. Permitted crops are listed in the agreement. Other crops not listed will be considered for their compatibility to wildlife related goals. Close coordination with the Williamston Depot staff on field border maintenance and crops left are essential in making the agricultural lands productive to wildlife. Areas that are not very productive or are

difficult to plant due to size or wet conditions may be candidates for inclusion into the early successional habitat plan.

Management of the wildlife openings will fall into 2 categories; dove fields and other wildlife openings. The dove fields are more labor intensive than most of the other openings and therefore are covered separately.

Dove fields by definition are managed primarily for dove hunting. Other wildlife including early successional songbirds, quail, rabbits, and white-tailed deer routinely take advantage of the food and cover offered in the fields. Below are management recommendations for the dove fields.

- Use a burndown herbicide in early spring to prevent a thick stand of vetch. If vetch is not controlled early and allowed to grow, extensive tillage may be required to permit adequate seed/soil contact to allow germination.
- Plant millets around the last week in May at a rate of 18-20 pounds per acre.
- Use a pre or post-plant application of a glyphosate herbicide to kill any new weeds prior to millet germination.
- Monitor weeds in millet. A post-emergent herbicide application may be required to control broadleaves.
- Apply a pre-emergence herbicide to control broadleaf weeds and grasses in sunflower fields. This can be a pre-plant incorporated, pre-plant, or a pre-emergence application. Follow herbicide label directions.
- Plant sunflowers the second week in May. Plant no later than May 15.
- Monitor weeds and apply a post-emergent herbicide per label.
- Prior to dove season, begin mowing areas in millet and sunflowers fields.

- Consider millet areas to burn. Plan mowed and burn areas to help distribute hunters.
- Burn planned millet burn areas not more than 1 week prior to the dove hunts.
- Rotate crops of millet and sunflowers crops where applicable.
- Consider minimum plant back intervals of herbicides used.

Most of the wildlife openings will be planted in clover, cowpea mix, or oats. Typical clover establishment will consist of a pre-plant or pre-emergence herbicide treatment followed by planting a mix of either clovers and oats or clovers and wheat. Seeding rates vary based on the mixes used. Weeds should be monitored and may require mowing during the spring and summer. A post-emergent herbicide may be required to control weeds. When considering to plant clover, avoid areas that are extremely sandy or stay wet in the winter. Clover cannot tolerate long periods of hot, dry weather nor can it survive in long term saturated soils. Partially shaded areas and areas that can hold some moisture in the summer are preferred.

Warm-season crops can be planted alone or in mixes. Iron-clay cowpeas are normally planted as a mix containing sunflowers and milo. The stalky sunflowers and milo give the cowpeas structure to climb on. Mixing broadleaf and grass crops can complicate weed control if weeds become a problem. NCWRC staff should consider the expected weeds and plan to use a pre-emergence herbicide to establish the crop. In order to minimize weed competition, plant in early May since sicklepod thrives with late spring and summer tillage. Use no-till planting methods if good seed/soil contact can be achieved. Monitor weeds and use a post-emergent herbicide if required. Seeding rates vary based on the mixes used.

The warm-season wildlife openings should not need further management. It is recommended that a browse enclosure be installed. The enclosure is a small pen (pictured right) to keep wildlife, mainly deer, from feeding in an area. This will help to determine if the plot is large enough to support the browsing pressure or if the crop fails. By using the enclosure, managers can eliminate if browsing pressure was the cause of crop failure.



Oats should be planted in September. Plant oats in a prepared seed bed at a rate of 60-80 pounds per acre. Drilling oats is recommended but broadcasting oats into a tilled field and then lightly tilling or lightly disking the seed is acceptable. Using a seed drill ensures a proper seeding depth

and seed distribution. No herbicides are usually required to meet the goals of an oat food plot. Oats will grow through the fall and mature in the summer.

Managers should intersperse cool-season and warm-season food plots across the game lands. Taking in consideration of the agricultural lands and the early-successional habitats, food plots can make the LRRWGL an attractive area for hunters and wildlife.

E. Desired Future Condition

Desired Future Condition may never be achieved in these habitats.

Ideally, DFC would be an open land landscape that did not produce undesirable/noxious vegetation in the agricultural fields or wildlife openings. Undesirable/noxious weeds will continue to pose a management problem on the game land. Many crops like chufa are not found on many herbicide labels and therefore finding a suitable herbicide labeled for a crop planted in the



wildlife opening can be difficult. Pigweed species can be easily controlled in millet by selective broadleaf herbicides but managers risk off site crop injury to neighboring cotton and tobacco crops. Even with the weed challenges in dove fields and food plots, these habitats will continue to exist. Working within the current boundaries of the LRRWGL, agricultural fields and wildlife openings should remain at nearly 4% of the overall habitats on the game land.

Feral hogs may always be present on the landscape. Hunting and potential trapping can have an impact on their density. Staff should monitor hog damage and management actions should be developed if funding permits.

The Roanoke River flooding is what made the floodplain the rich ecosystem that it is. Wanting a DFC that eliminates flooding across the landscape will not be in the best interest of the ecosystem. NCWRC staff are working with the US Army Corps of Engineers on river flow models that may allow a flood regime that will mirror flood patterns prior to dam construction. A new flood regime may call for higher discharges and a shorter flood duration. A shorter duration flood will reduce the amount of time the Conoho Road and the open lands are underwater. A DFC for the agricultural fields and wildlife openings would be to work with the US Army Corps of Engineers to implement a discharge regime that mimics natural flood events.

Acquisition of tracts may allow for the expansion of open lands. Utilizing the Cooperative Farm Leases has allowed WRC to create and maintain many acres of early successional habitats. New acquisitions not near the Everett Tract may allow for additional dove hunting opportunities.

Over the next ten years, NCWRC staff should identify 20 acres areas that are not very productive or are difficult to plant due to size or wet conditions and areas that will contribute the overall connectivity of early successional habitats. Staff should reduce open land habitat by 20 acres (5%) and transition those acres to an early successional habitat.

Mesic Forest

Mesic Forest on the LRRWGL comprises 4.3% (429 ac.) of the property. The Mesic Forest type occurs most frequently on the LRRWGL on rarely flooded, fire-sheltered locations such as mineral soil uplands nestled within the Floodplain Forests or creek bluffs. The Mesic Forest type is associated with topography, therefore relatively uncommon in the coastal plain region, typically appearing in small patches when it does occur. This forest type is found on soils ranging from well to poorly-drained sandy loams, with hydrology mostly elevation dependent.



Dominant tree species of the LRRWGL Mesic Forest type include American beech, white oak, southern red oak, American elm, and tulip poplar. Sourwood and flowering dogwood are typical midstory species. Except under complete crown closure situations, understories are well- developed, responding to canopy openings where individual tree stems succumb to natural causes. Most stands without much human interference are uneven aged with regeneration colonizing canopy gaps.

A. Location and condition of habitat (Fig. 13)

There are good examples of the Mesic Forest type in a relatively undisturbed condition with good tree species composition and age distribution on swamp islands on the Rodgerson and Whitaker tracts. All the tracts with upland sites and slopes to Conoho Creek have examples of the Mesic Forest type. Timber stand accessibility is probably the most historically influential factor affecting the condition of this forest type. The less accessible “swamp islands” are the areas in the representative habitat condition, while the slopes from adjacent uplands have been most recently cut over and lack the desired habitat features.

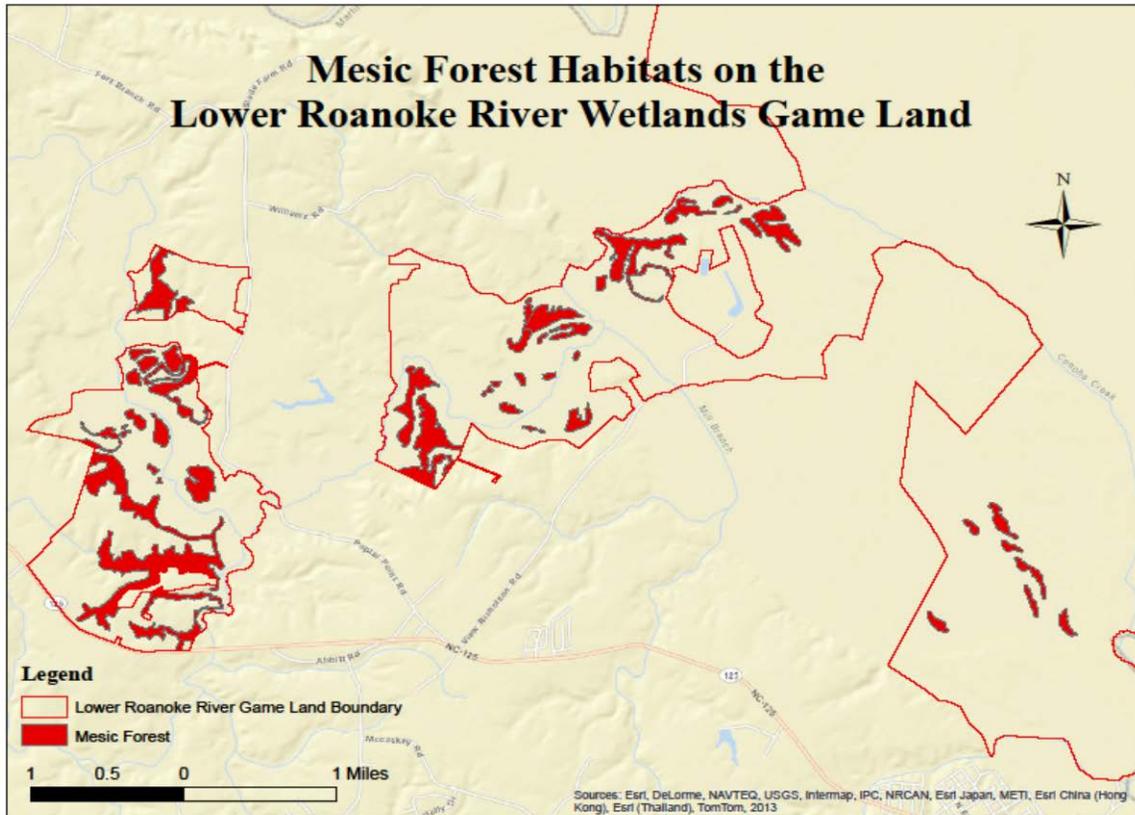


Fig. 13. Mesic Forest on the LRRWGL.

B. Priority Species

Wood thrush and eastern wood peewee are representative songbird species in the Mesic Forest habitat type on the LRRWGL. Priority game species for management in this forest type are white-tailed deer, wild turkey, and gray squirrel. The following table lists nongame species potentially found in this habitat type and their conservation status.

Table 5. Listed non-game species associated with mesic forest habitat.

Taxonomic Group	Common Name	Scientific Name	State Status (Federal Status)	Natural Heritage State and Global Rank
Mammals	Star-nosed Mole	<i>Condylura cristata</i>	SC	S ₂ , G ₅ T ₂ Q
	Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>	T	S ₃ ,G ₃ G ₄ T ₃
Reptile	Timber Rattlesnake	<i>Crotalus horridus</i>	SC	S ₃ , G ₅
Plant	Magnolia Vine	<i>Schisandra glabra</i>	T	S ₁ , G ₃

C. Management Challenges

Two primary challenges have been identified. First, the accessible cut-over slopes lack the age class diversity to meet the potential habitat capability within the current planning horizon. With or without active management actions the timber stands need more time to approach desired habitat goals. Secondly, Articles of Dedication designed to protect these and associated areas inhibit some management options that may get habitat to the desired future condition faster.

D. Management Strategies & Needs

Passive management allowing time for stands to mature to the desired condition is the dominant strategy. Those stands available for timber management need to be evaluated on a case-by-case basis if a treatment would be beneficial toward tree species composition objectives, such as favoring American beech over elm for the mast production benefits to target wildlife species. Since this forest type occurs on slopes sometimes on soils with high erosion susceptibility, prescriptions need to take this into account to avoid site degradation. Since fire is not usually a force shaping this vegetative community, these sites will not be intentionally targeted for prescribed burning.

E. Desired Future Conditions

In the case of the isolated “swamp islands” the desired future conditions have been met and will continue to perpetuate itself through the planning span. It is anticipated that given time, younger stands will meet the objectives of habitat for the featured species while maintaining soil and water quality protection values.

Oak Forest

Stands attributed to the Oak Forest type on the LRRWGL encompass 3.9% (397 ac.) of the property. The Oak Forest type on the LRRWGL ranges from upland oak-hickory dominated stands on well drained sands to pioneer species such as sweetgum and tulip poplar on less well drained loamy soils.

Occasionally, persimmon is a canopy species as well if the timber stand naturally-regenerated on an old field site. Two invasive exotics, chinaberry and tree of heaven have been noted on the periphery of some of these stands.



Understory condition is dependent upon fire frequency, crown closure, and site productivity, often functioning as independent variables influencing the groundcover. Conditions range from a covering of only deciduous leaf litter to thick sapling or shrub understories. Mature stands with mast-bearing species as the canopy dominants are valuable for wildlife food production and tree cavities. Due to their accessibility and workability from an equipment standpoint, Oak Forest stands have been targeted for timber harvest, which resulted in short rotation ages, natural regeneration species composition changes or conversion to pine plantations.

A. Location and condition of habitat (Fig. 14 and Fig. 15)

At one time Oak Forests were more expansive on the landscape in occasionally burned uplands between the pine lands and bottomlands. Now many remaining stands are just remnants around developed areas. Most of the acreage in this type on the LRRWGL is represented in the mixed hardwood forests situated on slopes between lands cleared for agriculture. Very little of this type is present on lowland tracts such as Deveraux and Beach House.

Past timber harvesting practices have impacted species composition and dominance. Oak may be present in most of this forest type; however, often as an understory species beneath sweetgum, tulip poplar, and the occasional loblolly pine. The stands are a variety of ages with most over 20 years in age. In its current condition, due to the minimal acreage and dominant species, this type does not contribute significantly to mast production on the game land.

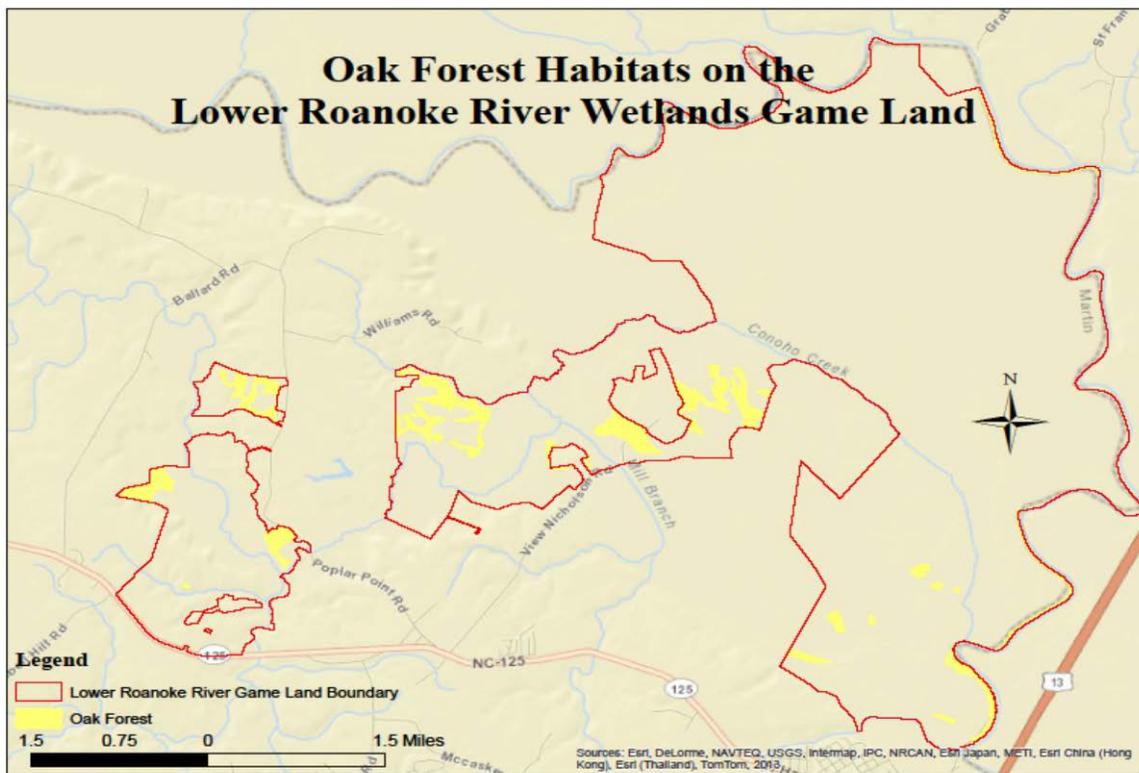


Fig. 14. Oak Forest on the LRRWGL Martin County tracts.

B. Priority Species

The Oak Forest type does have a role providing habitat for hardwood tree oriented songbirds. Summer tanager and Northern parula are representative species in this habitat type as it exists on the LRRWGL. Priority game species for management in this forest type are white-tailed deer and wild turkey. The following table lists the nongame specie potentially found in this habitat type and their conservation status.

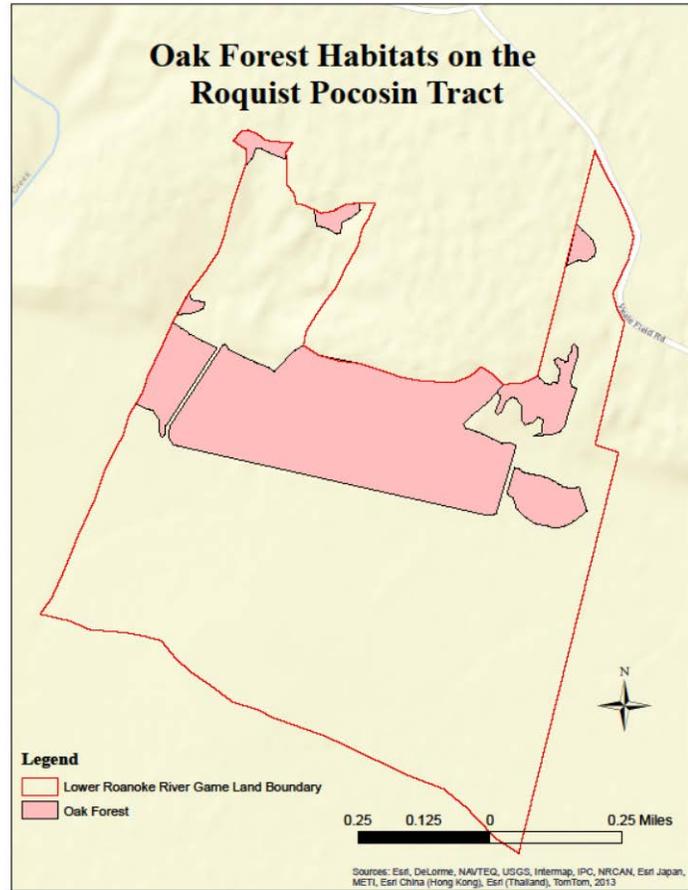


Fig. 15. Oak forest on the Roquist Pocosin Tract.

Table 6. Listed non-game specie associated with oak forest habitat.

Taxonomic Group	Common Name	Scientific Name	State Status (Federal Status)	Natural Heritage State and Global Rank
Reptile	Timber Rattlesnake	<i>Crotalus horridus</i>	SC	S ₃ , G ₅

C. Management Challenges

Issues affecting management of the Oak Forest type on LRRWGL are threefold.

1. Past forest management practices favoring pioneer species has shifted tree species composition away from the desired oak dominated condition and the preferred species are not present in the stand.
2. Older age stands providing mast and tree cavities that this type is capable of are scarce.

3. The Articles of Dedication that apply to adjacent Floodplain Forest stands often take in small stands of the Oak Forest type if a different designation would fragment the primary areas, which limits management options.

D. Management Strategies & Needs

Inventory existing stands within the current planning period to ascertain the species composition and whether passive management and time will develop the desired habitat conditions. Utilizing inventory information to develop recommendations in annual planning documents, which may include removal of undesirable species or planting of the appropriate species. The operational threshold would be that at least 50% of the stems in a stand should be an oak species. Values below 50% would be the trigger for restoration work to be done. Single stem herbicide treatments, which could address competition control and snag needs in the forest type, may be a feasible option where commercial timber harvests are not. In the case where it is determined that the desired future conditions will not be met over time, removal of the tree canopy, an herbicide treatment to prevent regeneration of what was cut and replanting may be an easier and more effective treatment to reach habitat goals. Some opportunity may be present to convert formerly Oak Forest stands currently in Dry Coniferous Woodland back to the Oak Forest type.

E. Desired Future Conditions

The desired future condition of Oak Forests on LRRWGL is to develop mature stands with mast production potential as well as old growth characteristics providing tree cavities and snags. Desired tree species composition for these stands would comprise at least one-half in an oak component.

Dry Coniferous Woodlands (Loblolly/Longleaf Pine Forests)

This cover type consists of loblolly and longleaf pine plantations, as well as naturally-regenerated loblolly pine stands comprising 3.2 % (322 acres) of the LRRWGL. The understory is dominated by shade-tolerant hardwood tree species, such as American beech, red maple and oaks in closed canopy stands with significant pine straw accumulation. In open canopy stands, sweetgum and greenbrier are understory dominants. In open stands maintained by fire and mechanical treatments such as timber harvesting, blackberry and grasses are a significant understory component with abundance of each dependent upon soil texture and moisture regime.

A. Location and current condition of habitat (Fig. 16 and Fig. 17)

Situated in scattered patches across the larger landscape on elevations ranging from 10-60 feet above sea level, predominantly on sandy loam soils, this community is a minor component of the LRRWGL. Although the portion of the game land in this type is small, it receives more management emphasis than other forest types. This type is present on all of the game land tracts except for the Beach House and the main Deveraux Swamp tract. Most of the stands were

established prior to State ownership with the exception of a few uncultivated field corners that naturally regenerated in loblolly pine and some longleaf pine plantations. Stands are of even-age composition, range in age from 3-40 years old and are less than 50 acres in size, with the average size of less than 9 acres. While most of these stands were heavily stocked when acquired, most of the accessible ones with merchantable timber have been thinned and incorporated into a 3-4 year prescribed burning rotation. Accessible stands that have not been thinned will be treated as they reach merchantable size and viable as a commercial contract thinning. In treated stands, thinning and burning prescriptions have influenced tree canopy density resulting in development of an understory plant layer with improved wildlife habitat conditions. Understory plant diversity is limited to those species with long distance seed dispersal capability due to previous land use and tree canopy closure issues.

Without conversion from another forest type, few forested sites on the game land would naturally be classified as Dry Coniferous Woodland. In most cases, their origin is a direct result of human influence, either by direct planting or naturally seeding into previously cleared areas. Historically, most of the lower elevation stands in this type would have been oak or mesic forest types, while higher elevation sites with a direct high elevation topographical connection influenced by fire would have been longleaf pine dominated communities. Oak inclusions would have been present on microsites, since most of the high elevation stands presently in this type are located on flats, terraces and other transitions from well-drained uplands to hardwood swamps.

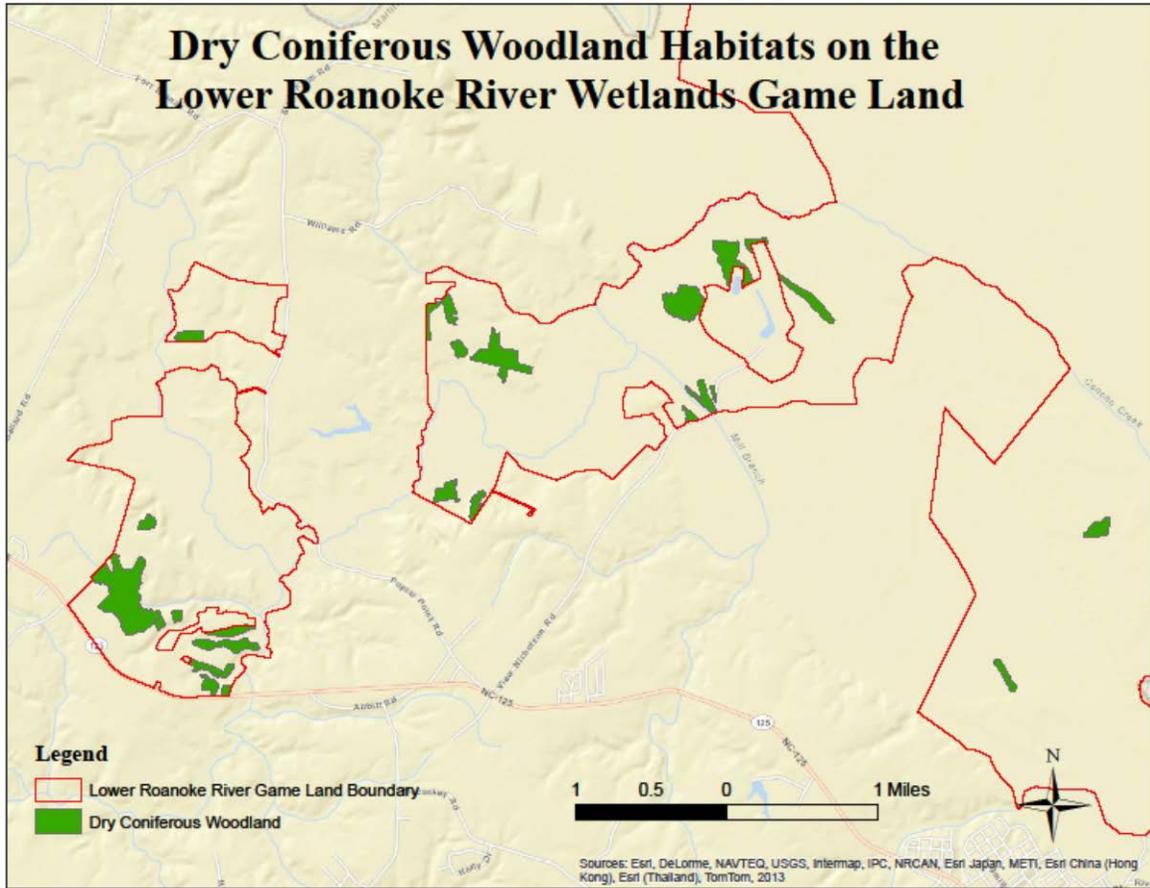


Fig. 16. Dry Coniferous Woodlands on the LRRWGL Martin County tracts.

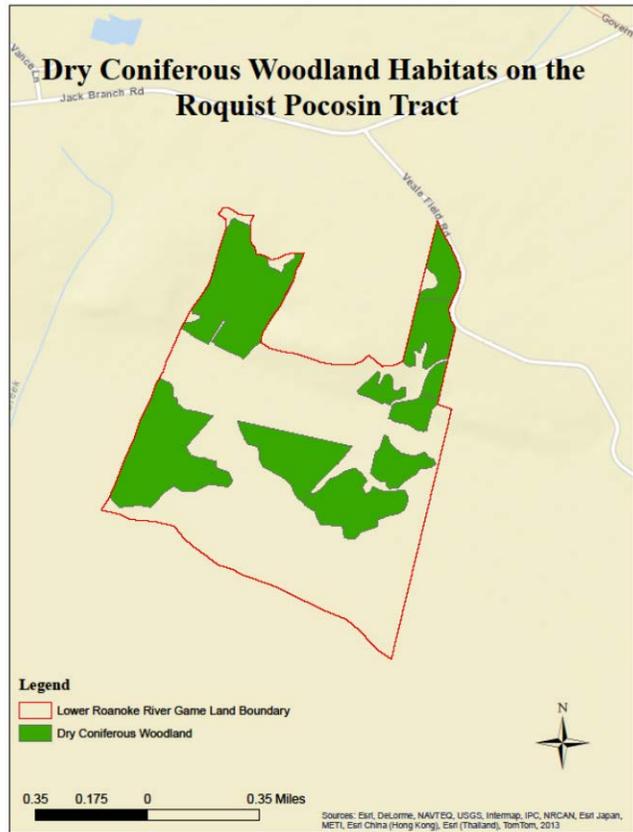


Fig. 17. Dry Coniferous Woodlands on the Roquist Pocosin Tract.

B. Priority Species

The primary game species frequenting the Dry Coniferous Woodland type on LRRWGL are white-tailed deer and wild turkey. Where open canopy stands of this forest type are adjacent to Early Successional Habitats, eastern cottontail rabbit and bobwhite quail are also a featured species and management is tailored to benefit them. The following table lists nongame species potentially found in this habitat type and their conservation status.

Table 7. Listed non-game species associated with dry coniferous woodland habitats.

Taxonomic Group	Common Name	Scientific Name	State Status (Federal Status)	Natural Heritage State and Global Rank
Reptiles	Timber Rattlesnake	<i>Crotalus horridus</i>	SC	S ₃ G ₄

C. Management Challenges

Timber stand size and access are the greatest impediments to effectively managing this stand type on the LRRWGL. Even for sites with an upland access, the small acreage of the stands

requires an inordinate effort to prescribe burn, limits the feasibility of commercial timber harvests, and consequently the ability to make effective wildlife habitat improvements. Some plantations established on low elevation sites do not have an upland access across state-owned property for either contract mechanical treatments or plant understory and fuels management. Even when dry conditions would allow for equipment access, Articles of Dedication applying to surrounding timber stands prohibits management activities requiring heavy ground equipment.

In many cases, due to landscape position, firebreak construction in ecologically sensitive areas would cause more damage than benefits that could be recouped from a prescribed burn. Therefore, in order to prescribe burn, many of these sites are dependent upon surrounding fuel conditions to contain a fire. Often these are during wet conditions that negatively affect burning conditions within the target treatment area, presenting difficulty in achieving prescribed burn objectives. The sites requiring favorable surrounding fuel conditions for fire control will probably not ever be incorporated into a growing season fire regime that would allow for better understory vegetation manipulation.

D. Management Strategies & Needs

In the case of the very small or inaccessible stands, short-term management objectives of forest health maintenance and understory plant development for wildlife habitat improvement are not being met. In addition, the prior conversion of the low elevation stands to loblolly pine plantations with limited management opportunity hampers long-term goals of reestablishing the appropriate forest type.

On high elevation sites contiguous with other uplands, this type is merely a successional stage en route to the desired conditions. The ongoing application of prescribed fire, timber thinning coupled with planting longleaf pine and understory species, where site appropriate, will transition stands to a pine savanna type over time. Efforts will focus on incorporating these sites in treatments with other units towards moving to this end goal. These stands will be managed on relatively long timber rotations (>60 years) and be maintained with prescribed fire. Ideally, fire treatments would be on a 2-5 year rotation, with frequency being tree species dependent. Currently, most of the stands are burned during the dormant season. A shift toward more growing season burns where implementation is feasible for improved understory plant response will be pursued.



Approximately 65 acres of what is classified as dry coniferous forest has been planted in longleaf pine, which is the desired over-story species for those locations. All of the longleaf stands are under a prescribed burning rotation but lack the understory character to be considered savanna. This is due in part to the fact that all but one of the sites is formerly agricultural field and without planting, the desired understory species are not present since the native seed bank is depleted. Application of a thinning treatment for commercially merchantable stands and maintaining the prescribed burning rotation on a 2-4 year interval, including some growing season fire, will promote colonization of savanna appropriate understory plants.



The isolated low elevation pine plantation sites will require some active management to move them toward the desired future condition in a reasonable time frame. The ideal treatment would be removal of the pine canopy and replanting with an appropriate hardwood species, as most of these sites would originally have been a mesic or oak forest type. Negotiating a timber access with an adjacent landowner or combining with a timber sale on an adjoining property

may be an opportunity to achieve habitat management and forest community restoration objectives. Most restoration projects will require an herbicide prescription prior to replanting to control loblolly pine regeneration and other competition to planted trees. Long term, an infrequent fire application, every 5- 10 years may be appropriate for some restored sites. Evaluation for prescribed fire suitability should be made on a case-by-case basis, considering at a minimum: hydrology, soil type, and fire tolerance of the planted species.

Identification of specific stands and the treatment prescription will be defined in the annual forest management plan generated by field staff.

E. Desired Future Conditions

During the 10-year scope of this document, one-quarter of the acreage in the dry coniferous woodland type is targeted for management actions, resulting in enough changes to enable reclassification as either longleaf savanna or oak forest type. The first priority are management activities continuing to transition the 65 acres of already established longleaf pine plantations to a longleaf savanna type with bluestem grass and understory associates. Additional acreage with commercially merchantable pines has been slated for conversion to longleaf pine savanna where a burning rotation can be maintained or to oak forest where access will limit prescribed burning opportunity. Additionally, this forest type in manageable locations with either longleaf or

loblolly pine as a canopy dominant has the ability to augment early successional habitat on the game land if an open canopy (BA < 90 sq. ft./ac.) is maintained. Thinned stands with a grass-forb dominated understory morphing toward a savanna type, with continued management, could contribute to this habitat element in perpetuity.

Early Successional Habitat

Approximately 295 acres (2.9%) of habitat on Lower Roanoke River Wetlands Game Land is classified as early successional habitat. These communities form soon after a disturbance and generally consist of herbaceous annuals and perennials that quickly occupy disturbed sites. They reproduce seeds that are disturbance-adapted or can be widely dispersed by wind, water, or animals. Early successional habitat can be a mix of grasses, legumes, wildflowers, vines, shrubs, and saplings. In general, sod-forming grasses such as fescue and bermudagrass provide minimal wildlife value; while grasses that grow in individual clumps, such as switch grass and broom sedge, provide greater value for wildlife. Small patches of vines or shrubs contribute to habitat value, but woody vegetation should not shade out the grasses and forbs.

These communities are characterized by high productivity and provide habitat for many disturbance-adapted wildlife species. Early successional habitats are highly ephemeral and in the absence of further disturbance, the attractiveness and productivity of these habitats declines.

This habitat type requires frequent disturbances that suppress or reset ecological succession. These disturbances include activities such as timber harvests, disking, mowing, burning, and/or herbicide treatments to maintain this condition. However, environmental factors such as weather events, climate, and natural fires still play a role in creation and maintenance of these habitats. Without these disturbances or active management, natural plant succession will inhibit the creation and limit the longevity of many of these habitats.

It must be noted that early successional wildlife habitat differs from other open land by the vegetative component represented. Although pastures, hayland, agriculture crops, lawns, and golf courses may be considered early successional *lands*, they should only be considered early successional *habitat* if they are composed of vegetation that is beneficial to wildlife. There are 443 acres of agricultural fields and managed wildlife openings on the game land. Although at times they have elements that are similar to early successional habitats, their management separates them from the other forms of early successional habitats and are covered in a separate section of this plan.

Historically, both large and small areas of these habitats were created by catastrophic natural fires, anthropogenic fires, large-scale wind events, insect pests, or pathogens such as fungal diseases that all cause significant canopy loss. Timber harvest also creates early successional habitats for several years following the harvest and this character can be maintained through understory treatments.

A. Location and condition of habitat (Fig. 18)

Fallow fields, planted native warm season grass/forb fields (NWSG), field borders, hedgerows, recent timber plantings, and waterfowl impoundments and dikes are all examples of early successional habitats that exist on the LRRWGL. Since the establishment of the Lower Roanoke, a concerted effort has been underway to develop and maintain high quality early successional habitats. Most of the focus has been on the Conoho Farms tracts as these tracts offer the greatest opportunity for management. Isolated patches of early successional habitat, although they may be of high quality, offer very little to wildlife and may be a trap as it can concentrate prey for predators. With the amount of acreage in farm land on Conoho Farms, we have been able to intersperse quality early successional habitats across the landscape and juxtapose those habitats to other features to provide habitat continuity for early successional wildlife species like rabbits and quail.

Managed field borders surround nearly all of the agricultural fields on the LRRWGL. The field borders consist of at least 30 feet of natural vegetation. Volunteer grasses, forbs, and saplings make up the borders. Nearly all of the borders are adjacent to woods. This creates an edge with larger amounts of saplings and vines compared to borders along ditches. Field borders offer excellent nesting and brood cover for bobwhites and wild turkey.



Native warm season grass fields are areas that have been planted in a mix of bunch grasses and forbs. Forbs are broadleaf herbaceous plants including, partridge pea, clovers, and many wildflowers. Depending on the site, NWSGs planted on LRRWGL have been switchgrass, indiagrass, big bluestem, little bluestem, and side oats grama. Typical forbs mixed with the plantings have included partridge pea, Illinois bundleflower, Maximilian sunflower, purple prairie clover, and black-eyed Susan. Unlike sod forming grasses such as fescue and bermudagrass, NWSG grow in bunches forming open space at ground level and providing overhead protection. Quail, rabbits, sparrows, and young turkeys forage through the clumps. During winter months when broadleaf plants drop their leaves, the NWSG's remain standing and in turn offer cover to wildlife. The first planting occurred in 2003 with 12.5 acres planted in several fallow fields on the Whitaker Tract. Other areas on the Everett Tract of Conoho followed. The largest single field converted to a NWSG/forb mix was 13.5 acres in Conoho in 2011. Currently 48 acres are managed as NWSG fields.

Fallow fields can offer a similar vegetative structure to that of a NWSG field if managed correctly. Fallow fields typically have a greater forb component than the NWSG fields. Timing of management actions can change the grass make-up of the fallow fields. Fallow fields may not offer the same protective cover that NWSG fields offer in the winter but their brood rearing potential in late spring and summer can arguably be greater.



Common plant species found in the fallow fields are pine, hardwood saplings, blackberry, partridge pea, ragweed, pokeweed, and goldenrod.

Hedgerows offer import escape cover for wildlife. A 1993 Challenge Grant Project with the Roanoke-Albemarle Chapter of the National Wild Turkey Federation funded the planting of eastern redcedar trees along Conoho Road. Alongside of the cedars, VA-70 lespedeza was also planted. The same was planted at the Everett Tract along NC Highway 125 and along game land access roads. A row of plums were planted on the Everett Tract.

Although waterfowl impoundments are not usually considered an early successional habitat, they provide some of the best brood rearing habitat for turkeys on the LRRWGL. There are 5 impoundments totaling 103 acres. Management of the impoundments involve planting a cereal grain crop such as corn, milo, or millet, planting smartweed, creating openings, and then flooding in the fall. During most of the year the impoundments are not inundated with water. A slow drawdown in the spring gives way to an outstanding flourish of forbs that attract insects which in turn attract turkey broods. The dikes and non-flooded portions of the impoundments offer nesting locations for turkeys and quail.



Timber harvest reset succession, and for several years post-harvest, offer excellent early successional habitat. Typical vegetative response consists of stump sprouts, thick blackberry patches, and forb germination. Ultimately, replanted stands following timber harvest revert back to an older stand with limited early successional benefits after 7-15 years. Timber harvest is a

minor component of the LRRWGL habitat management. Timber harvests are discussed in the Dry Coniferous Forest section.

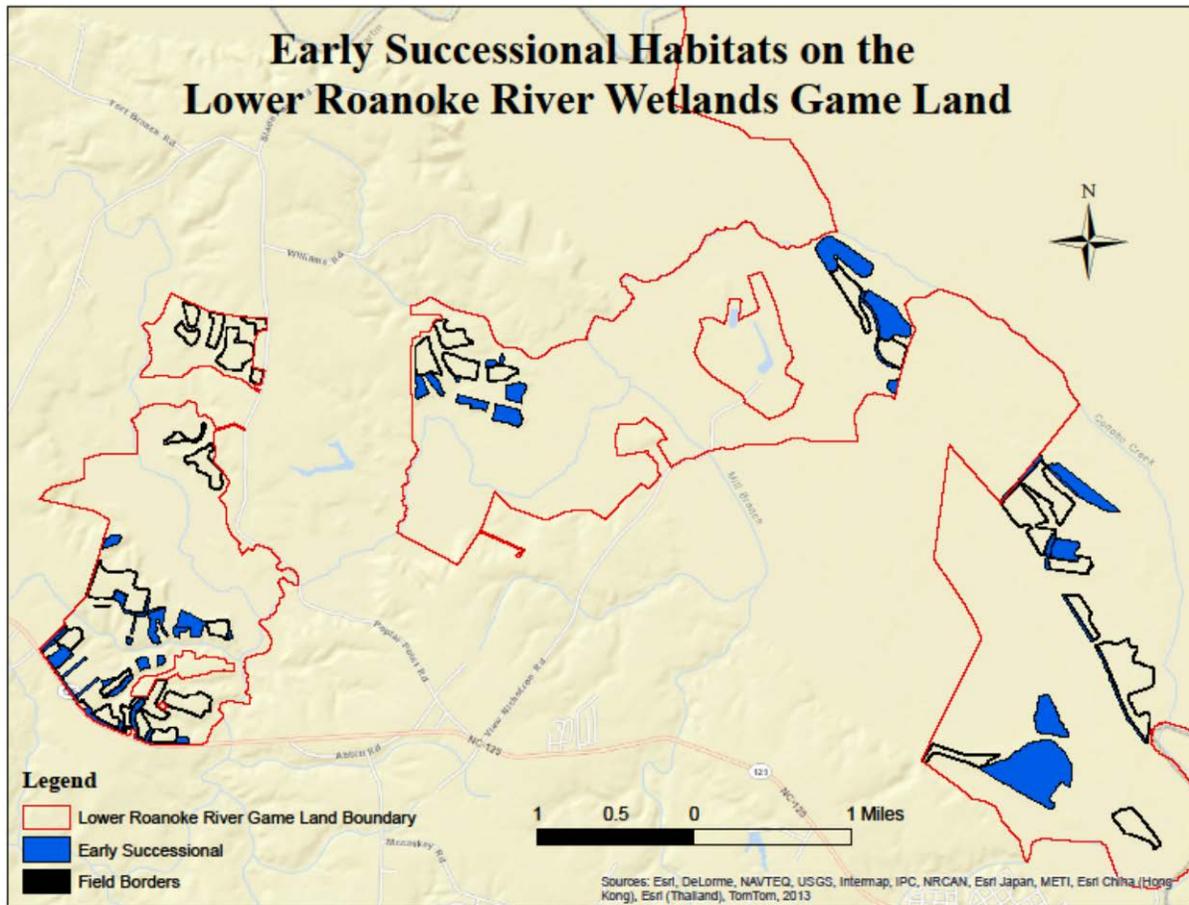


Fig. 18. Early Successional Habitats on the LRRWGL.

B. Priority species associated with early successional habitat

Over the last 10 years, extensive effort has been underway to increase the quantity and quality of early successional habitats on the LRRWGL. Management actions to improve habitat conditions for one species may not meet the needs of other early successional species at any given time. Game species that are targeted for management in these habitats include Northern bobwhite, wild turkey, white-tailed deer, cottontail rabbit, marsh rabbit, and in the impoundments waterfowl. Priority non-game species that use these habitats include American kestrel, prairie warbler, and orchard oriole. Non-game mammals that are associated with early successional habitats include the least shrew, long-tailed weasel, and the Southern bog lemming.

Table 8. Listed non-game specie associated with early successional habitats.

Taxonomic Group	Common Name	Scientific Name	State Status (Federal Status)	Natural Heritage State and Global Rank
Mammal	Star-nosed Mole	<i>Condylura cristata</i>	SC	S ₂ , G ₅ T ₂ Q

C. Management Challenges

The biggest challenge is providing this habitat in a forested landscape which requires intensive and constant management practices such as prescribed burning, mechanical, and/or herbicide treatments. These activities aid in resetting succession. Most forms of early successional habitat on LRRWGL are in close proximity to a woods edge. Natural seed dispersal from pines, sweetgums, maples, and river bitch into the field borders, NWSG fields, and fallow areas require staff to take management actions to kill unwanted saplings.

Invasive species can cause problems in early successional habitats. Fire ants kill newly hatched ground nesting birds, reptiles, and new born mammals. Brown-headed cowbirds parasitize bird nests and many exotic plant species take advantage of the light conditions in early successional habitats. Invasive plant species such as tall fescue, bermudagrass, and other sod-forming grasses form a dense structure at ground level. This makes it difficult for young wildlife to travel through these areas, limits seed and invertebrate availability, and limits the native seedbank from germinating.

Poorly timed management actions can have a negative impact on early successional habitats and the wildlife species that rely on those habitats. Mowing or disking during certain times can destroy bird nest, eliminate the following year’s seed source for desirable species, and promote invasive or other undesirable vegetation.

D. Management Strategies and Needs

Maintenance of most of the field borders falls under the conditions of the Cooperative Farm Agreement where the Co-Op farmer should disk 1/3 of them annually. The Williamston management crew will work closely with the farmer in determining which borders are to be disked using the following parameters as a guide.

- Disk in the fall and winter to remove saplings and promote ragweed, partridge pea, and blackberry germination. Disking should not be to the level expected in agricultural fields. Disking will expose soil and reduce the thatch layer.
- Herbicide control may be required to kill saplings that are too large to kill by disking.
- Mowing fallow fields should be a last resort.

- Other than a herbicide prescription on saplings, all management activities should be done in late fall and winter and should be completed by March 15 before nesting season for turkeys, rabbits, and songbirds begins. Management for certain plant species may alter the March 15 date.

Proper maintenance of NWSG/forb fields is critical to maintain a high quality early successional habitat. Burning these areas is preferred to disking. Disking may be required depending on weather conditions and overall management objectives. Grass component should not exceed 40%. Forbs and open spaces are essential in NWSG areas if they are to offer excellent habitat value. Management actions on NWSG fields should include the general protocol as listed.

- Burn NWSG fields in late February and March. Late season burning ensures that there is the maximum amount of cover available through the winter. Burning reduces litter buildup, sets back succession, and stimulates herbaceous growth.
- Disk only if grass component reach levels that inhibits the germination of forbs where fire has not been able to meet this objective. Disked areas can be interseeded with legumes like partridge pea, Illinois bundleflower or other forbs.
- Strip spraying selective herbicides can return balance to grass/forb ratios.
- Other than a herbicide application on saplings and possible strip application of herbicide to thin grass component, all management activities should be done in late fall and winter and should be completed by March 15 before nesting season begins for turkeys, rabbits, and songbirds.
- Burn/disk areas on a 2-3 year rotation. Keep other early successional habitats available as to allow cover for wildlife.
- Monitor and eliminate sod forming grasses.

Fallow fields on the LRRWGL offer early successional habitat to nesting birds and foraging areas during the spring, summer, and fall. Below are management actions to keep fallow fields in an early successional state.

- Use prescribed burning on appropriate sites in winter to kill saplings and reduce thatch layer.
- Disk in the fall and winter to remove saplings and promote ragweed, partridge pea, and blackberry germination. Disking should not be to the level expected in agricultural fields. Disking will expose soil and reduce the thatch layer.
- Herbicide control may be required to kill saplings that are too large to kill by disking or prescribed burning.
- On larger fallow fields, divide the block into sections and treat 1/2 of block per year.

- Mowing fallow fields should be a last resort. July mowing will promote broom sedge establishment, considerations should be made for ground and grass nesting birds and rabbits.
- Other than a herbicide application on saplings, all management activities should be done in late fall and winter and should be completed by March 15 before nesting season for turkeys, rabbits, and songbirds begins.
- Burn, disk, or mow on a 2-3 year rotation.
- Monitor and eliminate sod forming grasses.

There are two different hedgerow types on the LRRWGL. Cedar and plum tree plantings are now mature and offer excellent escape and loafing cover. The other type is the VA-70 plantings that border all of the planted cedars. Below are management actions needed to maintain the hedgerows.

- In the cedars and plums, selective herbicide or chainsaw applications will be needed to remove undesirable hardwoods and pines.
- VA-70 lespedeza strips should be mowed on a 3 year rotation in March before spring green-up. Mow at 1 to 1 ½ feet high.
- Rotate mowing of these strips as not to remove all cover in a single year.
- Herbicides may be required to remove sweetgum and river birch saplings.

As mentioned earlier, waterfowl impoundments are not usually considered an early successional habitat. The impoundments on the LRRWGL, especially the Dr. Ray D. Minges impoundments, offer excellent turkey brood rearing habitat. The LRRWGL impoundments are managed for cereal grains and moist plants. Below are management recommendations for the waterfowl impoundments.

- Allow natural draw down in spring. Pull boards from water control structures to drop water levels in late spring to facilitate disking.
- Plant a cereal grain such as milo/corn in May. It is recommended that milo be planted instead of corn in the Minges Impoundments as the corn crop rarely is available to waterfowl during the winter due to deer and raccoons.
- Monitor for invasive species such as alligatorweed and sesbania. Eliminate when discovered.
- Control needle rush by disking or herbicide treatment.
- Plant millet (Japanese or browntop) in late June.
- Disk openings as late in the fall as possible. Fall disking promotes smartweed germination in the spring.
- Flood impoundments per flooding schedule.

Currently there are no infrastructure needs required for providing current and predicted early successional habitats. Fire breaks will utilize natural breaks or be installed using a disk. Disked fire lines should not need rehabbing. Planting a forb in lines created in late winter could add quality to these habitats.

E. Desired Future Condition

Maintaining “Desired Future Condition” requires continuous habitat manipulation. If the areas are left alone, these habitats quickly grow up in trees and the value to the wildlife species that depend on these habitats diminishes.

In the next ten years, staff should identify areas to increase fallow fields and NWSG/forb fields by 20 acres (6%). Priority areas will be nooks in fields, fields or parts of fields with poor soil



fertility, fields or parts of fields where wet conditions may deter Co-Op farmers from planting a crop, and areas that will contribute the overall connectivity of early successional habitats.

Future acquisitions may allow for the expansion of this type of habitat. If adjacent properties are added to the program, land managers should consider the arrangement and interspersions of early successional habitats and work to connect similar habitats.

Infrastructure Development and Maintenance

Assessments of existing infrastructure throughout the Lower Roanoke River Wetlands Game Land were conducted by Engineering & Lands Management staff in 2013. The infrastructure maps included in an appendix to this document show the locations of existing public roads, administrative access roads, trails, parking areas, dams, and gates within the game land. The results of the assessments along with recommendations for maintenance and improvements are discussed by category below. See Appendix V for maps concerning infrastructure.

Road Assessment

The tracts that comprise the LRRWGL are focused around the Roanoke River and generally follow the river from the northwest to southeast. Additional tracts are located just to the southwest with one isolated tract north of the river. Given the proximity to a coastal river and the associated wetlands, few high ground roads provide access to the game lands. There are a

total of eight accesses open to the public with one administrative access across private land. Four additional access roads extend from the main access roads to provide opportunities for disabled sportsmen. All roads terminate on the game lands due to the topography.

The game land roads provide public access, administrative access, and access to agricultural lands under lease. The focus of this assessment is on the approximately eight miles of year round and seasonal public access roads. Public access activities include, but are not limited to, the following; hunting, fishing, hiking, wildlife viewing, geo-caching, and other outdoor recreation.

Existing Road Conditions

The roads are primarily one lane gravel approximately ten to twelve feet wide. The roads are in generally good condition. Given the limited number of roads and the overall good condition individual roads will not be summarized.

Future Road Improvements

As stated before the majority of the roads are in good condition. The area most lacking is providing an all-weather driving surface on roads utilized by disabled sportsmen. There is potential for disabled sportsmen to drive a two-wheel drive vehicle that cannot negotiate soil paths during wet conditions. Additionally, the topography of the area causes road issues that must be addressed.

High Priority

The following roads are high priority:

- Depot Road DS Blind Access

- Conoho Road (from Boundary to 54" Culvert + remaining 3.3 miles)

- Conoho Road DS Left 1

Depot Road

Depot Road turns north from NC 125 just north of the Williamston Depot. It provides access to the Depot Road Campground, agricultural lands under lease, general game land access, and mechanically elevated disabled sportsman blind. The first 0.3 miles is in good shape and would only require additional gravel and grading. The 0.3 miles open only to disabled sportsmen will require stabilization stone and ABC stone. It is also recommended that an accessible path be constructed from the parking area to the blind. This will only require minor grading and minimal additional stone. The estimated cost is \$60,000

Conoho Road

Conoho Road is the primary access for this game land. It provides access to three waterfowl impoundments, two campgrounds, three disabled sportsmen areas, and agricultural lands under lease. The basic structure of Conoho Road is currently in fairly good shape; however, the one mile portion of the road from the entrance to the 54" culvert frequently floods due to its proximity of the Roanoke River. Repairing the roadway after flooding requires a significant maintenance effort and cost. This portion of the road needs to be upgraded to withstand frequent flooding. Additionally, the remaining 3.3 miles should be reinforced to a lesser degree to ensure access. The anticipated cost for the one mile section is \$250,000. The estimated cost for grading and adding gravel to the remaining 3.3 miles is \$200,000.

Conoho Road DS Left 1

This disabled sportsmen road bears to the left just before the road crosses onto private property, 2.8 miles from the game land entrance. The road is currently a 0.3 mile soil path with minimal improvements. Improvements would include stabilization stone and an ABC surface. Two-way traffic is not anticipated; therefore, a road width of eight feet would be sufficient. A turn around area should be included in the improvements. The estimated cost is \$35,000.

Medium Priority

Conoho DS Right 1

This road is the first disabled sportsmen access to the right while traveling north on Conoho Road. The road is currently a 0.1 mile soil path with minimal improvements. Improvements would include stabilization stone and an ABC surface. Two-way traffic is not anticipated so a road width of eight feet would be sufficient. A turn around area should be included in the improvements. The estimated cost is \$15,000.

Doug's Gun Shop Road

Doug's Gun Shop Road turns north off of NC 125 just south of the Williamston Depot. The road is shared with a hog farming operation for the first 0.2 mile. The remaining 0.1 mile will access a proposed parking area. The shared portion should be graded and the remaining 0.1 mile upgraded with ABC stone. The estimated cost is \$10,000.

Dr. Ray D. Minges Waterfowl Impoundment Road

This road turns north from NC 125 north of Williamston, NC. The road is 1.1 miles long and provides access to the Dr. Ray D. Minges Waterfowl Impoundment. The road is in fair condition but needs to have the crown restored, potholes filled, and gravel added. The first mile of the road is on private land and passes close to a residence. When the road is improved, special consideration should be given to ensuring low speed travel near the residence. The estimated cost of improvements is \$100,000.

Low Priority

Conoho Road DS Right 2

This road is the second disabled sportsmen access to the right while traveling north on Conoho Road. The road is currently a 0.2 mile soil path with minimal improvements. Improvements would include stabilization stone and an ABC surface. Two-way traffic is not anticipated so a road width of eight feet would be sufficient. A turn around area should be included in the improvements. The estimated cost is \$25,000.

Roberson Tract Road

This road provides access to a designated parking area. The road is currently in good shape for the first 0.2 mile where it is shared with private residents. The remaining 0.2 mile is currently a soil path through a field. Given the limited use a light application of gravel should meet the desired level of service. The estimated cost is \$10,000.

In addition to the road improvements, access to the parking area can be improved by the installation of a cattle guard. The property owner plants winter grain in the field adjacent to and including the road then installs a temporary electric fence. Installing a cattle guard would eliminate the hassle and shock potential for hunters accessing the game land. The estimated cost would be \$1,500.

Deveraux South

This road provides access to a campground and agricultural fields under lease. The first 0.1 mile is shared with a residence and is in good shape, the remaining 0.1 mile requires grading and additional gravel. The estimated cost is \$10,000.

Road Maintenance

All roads require inspection and maintenance to function well and avoid damage and deterioration. Maintenance should be performed regularly, as the longer the delay in needed maintenance, the more damage will occur and the more costly the repairs will be.

Typical Road Maintenance Practices

- Inspect Roads regularly, especially before the winter season and following heavy rains.
- Keep ditches and culverts free from debris (see Culvert Maintenance Section of this Management Plan).
- Remove sediment from the road or ditches where it blocks normal drainage.
- Regrade and shape the road surface periodically to maintain proper surface drainage.

- Typical road should be crowned at approximately 4%, or ½” per foot.
 - Some roads may not require a crown, but should have a constant cross slope (super-elevation).
 - Gravel should be distributed at an even depth across the road.
 - Gravel should have an even distribution of fine and course materials.
 - Keep downhill side of the road free of berms, unless intentionally placed to control drainage.
 - Proper maintenance and grading of the road will require a motorgrader and a roller.
- Avoid disturbing soil and vegetation in ditches, shoulders, and cut/fill slopes to minimize erosion.
 - Maintain shoulders on both sides of the road to ensure oncoming vehicles have enough room to pass. Shoulders should be relatively flat, with a mowed grass surface.
 - Maintain an erosion-resistant surfacing such as grass or rip rap in ditches.
 - If it is determined that a road needs major repairs or upgrade, contact Regional Supervisor and Design Services to schedule an assessment.

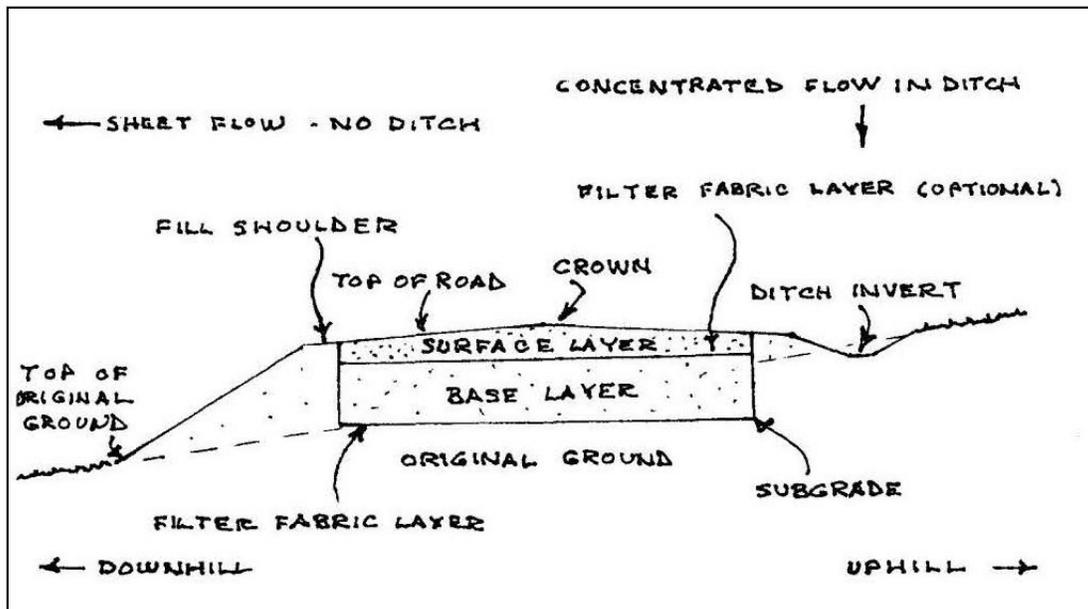


Fig. 19. Typical Road Cross Section (Canaan, New Hampshire Highway Department 2013).

Road Safety Features

- Remove trees and other vegetation as necessary to provide adequate sight distance and clear travel way.
- Install and maintain road signage. This includes:

- Stop signs –Should be installed at every intersection, with the signs on the minor roads.
- Warning signs – Should be installed to warn the public of any road closures or problems in the game land.
- Road/Route signs – Should be installed at every road intersection on a game land.
- Information kiosks with Game Land road map – Entry signs should be installed at every entrance to a game land off of a DOT road. Information kiosks should be located near the entrances and in parking areas.

Gates

Gates should be used on game lands for maintenance and habitat conservation. For maintenance purposes, gates should be used to limit access to roads that are unsafe or are in disrepair, or to limit use on roads to certain times a year in order to minimize the wear and deterioration of the road. If a road is considered unsafe or in disrepair, field staff should contact an engineer. The engineer will perform an inspection to determine the best course of action to repair or upgrade the road.

All gates installed on game lands should be the standard swing gate and painted orange for maximum visibility. No cable gates should be installed, and any existing cables should be replaced.

Troubleshooting

Road Surface Problems

Problem: Longitudinal erosion of the road surface

Possible Causes:

- Flat or U-Shaped road. A crown or super-elevation of the road is needed to shed water laterally off the outer edges of the road surface.
- Small ridge of soil or grass growth along the outer edge of the road is preventing water from draining off the road surface. Edge needs to be graded to remove this ridge.
- Water is traveling in a wheel rut. Road needs to be re-graded. This problem often results from soft roads.
- Road ditch is not large enough and overflows onto road surface. Install more frequent turnouts to get water away from the road or increase the size of the ditch.

Problem: Lateral erosion cutting across the road surface

Possible Causes:

- Most often occurs at a low spot in the road or where a ditch filled in and no longer functions. Water builds up and overtops and erodes the road surface. A culvert should be installed in this location.

Problem: Potholes

Possible Causes:

- Potholes are typically caused by insufficient crown or road cross slope. The road should be re-graded to remove the potholes, then re-crown or super-elevate the road as necessary.

Ditch Problems

Problem: Bottom of ditch is eroding

Possible Causes:

- Slope of ditch is too steep to handle the flow without additional protective measures, which include additional vegetation, erosion control mats, rip rap, check dams, etc.
- Ditch is too small to handle the volume of water flowing through it. May need to install periodic turnouts to reduce flow through the ditch.
- Bottom of ditch is too narrow and needs to be widened to a parabolic shape.

Problem: Sides of ditches are slumping or eroding

Possible Causes:

- Side slopes are too steep and need to be lessened by digging the back.
- Side slopes need to be stabilized with additional vegetation, erosion control mat, or rip rap.

Parking Areas

Designated parking areas are provided at waterfowl impoundments, ADA blinds, dove fields, campgrounds, and various road intersections/ terminations. Parking for game land access is also provided at the end of Roberson Tract Road.

Future Parking Areas

Any new parking area should provide a gravel surface (approximately 6" layer of compacted ABC stone) and provide enough parking for three to five vehicles. Depending on the amount of use, clearing, and grading required, it is estimated that each parking area will cost between \$5,000 and \$15,000.

Two new parking areas should be constructed on the game land, one at the end of Doug's Gun Shop Road and the other at the access gate on Longleaf Road.

Gates

There are several gates located throughout the game land, which limit access to certain roads and portions of the game land. The gates observed during the inspection are swing pipe gates in good condition.

The game land is typically closed outside of hunting season, with all gates closed and locked. Some gates on the game land are opened/closed during specific times of the year, typically for deer and turkey hunting seasons. A Controlled Access Map (Appendix V) has been included in this report, which identifies the times of the year when each gate/road is open to the public.

Drainage Structure Assessment

Dams

The game land has one pond dam located at N 35.881828, W 77.136561. The dam is an earthen embankment that retains water for an approximately 0.8 acre pond. There is no control structure or emergency spillway. The limited drainage area results in a maximum depth of 3.5 feet with a freeboard estimated to be five feet. Trees have overgrown the embankment and should be removed; however, given the small amount of water retained, this would be a low priority.

Waterfowl Impoundments

Waterfowl impoundments are managed to provide food and resting areas for waterfowl and hunting opportunities for sportsmen. The typical mode of operation is to grow a food source in the drained impoundment then inundate the impoundment in the fall during the fall migration. There are five waterfowl impoundments currently on the game lands.

Dr. Ray D. Minges Waterfowl Impoundment

Deep Pond

Susie Slough

Dr. Ray D. Minges Waterfowl Impoundment (N 35.872022, W 77.056078)

The Dr. Ray D. Minges Waterfowl Impoundment consists of two ponds, of approximately 57 acres, enclosed by an earthen embankment approximately 6,800 feet. An earthen embankment approximately 1,800 feet long separates the impoundment to form Minges 1 and Minges 2. A PTO driven mechanical well pump supplies the water to inundate the impoundment. Water from the well is pumped into Minges 1 then flows into Minges 2. The water level in both ponds is

controlled by aluminum flash board risers with corrugated metal pipe (CMP) barrels. The embankments and control structures are functioning as intended.

The well is currently being repaired. Water to inundate the impoundments is being pumped from the adjacent swamp with a tractor PTO pump. Given the opportunity to update the water supply system, it is recommended that an engineered design and cost analyses be performed to determine the best system to replace the existing well pump. An estimated \$25,000 plus is spent annually on fuel for the portable motor driving the existing PTO pump. Additionally, expenses are incurred for staff time and mileage to service the pump from August to January. The cost analysis should consider long term operating expenses along with initial capital investment. Given the cost of fuel, an electrically powered pump should be investigated.

The estimated cost to upgrade the system could range from \$50,000 to \$150,000.

Deep Pond Impoundment (N 35.888831, W 77.053592)

The Deep Pond Impoundment consists of one pond, approximately 8 acres, enclosed by an earthen embankment along the west, north, and east sides of approximately 1,500 feet long. The natural topography provides a boundary to the south. A PTO driven mechanical well pump supplies the water to inundate the impoundment. The water level in the pond is controlled by aluminum flash board risers with a CMP barrel. The embankments and control structures are functioning as intended.

Deep Pond pump should follow the same upgrade process as the Dr. Ray D. Minges Waterfowl Impoundment.

Susie Slough Impoundment

Susie Slough Impoundment consists of two independent impoundments supplied by a shared PTO driven mechanical well pump with piping and valves to control the water supply. Both impoundments have aluminum flash board risers with CMP barrels as water control structures. Both embankments appear to be in good condition.

Susie Slough 1 (N 35.906283, W 77.070211) Susie Slough 1 is approximately 19 acres in size impounded by an earthen embankment 4,000 feet long. Susie Slough 2 (N 35.910572, W 77.074689) is approximately 19 acres in size impounded by an earthen embankment 4,200 feet long.

According to field staff, the control structures are not water tight. Additionally, it is believed the construction of the impoundment damaged the impervious soil below the impoundment surface. As a result of the leaking control structures and potentially pervious impoundment surface the impoundments have never functioned as intended.

It is recommended a plan be developed to repair the impoundments to a functioning condition given the requirements included in the initial construction funding agreement. As a start, the control structures should be inspected. Any control structure that is not water tight should be removed and reinstalled. Next the infiltration rate of the impoundment surface can be investigated either by inundating the pond to see if problem areas are evident or by conducting an assessment with soil boring in strategic locations. Once the issue is identified it should be repaired and the impoundment brought into service. Additionally, the pump supplying the water is the same general type that has failed at the other impoundments; therefore, the same design and analysis should be conducted for this location.

Dam/Impoundment Maintenance

Dams are complex structures that consist of many parts (Fig. 20). In order to prevent failures, dams must be inspected to identify potential problems, and maintenance must be performed to prevent deterioration of the structure that may result in failures. Because of their complexity, dams can fail in many ways including, but not limited to, overtopping, seepage failure, and structural failure.

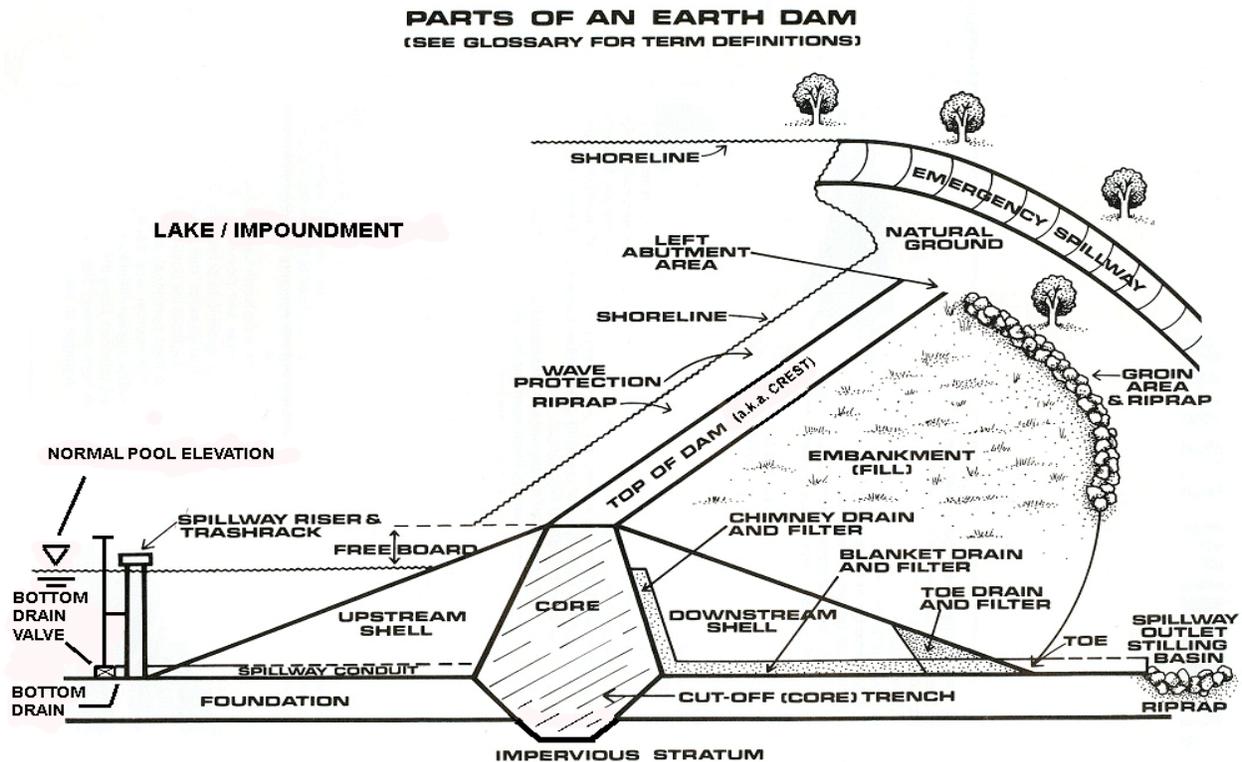


Fig. 20. Parts of an Earthen Dam (North Carolina Department of Environment and Natural Resources 1985).

Periodic inspection of dams is very important. Dams should be thoroughly visually inspected by technician staff at least twice a year, once in the summer and once in the winter. A closer inspection of the embankment can be made in the winter when the vegetation is dormant and in the summer after the embankment has been mowed. An engineer should be contacted after the embankment has been mowed. Ideally, an engineer will inspect the dam once per year. An engineer should be contacted any time of the year if a problem is observed. Each component of the dam should be inspected for problems, and corrective action should be taken as necessary. Records of inspections and corrective measures should be kept on hand to monitor any problems that may be observed. Checklists for inspections are available in the “Dam, Operation, Maintenance, and Inspection Manual” published by NCDENR.

A healthy stand of grass should be maintained on the dam embankment, toe, groin, top (if a road is not present), and in the emergency spillway to prevent erosion. Shrubs and woody vegetation should not be allowed on the embankment or in the spillway. Roots can cause seepage paths, and trees that fall can leave large holes that can weaken the dam. Brush and trees can also make it difficult to visually inspect the embankment for other issues, and they also provide a haven for burrowing rodents. They also prevent grass growth. As such, all trees, shrubs, and bushy vegetation should be removed from the dam. Embankments should be mowed at least once a year with equipment capable of navigating the potentially steep slopes and capable of removing small woody growth. Emergent vegetation on the shoreline of the embankment should also be controlled. Commercial herbicides can be used in these areas; however, all application instructions, environmental precautions, and safety practices should be followed.

Any and all erosion observed on the embankment, on the groin, and in the emergency spillway should be addressed immediately. Vegetation should be re-established in the eroded area by adding soil as necessary and installing topsoil and fertilizer if necessary prior to seeding. Turf reinforcing mat may also be required to stabilize the repair. The cause of the erosion should also be addressed. The upstream face/shoreline of the embankment should also be checked for erosion. This may be caused by wave action. These areas should be repaired immediately by excavating out the eroded material and installing filter fabric and rip rap to prevent further damage.

Dam inspections should also address seepage that is observed. Seepage can occur anywhere on the downstream face, around principal spillway pipes, or beyond the toe of the dam. Seepage may vary in appearance from a soft, wet area to a flowing spring. These areas may show up as areas where the vegetation is more lush and darker green. Marsh or wetland vegetation may also be present in these areas. Seepage can lead to weakening of the embankment evidenced by slides caused by soil saturation or pressures in the soil pores. Seepage can also lead to piping, or the movement of soil particles, which can lead to dam failure. A continuous or sudden drop in the water level may also be an indication that seepage is occurring. Regular inspections and record keeping (seepage flow rates, water levels, content of flow, size of wet areas, and type of

vegetation growth) are important to monitor the seepage conditions to determine whether the seepage is steady or in a state of change. If seepage is observed, an engineer should be notified.

The embankment should also be inspected for cracks, slides, sloughing, and settlement. Short, isolated cracks are not usually significant, however larger (wider than ¼ inch), well-defined cracks indicate problems. Transverse cracks that appear across the embankment may be due to differential settlement, and they can provide paths for seepage and piping. Longitudinal cracks that appear parallel to the embankment mat indicate the early stages of a slide. Small cracks should be filled to prevent water intrusion. Slides are serious threats to dam safety as they can lead to instability of the embankment and failure. If a slide develops, the water level should be lowered to facilitate investigation of the cause and facilitate the construction of a repair. An engineer should be contacted to examine all cracks, slides, and settlements observed.

During the dam inspection, evidence of rodents (groundhogs, muskrat, and beavers) should be noted. Burrows can weaken the embankment and serve as pathways for seepage. Beavers can also plug spillways causing the water level to rise above the design level. Rodents should be removed from the dam by acceptable means and burrows should be filled. Trash racks, spillways, and other outlets should be inspected for clogging and cleaned as necessary.

Roads on top of dams should be maintained to prevent damage to dam embankments. They should be constructed using a proper base and wearing surface. If a wearing surface is not constructed, traffic should not be allowed on the dam during wet conditions. Water trapped in ruts can lead to saturation and weakening of the embankment. A wearing surface will prevent or minimize ponding water and infiltration. A wearing surface should be constructed to drain into the impoundment, and stormwater runoff should not be concentrated at one point.

Principal spillway pipes should be inspected thoroughly once a year. They should be inspected for improper alignment (sagging), elongation and displacement at joints, cracks, leaks, surface wear, loss of protective coating, corrosion, and blockage. Special attention should be paid to pipe joints. The pipe should also be checked for signs of water seeping along the outside. Small or minor problems can be patched; however, major problems may require replacement of the pipe. An engineer should be contacted if problems with the pipe are observed. Erosion at the pipe outlet should also be inspected. Severe undermining can lead to pipe joint displacement and weakening of the dam embankment. Rip rap may be installed to mitigate against continued erosion; however, an engineer should be contacted if there is severe erosion. Inspection reports should be kept to monitor the progression of any observed problems.

Riser structures should be thoroughly inspected at least once a year. They should be examined for spalling and deterioration. Any cracking, staining, exposed reinforcing bars, and broken out sections that are observed should be further examined as this may lead to structural instability. They should also be checked for alignment and settlement. Mechanical equipment such as valves, gates, stems, and couplings should be inspected for corrosion, broken, or worn parts. It

would also be good to operate these devices at least once a year to ensure that they are functioning and seating properly. An engineer should be contacted if problems in riser structures are observed, and they should be addressed immediately.

Trash racks and flashboards should be inspected on a more frequent basis. Clogging of these features can lead to higher water levels that may compromise the stability of the dam. Clogs should be cleared and all trash should be removed. If possible, the cause of the clogging should be identified and addressed. Broken trash racks and boards should be repaired or replaced. Broken trash racks can allow trash and debris to enter the riser and/or principal spillway pipe and can lead to clogging of these features.

Vegetated emergency spillways should be inspected at least twice per year (at the same time as the embankment). Spillways should be mowed to prevent trees, brush, and weeds from becoming established and to promote the growth of grass. Any erosion should be repaired immediately and any obstructions should be removed. Periodic reseeding and fertilization may be necessary to avoid erosion and bare areas.

Concrete and other lined emergency spillways should be thoroughly inspected at least once a year. Concrete should be inspected for floor or wall movement, improper alignment, settlement, joint displacement, undermining, and cracking. Structural repairs should begin by removing all unsound concrete. Cracks must be repaired carefully to prevent water intrusion. An engineer should be notified if any structural problems are observed with the spillway. Rip rap lined spillways should be inspected for erosion and displacement of stone. All woody vegetation should be removed, and any obstructions should be removed. Inspection forms and notes should be kept to monitor the progression of any observed deficiencies.

It is important to keep detailed and accurate records of all observations, inspections, maintenance, rainfall and pool levels, drawdowns, and other operational procedures. These records can aid in monitoring the progression of deficiencies as well as diagnosing problems. More information on dam inspections, operation, and maintenance can be found in the “Dam, Operation, Maintenance, and Inspection Manual” prepared by NCDENR Division of Land Resources Land Quality Section.

Culverts

Due to the size of the game land and total number of culverts, inspection of all culverts is impractical. However, during the road investigation with field staff, several culverts were identified as needing repair or upgrade. Any culvert upgrade consisting of a single pipe 36” and greater or a crossing utilizing multiple lines of pipe should include design considerations for fish passage. Specific considerations can be obtained by contacting the Division of Inland Fisheries, Habitat Conservation Program - Technical Guidance Section. They include the following:

Conoho Road (Culvert 1: N 35.864258, W 77.043322)

The culvert is a 48" CMP 20' long. Severe erosion has nearly compromised the integrity of the roadway both upstream and downstream. It is recommended the culvert be replaced and wing walls included given the proximity to the river which results in two way flow and inundation. Large trees at both ends may require realignment of the road to accommodate the wing walls. The estimated cost is \$40,000.

Conoho Road (Culvert 2: N 35.873578, W 77.045617)

The culvert is a 54" CMP 20' long. Severe erosion has nearly compromised the integrity of the roadway both upstream and downstream. It is recommended the culvert be replaced and wing walls included given the proximity to the river which results in two way flow and inundation. The estimated cost is \$40,000.

Conoho Road (Culvert 3: N 35.901847, W 77.068694)

This culvert is 8" PVC 20' long. The culvert inlet has been damaged due to farming operation equipment. A properly designed replacement should be installed to accommodate the anticipated equipment usage. Additionally, the road should be built up to handle the loading and facilitate proper drainage. The estimate cost is \$10,000.

Depot Road (N 35.883889, W 77.145072)

This culvert is a 48" RCP. The outlet side has eroded to the point of endangering the roadway. A scour hole has formed and a portion of the pipe has washed downstream. Complete replacement will require coordination with the adjacent landowner given the proximity of the inlet to the property boundary. However, repairing the scour hole, extending the pipe, and adding a wing wall should protect the roadway. The estimated cost is \$15,000.

Longleaf Road (N 36.100076, W 77.148222)

This culvert is a 30" RCP. The end of the pipe is damaged and the road bed has begun to erode. The damaged section(s) of pipe should be removed and replaced and the road bed repaired.

The estimated cost is \$5,000.

The following culverts provide administrative and farming operation access. Each requires replacement and should be designed to handle the anticipated heavy loads. The following lists the location, reason for replacement, and estimated cost respectively. It is anticipated, substantial savings would be realized if these culvert replacements could be completed as a set.

Banana Field Access N 35.896567, W 77.132992, over topping, \$5,000

Deveraux Swamp (Northern access west of Poplar Point Road) 1-4

1. N 35.902167, W 77.129186, Severe damage, \$15,000
2. N 35.902222, W 77.129069, Severe damage, \$15,000
3. N 35.903856, W 77.132903, over topping, \$10,000
4. N 35.905244, W 77.133619, damaged, \$5,000

Culvert Maintenance

Culvert maintenance is performed to extend the life and ensure proper function of the installed drainage structure. The accumulation of sediment and/or debris at the inlet or outlet of a culvert or damage such as crimping of the pipe effectively reduces the diameter and flow capacity of the pipe.

Culvert maintenance includes removal of accumulated sediment and/or debris that prevents passage of water (and organisms) through culvert inlets, outlets and connected drainage ways. It may also include reinforcement of eroding inlets and outlets by installing riprap or other erosion control measures. Damaged culverts and culverts requiring frequent repeat maintenance should be considered for future remediation via redesign and reinstallation.

The following items should be checked for and addressed as part of routine maintenance inspections:

- partial or complete blockage of the inlet or outlet of the pipe with sediment, stone, leaves, woody debris, refuse or any other items that could affect flow through the culvert
- evidence of scour, bank or channel bed erosion near the inlet or outlet of the culvert
- evidence of flow overtopping the road at the culvert location
- damage to the pipe including crimping of the inlet or outlet, crushing or piercing of the pipe
- severe corrosion of the pipe
- damage to headwalls

Staff should inspect ditches and culverts as part of their regular road maintenance activities. This inspection is especially important during leaf fall and following periods of heavy rain. Staff should consider the location of the culvert before performing maintenance using heavy equipment. Culverts located in active stream channels, dedicated, or critical habitat areas may

require special permission or installation of erosion control measures before maintenance can commence.

Leaves and woody debris that have accumulated in or around the inlet of the culvert should be removed immediately using hand tools if possible. Removal of accumulated silt and/or gravel from ditches approaching the culvert inlet should be performed using a small excavator, backhoe or a tractor equipped with a scrape blade. Sediment in or around the immediate vicinity of the pipe inlet or outlet should be removed using hand tools to prevent damaging the culvert. Cleaned out material is to be pulled away from the culvert then hauled and spread at a site where it cannot be washed back to the culvert area.

Repeat problems with sediment collecting around the inlet may indicate the existence of an erosion problem originating from the slopes, streams, or ditch lines in the vicinity of the culvert. Identification and stabilization of these problem areas through practices such as seeding or matting could improve performance of the culvert and reduce maintenance requirements.

Flow overtopping the road at the culvert location generally indicates that the pipe is undersized and could warrant resizing and replacement. Any damage to the culvert, as described above, may also necessitate replacement of the pipe. If maintenance staff identifies any culverts that may need replacement, they should contact engineering staff to calculate the peak flow capacity and diameter of the new pipe.

Recreational Facilities Assessment

Boating Access

There are no boating access areas on the game lands; however, NCWRC operated boating access areas are critical launching sites to provide public access to remote portions of the game lands not serviced by roads. The Hamilton Boating Access Area provides access to the northern game land tracts while the Williamston Boating Access Area provides access to the southern tracts. Additionally, the Plymouth Boating Access Area and Water Street Landing Boating Access Areas provide access to the Roanoke River National Wildlife Refuge

Public Fishing Access

There are currently no public fishing access areas on the game land; however, considerable bank fishing does occur along Conoho Road in the Roanoke River

Shooting Ranges

There is not a shooting range on the game land at this time.

Campgrounds

There are five designated primitive campgrounds on the game land. All the campgrounds are grass fields maintained by mowing. Additional primitive camping is allowed within 100 yards of the Roanoke River; however these areas are not designated. The designated areas are listed below.

Depot Road Campground (N 35.884533, W 77.144142)

The Depot Road Campground is one acre in size and located to the right at the end of Depot Road.

Deveraux Swamp South (N 35.902156, W 77.132044)

The Deveraux Swamp South Campground is 0.25 acres in size located to the west of Poplar Point road 2.2 miles north of the intersection with NC 125.

Deveraux Swamp North (N 35.895747, W 77.128556)

The Deveraux Swamp North Campground is 0.25 acres in size located to the west of Poplar Point road 2.5 miles north of the intersection with NC 125.

Conoho Road 1 (N 35.887819, W 77.055381)

The Conoho Road 1 Campground is 0.25 acres in size located on the left hand side of Conoho Road 1.1 miles north of the second culvert crossing. This camp ground has an equipment shed that is utilized by campers. A least one of the support poles needs to be replaced at an estimated cost of \$1,000. NCWRC staff should consider replacing this equipment shelter with a metal frame shelter. Estimated cost for replacement is \$60,000.

Conoho Road 2 (N 35.907961, W 77.071933)

The Conoho Road 2 Campground is 0.25 acres in size located on the left at the end of Conoho Road. This campground also has a pole shed used by campers. The shed appeared to be in good shape. Severely damaged from Hurricane Isabel, NCWRC staff removed one section of the shelter and repaired the remaining structure. NCWRC staff should consider replacing this equipment shelter with a metal frame shelter. Estimated cost for replacement is \$60,000.

Geocaching

Geocaching is a recreational activity, in which participants use a GPS receiver or mobile device to hide and locate hidden containers, or caches, located somewhere outdoors. Game lands have become a very popular geocaching location. There are no major infrastructure elements required

for this non-traditional use, but it would be beneficial to the participants to provide parking areas near the start/end of the geocaching trails.

Hiking

The game land contains several miles of roads, which have typically been for hunter access. Hiking is becoming a more popular activity and will continue to be a demand on game lands. Hiking trails should be on existing roads and trails which will allow NCWRC staff to maintain the trails. Consideration must be given to dedication restrictions during the development of a long term trail plan. If new trails are allowed, they can be used for both hunter access and recreational hikers.

Horseback Riding

Currently, unregulated horseback riding occurs on the game land. Unofficial trails are beginning to impact the natural condition of the game land, particularly at water crossings. Given the increased public demand for this use, potential trails will have to be investigated and infrastructure may need to be constructed. Infrastructure needs will include designated trails, armored stream crossings, and parking for vehicles towing trailers. It is estimated the minimal cost to provide trails, crossings and parking area will be \$20,000 per mile, \$30,000 per crossing and a minimum of \$70,000 each respectively.

Wildlife Viewing Platform

An elevated wildlife viewing platform is located on the Dr. Ray D. Minges Waterfowl Impoundment. The elevated centralized location minimizes wildlife disturbance while providing an excellent view of the entire impoundment. The structure is well constructed and in good condition.

Recreational Facility Maintenance

Maintenance of recreational facilities is critical to the overall operation of the game land program. Typical use of the game lands is dispersed; however, recreational facilities concentrates users on a specific area or feature. This concentration of users, whether it is a boating access, fishing access, shooting range, or other use, results in a need to ensure the facility is safe and functional. Routine site visits for inspection and maintenance will accomplish this goal. Site visits should consist of two actions: (1) Inspection for safety issues and functionality; (2) Actual maintenance activities.

1. Inspections should examine the following items
 - a. Safety inspection items:

Facility Components

- Decking
- Handrails
- Structural supports (piles, substructure, and floats)
- Fasteners (bolts, screws, and nails)

Slip or trip hazards

- Uneven walking surfaces
- Mud on walking surfaces
- Ponded water on walking surfaces
- Drop offs

Overhead

- Dead trees or limbs
- Overhead utilities

b. Functionality Inspection Items

Parking

- Surface condition (ruts, potholes, gravel)
- Delineation (wheel stops, paint)

Ramp

- Blockages (sediment, wood)
- Surface condition

Pier/Dock

- Bollards
- Wooden components
- Bumpers

Shooting range

- Berms
- Target area
- Benches
- Shelter (roof, structure, and floor)

Signage

- Kiosk (entrance, regulation and information)
 - ADA
 - No Parking
 - Keep Ramp Clear
2. Maintenance activities should include routine and corrective activities
- a. Routine Activities include:
 - Litter and debris removal
 - Grass mowing
 - Woody vegetative growth control
 - b. Corrective activities can include but not be limited to:
 - Lumber replacement
 - Sign replacement
 - Minor grading
 - Tree or limb removal

Over time recreational facilities degrade to the point that routine maintenance activities cannot provide corrective action. Examples of this level of degradation include but are not limited to: structural problems, persistent and/or severe erosion issues, and broken/or severely degraded concrete. Once this level of degradation is reached, supervisory personnel should inspect the facility and determine the scope of the needed repairs. If major repairs are required supervisor personnel should contact an engineer for assistance.

Public Uses

As stated previously in the Game Lands Program Mission Statement, primary public uses of North Carolina game lands are hunting, fishing, trapping, and wildlife viewing. However, the Commission recognizes the desirability of providing opportunities for other activities on state-owned game lands that are feasible and consistent with the agency's mission and compatible with these traditional uses.

As the human population of North Carolina has rapidly grown, state-owned game lands have received increasing pressure to provide public outdoor recreation opportunities. These uses include traditional activities such as hunting, fishing, trapping, and wildlife viewing, as well as other outdoor recreational pursuits. While hunting, fishing, trapping and wildlife viewing are the primary public uses of state-owned game lands, the Commission has always allowed other dispersed and non-developed recreational activities. The funding sources of the NCWRC; however, are focused on natural resources management rather than recreational development. Because of this, the NCWRC must exercise care in providing for recreational activities that may

not be compatible with the natural resources for which the lands are valued and the primary management objectives of these lands.

As a response to these increasing pressures, the NCWRC developed a Game Lands Use Evaluation Procedure to provide a statewide framework for determining appropriate uses for Commission-owned or controlled game land properties (Appendix VI).

Different user groups of the Lower Roanoke River Wetlands Game Land

Based off of anecdotal information and input received from the public input processes that occurred from 15 July to 31 August 2013, we have made our best determination of different user groups that occur on the LRRWGL. When analyzing the comments, we noticed that there were many references to tracts that are part of the Roanoke River National Wildlife Refuge. The NCWRC does not have management responsibility of the refuge lands and these comments were passed on to the refuge office. The discussion of the different users groups below primarily use responses to question number 3 from the public input meeting and the online comment website: **How do you use this game land?** The user groups are listed below and discussed in greater detail. Please note that the percentages when added together for any question may exceed 100% since many respondents included multipart answers.

During the public input process commenters were asked to explain why they think the current level of access is, or is not, satisfactory on this game land. Eight of the 12 respondents from the public input meeting wanted to increase access. Of those 8 respondents, 6 wanted to increase access for non-traditional uses. When looking at the total responses to that question, 48% (10 of 21 responses) wanted to restrict access or were satisfied with the current level of access. This suggests that locals see the game land as a resource for non-traditional uses while the online commenters recognize the game land for its hunting and fishing significance.

Traditional game land users

- Hunters
- Fishermen
- Trappers
- Wildlife viewers

Discussion of traditional game land users

According to public input comments, hunters make up largest number of traditional users followed by anglers. Wildlife viewing was reported as only a small percentage (7%) of activities that game land users participated in. As discussed earlier in the Plan, the LRRWGL is enrolled in the Permit Hunt Opportunities Program, which allows for managed hunting and trapping participation which provides for unique hunting opportunities. Overall, we believe that traditional users are satisfied with permit hunting opportunities provided on this game land.

Deer hunters

Excellent deer hunting opportunities are available on the LRRWGL. People from all over the state and some neighboring states come to take advantage of the large deer herd and, in some cases, to camp remotely on the Roanoke River. Biological data collected from hunter harvested deer suggest that hunters are not selective in the deer they harvest. Hunters are interested in a quality hunt and are generally satisfied with the ability to harvest any deer they choose as suggested by the lack of public comment regarding management changes. Of the responses received for question 3, (How do you use this game land?), 62% of the respondents indicated that they used the game land for hunting. When asked what species were most important to protect on the game land, 46% of the responses included deer as a species they felt were most important.

It is interesting to note that only 3 of the 18 respondents that use the game land for hunting attended the public meeting. The other 15 comments were sent in through the website. This may suggest that out-of-town game land users value the game land for its hunting opportunities more so than the attendees to the public input meeting. A survey covering the 2011-2012 gun deer hunting season on the LRRWGL showed that 63% (63% of 354 hunters that hunted the LRRWGL) traveled greater than 61 miles one way to hunt (North Carolina Wildlife Resources Commission, 2011-12 Deer, unpublished data).

Overall, we currently believe that deer hunting opportunities, which include hunter access, supplemental plantings, habitat management, and the numbers of deer are adequate to satisfy this user group. To better manage and improve the quality of permitted deer hunts, a survey is in the processes of being adopted by the NCWRC (Appendix VII). From the information gathered from this survey, we will be able to determine how many deer were observed, harvested, and the level of effort that was put forth during the hunts. This survey also gives the hunter an opportunity to express their level of satisfaction and the causes that determined it.

Turkey hunters

The LRRWGL tracts generally consist of a prime mix of bottomland hardwoods, managed upland forest stands, wildlife openings, and old-field brood habitat areas. These managed lands provide exceptional potential for high turkey numbers and stable to increasing productivity over time. These areas provide good numbers of turkeys for public hunting as well as contributing locally to turkey flocks using the surrounding private lands.

Based off of game land hunter harvest data collected when big game animals are registered, 82 turkeys have been harvested on the LRRWGL in the past 3 years. This number does include birds harvest on the RRNWR. Of those 82 birds, 48 came from the Martin County portion of the LRRWGL. Realistically, these numbers are open to interpretation because we don't know the amount of effort that was put forth to harvest these numbers of turkeys. They do, however, give us a glimpse into the importance of the game land to turkey hunters.

Fifty-four percent of the respondents to the public input questions listed turkey as an important species to protect. Through our permit system, we have been able to limit the number of hunters in order to provide a quality hunting experience. We feel that we have an excellent management program for turkey on the state-owned tracts of the LRRWGL. Threats that could jeopardize turkey abundance could be increases in access, habitat destruction from other/poorly managed uses, and increase disturbances from game land users during nesting and brooding seasons.

We currently believe that turkey hunting opportunities on the LRRWGL are sufficient. We believe that infrastructure, supplemental plantings, habitat management, and the numbers of turkeys available to harvest are at levels to satisfy this user group.

To better manage and improve the quality of permitted turkey hunts, a survey is in the processes of being adopted by the NCWRC (Appendix VIII). From the information gathered from this survey, we will be able to determine how many gobbling turkeys were heard, harvested, and the level of effort that was put forth during the hunts. This survey also gives the hunter an opportunity to express their level of satisfaction and the causes that determined it.

Waterfowl hunters

The purpose for the creation of the RRNWR and by default the procurement of large tracts of the state-owned portions of the LRRWGL was to address declining waterfowl populations, especially black ducks, by protecting large tracts of bottomland hardwoods. Waterfowl use on the LRRWGL is primarily dependent on beaver ponds and backswamp flooding. The degree of flooding depends on seasonal rainfall and releases from upstream dams. Working with the South Atlantic Migratory Bird Initiative and using North American Wetlands Conservation Act funds, 5 waterfowl impoundments have been constructed to restore 101 surface water acres of prior-converted wetlands.

Waterfowl hunting is dispersed across the different tracts of the game land using the permit hunt system. Successful permit applicants can hunt anywhere on the tract for which they are drawn. When asked what species are most important to protect, 42% of respondents listed waterfowl. Water levels in the impoundments are managed to provide resting and foraging habitats for migrating waterfowl. The impoundments were designed to capture rain water and to take advantage of flooding events. Since the construction of the impoundments, there have been several years of dry weather. The wells were to be used as a supplemental water source. They are the primary water source when rain water and surface water is not available. Pumping usually starts in early August to ensure the impoundments have huntable water in October. Staff have been able to take advantage of Conoho Creek and adjacent swamps to fill the impoundments. Care must be taken when drawing from the nearby swamp as to not impair the quality of habitat in the swamp by reducing surface water for waterfowl only to fill the impoundments. Two impoundments do not hold water very well and improvements to these impoundments have been addressed in the Infrastructure Development and Maintenance section.

To better manage and improve the quality of permitted waterfowl hunts, a survey is in the processes of being adopted by the NCWRC (Appendix IX). From the information gathered from this survey, we will be able to determine the number of different species harvested, the level of effort that was put forth during the hunts, and the level of satisfaction of each hunter based on several criteria. Currently, random hunter bags checks are being used to determine what species and numbers that are harvested and hunter attendance rate.

Small game hunters

Small game hunting opportunities are thought to be good on this property. This determination is based on anecdotal information alone because hunters are not required to report small game harvests. Currently, small game hunters have the opportunity to harvest doves, quail, rabbits, gray squirrels, opossums, bobcat, raccoon, and beaver. Fox hunting can only occur in Martin County with dogs. Bertie County local law allows hunters to take foxes with the use of dogs and/or weapons.

Forty-two percent of respondents indicated that small game species were important to protect. One small game hunter suggested we were trying to exclude small game hunters from the beginning of the season. Past conflicts have resulted in the removal of 4 days from the small game hunting calendar on the LRRWGL to provide for a Tier III Disabled Sportsman Deer Hunt. Opportunities exist at Bertie County Game Land and Van Swamp Game Land for small game hunting on the days removed from the LRRWGL calendar. There were 74 days available to hunt small game on the LRRWGL during the 2012-13 hunting season. This number does not include the days where dove could be hunted in September.

An extensive effort has been underway to increase the early successional habitats on the game land. These habitats offer excellent cover, brooding, and nesting areas for quail and rabbits. With the amount of early successional habitat and the vast forested bottomlands for squirrel and raccoons, we believe that access for small game hunting the LRRWGL is adequate. No additional infrastructure is needed to serve this group.

Webless migratory game bird hunters

Webless migratory game bird hunting opportunities on this property are thought to be very good. Approximately 40 acres of annual grains are planted each year as an attractant for doves providing opportunities for dove hunters. Dove hunts are managed through the Permit Hunting Opportunities Program and can be obtained through a random selection for hunts occurring during the first two weeks and through point-of-sale for the remainder of the season. According to a statewide survey of dove hunters, 5.2% of hunters listed the Roanoke River Wetlands Game Land as one of three game lands where they hunted doves the most often during the previous 5 years. This ranked 8th among all game lands in the NCWRC system (North Carolina Wildlife Resources Commission, 2012 Dove Hunter Survey, unpublished data). Only 50 permits are issued for each of the dove hunts.

Although our management activities typically are not focused on woodcock, there are several excellent areas to pursue them on the game land. According to a statewide survey of woodcock hunters, 2.8% of hunters listed the Roanoke River Wetlands Game Land as one of three game lands where they hunted woodcock most often during the previous 5 years. This ranked 17th among all game lands in the NCWRC system (North Carolina Wildlife Resources Commission, 2012 Woodcock Hunter Survey, unpublished data).

Hunting of other webless migratory game birds on the LRRWGL is thought to occur at very low levels. These species include snipe and Sora rails. These birds may utilize the shallow waters around the impoundment. It is not known if these birds are targeted on the game land by hunters.

There is a huge demand for public dove hunting opportunities in the state. We feel that trying to provide additional hunting opportunities by adding another dove hunting field within the current boundary of the LRRWGL will only take away from the quality hunt that is offered on the Conoho Farms tract. Should additional open lands be acquired that would not pull the same birds that are using the Conoho Farms tract, we would consider creating additional permit hunt opportunities. Additionally, we believe that our current level of habitat management is sufficient for webless migratory game birds.

Fishermen

Bank fishing is very popular with local anglers along Conoho Road. Fishing is usually centered around the white perch and striped bass runs in the spring. Catfish are also targeted in the spring, summer, and fall. Bowfins are also caught and many times are kept as part of the creel. During open hunting seasons, the gate on Conoho Road is opened allowing fishermen vehicular access to 1.1 miles of bank along the Roanoke River. Many hunters camp along the river and take advantage of fishing opportunities during down time.

Littering has always been an issue with the presence of bank fishermen using the Conoho Road stretch of the river. Staff have installed signs warning fishermen that littering is illegal and Wildlife Enforcement officers have worked details to try to reduce the amount of litter. There are no feasible management strategies that will reduce the amount of litter on the game land.

Trappers

Trapping of furbearers is currently thought to occur at low levels. No public comments were received prior to the draft plan being written that indicated satisfaction, or the lack of, with trapping opportunities on the LRRWGL. The NCWRC received a comment during the draft review that suggested the game lands trapping permits mirror the county's season. The trapping opportunity on the LRRWGL is set to reduce conflicts between user groups. Ample opportunities for trapping exists on other nearby game lands that are not in the special permit system. It should be noted that this game land lies in both Bertie and Martin County and local laws prohibit fox trapping. Trapping is by point-of-sale permit.

We are currently unaware of any specific infrastructure needs that would provide better opportunities for trappers. Additionally, we believe that ample opportunity is provided to trappers.

Wildlife Viewers

Wildlife viewing does take place on the game land but in low numbers. Only 7% of respondents indicated that they use the game land for wildlife viewing. The Roanoke River National Wildlife Refuge may be a more popular location for this activity. According to the Roanoke River National Wildlife Refuge Comprehensive Conservation Plan, approximately 2,000 visitors use the refuge for wildlife viewing every year (USFWS 2005).

An observation platform overlooking the Dr. Ray D. Minges Waterfowl Impoundment offer wildlife viewers the opportunity to see over two impoundments without disturbing wildlife that may be using the area. Several miles of roads and trails are available to wildlife viewers.

With the proximity to the Refuge and very low participation on the game land, we feel that needs are met for this user group.

Non-traditional game land users

- Bicyclist
- Campers
- Geocachers
- Outfitters and eco-tourism
- Hikers and runners
- Horseback/trail riders
- Military
- Paddlers
- Photographers
- Researchers, universities, and museums
- Target shooters
- ATV riders and other off-road vehicles
- Other illegal activities
- Joy riders and sightseers

Discussion of non-traditional game land users

We have attempted to determine all game land users of the LRRWGL and have made determinations of appropriateness and compatibility for each use based on the fact that hunting, fishing, trapping, and wildlife viewing are the primary uses. As long as non-traditional uses do not negatively influence the wildlife resources that the NCWRC manages or negatively impact

traditional uses, they may be determined appropriate and compatible. Some non-traditional uses require special consideration and are only considered to be appropriate and compatible under certain circumstances. These conditions are outlined in the following sections of the Plan.

Non-traditional users are strongly encouraged to refer to the *North Carolina Inland Fishing, Hunting, and Trapping Regulations Digest* and the *Permit Hunting Opportunities in North Carolina* booklet to identify hunting and trapping seasons as well as specific days and times that hunting and trapping occurs on the game land. Out of safety concerns, game land users are also strongly encouraged to wear blaze orange while using game lands. Hunting occurs on nearly every day starting the first week in September until the end of February. During the turkey season, youth hunts are the first full week in April and the regular turkey hunts are Thursday, Friday, and Saturday until season closes in mid-May. No hunting is allowed on Sundays on game lands. Fishing can occur at any time on the game land.

Bicyclist

Bicycling on the LRRWGL is considered compatible as long as bicyclists stay on designated roads and trails. Impacts to natural resources can be minimized by regulating use through numbers, timing, and conditions of trails. The use of the LRRWGL by bicyclists is currently very low. Trails will not be developed to increase this use since many areas are Dedicated and are flooded during parts of the year. The current road system offer bicyclist the best opportunities to ride on the game land.

Campers

Camping on the LRRWGL is considered a compatible use. There are 5 existing designated primitive camping areas on the game land. Camping is allowed anytime within 100 yards of the Roanoke River. Only 7% of respondents indicated that they camp on the game land. Most of the camping is associated with hunting. The campgrounds on the Everett Tract and the equipment shelters on Conoho Farms are extremely popular. Because camping in the campgrounds is restricted to September 1 through February 28 and March 31 through May 14, camping causes no conflicts with the interests and management objectives of the NCWRC. Additionally, camping opportunities are offered year-round on nearby State Parks which offer many amenities that are not currently on the game land.

Geocachers

We are currently unaware of any geocaching activities that take place on this game land. However, geocaching is considered a compatible activity as long as the NCWRC's geocaching policy is adhered to (Appendix X).

Outfitters and Eco-tourism

Guided hunts are thought to occur only at extremely low levels due to hunters being required to possess a valid permit. All the big game and waterfowl permits are lottery draw permits. Point-of-sale permits are available for small game hunting.

Eco-tourism on the game land is experiencing a surge in interest from local governments, groups, and entrepreneurs. These people see the game land as a resource to draw in tourism to boost the local economy. Activities such as canoeing, hiking, birding, and horseback riding have been suggested as potential eco-tourism activities for the LRRWGL.

It is important for land managers to monitor the above activities and document any issues that may arise. Over use by these activities can negatively impact the resource and traditional users.

Hikers and Runners

The use of the LRRWGL by hikers and runners is considered compatible because it creates minimal disturbance to natural resources and is consistent with NCWRC policies and objectives. Hikers and runners traditionally stick to established roads and trails and their impact to the road systems is essentially non-existent.

In response to the public comments requesting pedestrian trails on this game land, we believe that the existing miles of roads and trails provide adequate areas for hikers and runners. These areas are not currently designated specifically for pedestrians but can be used by both traditional and non-traditional game land users.

Out of safety concerns and respect for traditional game land users, hikers and runners should realize and be considerate of all hunting activities on the LRRWGL and the times that they are likely to occur.

Horseback/trail Riders

When asked how people currently use the game land, 5 of the 13 (38%) responses gathered at the public input meeting listed horseback/trail riding as an activity they do on the LRRWGL. Of those 5, only one recorded using the game land for hunting. When including the online comments with the comments received at the public input meeting, only 6 of the 29 (21%) use the game lands for horseback/trail riding. These numbers suggest that local users see the game land as a place to ride. When asked, "What suggestions, if any, do you have for changing how this game land is managed and maintained?" 24% would like to have increased riding opportunities. Much of this interest extends from local individuals, groups, and Martin County government. Some individuals and groups see the game lands as a place to ride their own horses. Others see the game land as an opportunity to increase eco-tourism and money coming to the county. Some want to profit from an outfitter type business, selling trail rides or at least hosting an area to park trailers and camp before going on a trail ride.

The LRRWGL is part of a sensitive ecosystem. Care must be taken when a use is being considered for appropriateness. Horseback riding on the LRRWGL can be compatible as long as certain restrictions are in place. Currently, there are no regulations restricting where riders can go. Although regulations do not exist on the LRRWGL, riding in certain areas may have violated terms of agreements with the North American Wetland Conservation Act, Articles of Dedication with the NC Department of Environment and Natural Resources, and the National Wild Turkey Federation.

Unauthorized trails have been created by horseback riders on the LRRWGL. These trails cross ditches causing erosion and water quality issues. Trails through the swamps have resulted in tree root debarking. Damage has occurred on the waterfowl impoundment dikes and an unimproved logging trail. Trampling of early successional habitats has reduced the quality of these areas for ground nesting birds. Trails have been documented in Significant Natural Heritage Areas.

Other potential threats to the game land include the introduction of invasive plants and the disturbance to wildlife. Nesting birds in the spring and summer may abandon a nest if disturbed. Waterfowl may be less likely to use the waterfowl impoundments if disturbance is increased. Newsome *et. al* (2002) conducted a study on the effects of horse riding on national parks and other natural ecosystems in Australia and determined that environmental impacts include, but are not limited to, soil degradation and compaction, erosion, loss of vegetation height and cover, change in plant species composition, degradation of existing roads and trails, the introduction of invasive grass and weed species, accidental transport of fungal pathogens, and the loss of vegetation, which are all common problems associated with horse use.

The NCWRC recognizes the interests that equestrians have in being able to ride horses on the LRRWGL. It is our recommendation that this activity be regulated through our permit system in order to manage use. We would also like to organize a LRRWGL horseback riding working group to discuss NCWRC concerns with current users and try to find acceptable levels and parameters for horseback riding on the game land that will protect the natural environment, wildlife, and traditional users for which the game land was originally purchased. Recommendations made by NCWRC staff as a result of the horseback riding working group meeting should be presented for regulation adoption.

Military

National Guard training has occurred on the LRRWGL. This activity usually consists of marching drills and has little impact on the game land. Trainers are encouraged to contact the NCWRC to schedule training as not to conflict with permitted hunters.

Paddlers

Most of the paddling takes place on the Roanoke River. The game lands offer a place for paddlers to have a primitive camp anywhere within 100 yards of the river. Most paddlers will start upstream at the Hamilton Boating Access Area (BAA) or the Scotland Neck BAA and paddle downstream to the Williamston BAA or continue to Plymouth, NC. Roanoke River Partners have developed paddle trails and 11 camping platforms on the lower reaches of the Roanoke River. Canoeing also takes place on Conoho Creek. Access down the creek can be difficult at times due to low water or obstructions. There are no developed accesses to Conoho Creek.

The Roanoke River and Conoho Creek are public waterways and therefore do not fall under the jurisdiction of the LRRWGL. Being that they are public waters, this use is not deemed compatible or incompatible. Only when paddlers impact the game land can issues arise. Clearing obstructions from Conoho Creek may impact fish nursery areas and cause stream bank erosion. Excessive camping in one area or paddlers leaving trash on the banks may be an issue. Hunting can take place on or near the creeks and river and paddlers may have a negative impact on hunters.

Impacts to hunters, anglers, trappers and wildlife viewers are considered minimal at current use levels. Paddlers are encouraged to wear blaze orange while paddling Conoho Creek during the hunting season so they are easily seen by other game land users.

Photographers

The use of the LRRWGL by photographers is considered compatible. Photographers create very little impact to the natural resources of the game land and their impacts to roads and trails is minimal.

Researchers, universities, and museums

The use of the LRRWGL by researchers, universities, and museums is considered compatible and does not impact management objectives of the Game Lands Program. These entities use the game land for the collection of data for research and educational purposes. It poses very minimal threats to traditional game land users and does not interfere with or disturb the natural resources of this property. These activities are usually handled through NCWRC's permitting process. At times, research activities provide information that may be beneficial to managing the property.

Target shooters

There are currently no restrictions to target shooting on the LRRWGL outside of designated safety zones. It is considered a compatible activity as long as it does not create safety concerns for the shooter or other game land users and staff, does not cause destruction to NCWRC

property, and shell casings are retrieved. Martin County local law states that it is unlawful to “discharge a rifle of greater than .22-caliber, except from an elevated position in which the rifle is a minimum of eight feet above the ground”.

The NCWRC is currently involved in the design and implementation of shooting ranges on game lands across the state. Upon construction of a designated shooting range on the LRRWGL or nearby game land, all target and recreational shooting activities will be limited to that area.

ATV riders and other off-road vehicles

The use of ATVs and other off-road vehicles on the LRRWGL is considered an inappropriate use. More times than not, these vehicles create disturbance and cause destruction to valuable resources on game lands. They greatly degrade roads and trails and create erosion and water quality concerns when driven in and around streams. Because these vehicles are very agile and maneuverable, riders tend to stray away from developed roads and trails and into areas that land managers desire to be undisturbed. These actions can be detrimental to various plant and animal communities and offset previous efforts made to conserve and manage these areas.

It should be noted that ATV use is currently allowed only by disabled sportsmen that have been deemed eligible for this use. This activity is handled through WRC’s permitting process. The permit authorizes the permit holder to use additional trails identified in the game lands map book. The permit does not allow the use of ATVs on roads and trails not shown as disabled access roads or otherwise open for vehicular traffic and the permit does not allow ATV use in or around fields and woods.

Because ATVs and other off-road vehicles have such a great potential to cause harm and create disturbance to natural resources and other game land users, their use on the LRRWGL is prohibited.

Other Illegal Activities

Illegal activities include wildlife/plant/artifact/mineral theft, vandalism, drug use, sexual rendezvous, and trash dumping. These activities are monitored by the Enforcement Division of the NCWRC.

Joy Riders and Sightseers

Joy riding and sightseeing via vehicle on the LRRWGL is prohibited. Vehicular access is only allowed by individuals possessing a valid permit for hunting or trapping. The exceptions are those people involved with NCWRC business, Co-op farming operations, individuals accessing private property through the game land, and people using Conoho Road to access the river for bank fishing. Hiking is allowed and hikers should use caution during hunting seasons.

Information Needs

Our current state of knowledge about wildlife occurrences on the LRRWGL is somewhat limited. Our best knowledge is of big game species. Successful big game hunters are required to identify the game land from which they harvest big game during the registration process. Some surveys of songbirds, bats, and cricket frogs have been conducted, but many times are associated with research projects. The distribution and occurrence of many cryptic taxa such as reptiles, amphibians, and small mammals (including bats) are under-surveyed and their relative distribution and abundance are unknown and misunderstood. It would be appropriate to work closely with the Natural Heritage Program or other entities to develop a biological inventory.

Our current knowledge of game animals is limited, even though we know the number of harvested big game on the LRRWGL. Currently, there are no surveys in place to track changes in population trends for even the most sought after big game animals (deer and turkey). At present we must make assumptions based on hunter harvest data and county-wide deer density estimates. Management practices and regulations should not be based on assumptions but on best available science.

The following is our current knowledge of our priority species. These priority species were identified because they are game animals that are hunted or trapped on the LRRWGL or they have a state or federal status. They are either known or thought to occur on this game land. Included in this information are inventory and management needs and research recommendations for the future. The appropriateness of tracking population trends for some wildlife species will be evaluated and appropriate techniques will be identified when it is determined such actions are warranted and only when appropriate levels of staff and funding are available.

The identification of game land hunters (or other users) would allow the NCWRC to generate a general observation survey in which data on the observations of multiple species could be collected by hunters or any game land user interested in recording the requested information. This cooperation by game land users would supplement our survey efforts and potentially reduce workloads required by NCWRC staff to collect this information. The use of other surveys is proposed to target hunters in order to determine hunter effort. Information derived from these surveys coupled with other information collected by field staff will give NCWRC biologists the ability to better estimate and track population trends. This valuable information will help staff determine the best management techniques to implement in order to achieve our desired future conditions.

Reports of diseased animals should be investigated and, when possible, attempts will be made to diagnose the cause of infection or cause of death. Also, as specific disease surveillances are conducted (Chronic Wasting Disease, Lymphoproliferative Disease Virus, etc.), the game land will be incorporated into the effort when appropriate.

Non-game Wildlife Species

- **Birds**

Anhinga

Current knowledge

Although anhingas have not been documented on the LRRWGL, they have been documented nesting on the nearby Conine Island tract of the RRNWR. According to the Carolina Bird Club (2013), anhingas have been documented nesting as far north as Weldon. The anhinga lives in shallow, slow-moving, sheltered waters (swamps) and uses nearby perches and banks for drying and sunning. They feed primarily on fish and are rarely found away from freshwater, except during severe droughts. It is generally not found in extensive areas of open water, though it may nest on edges of open bays and lakes. Anhingas may be found foraging in the waterfowl impoundments, Conoho Creek, beaver ponds, or the Roanoke River. The anhinga breeds near freshwater, often in association with other waterbirds such as herons, egrets, ibises, storks, and cormorants, such as the case with the heronry on Conine Island. The 1997 survey of the Conine Island site documented 100 anhinga nests. This species is considered significantly rare in North Carolina.

Inventory and monitoring needs

NCWRC staff should work toward surveys for priority waterbirds including anhingas every 2-3 years during spring and fall migrations as staff and funding needs are met. Aerial surveys of heronries should be completed every 5 years. Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Management needs

Continue management activities on the waterfowl impoundments to provide foraging areas. Most of the bottomland forests are Dedicated and active management is not possible. The large trees in these forests may offer nesting sites for anhingas.

Research needs

There are currently no known research needs.

Mississippi Kite

Current knowledge

In 1992, the Conoho Farms tract near Conoho Creek was thought to be the site of the largest population of Mississippi kites in North Carolina. No nest where detected at that time. Since then, NCWRC staff have observed kites foraging over agricultural fields and the Dr. Ray D. Minges Waterfowl Impoundment.

Kites prefer brownwater river systems and are most numerous along the upper half of the Roanoke River and portions of the lower Cape Fear River. Mississippi kites are migratory and primarily eat insects, with a preference for grasshoppers, cicadas, and dragonflies. They prefer to nest in tall trees in open woodlands near water. Mississippi kites range is expanding in the state. This species is considered significantly rare in North Carolina.

Inventory and monitoring needs

Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Management needs

Protection of the bottomland hardwood forest and continued management of the waterfowl impoundment may provide foraging areas for Mississippi kites.

The protection of bottomland forest and tall trees should aid in providing suitable nesting sites. Staff should maintain open areas including agricultural fields and native warm season grass fields in close proximity to the floodplain forest. Not enough data exist to make detailed management recommendations at this time.

Research needs

There are currently no known research needs.

Wood Stork

Current knowledge

Nesting wood storks have not been detected on this game land during aerial surveys conducted in the Roanoke River basin in 2012. Wood storks are conspicuous because of their white color and large size and are not difficult to detect when nesting. They nest in trees and shrubs within swamps. Only 3 confirmed nesting colonies have been recorded in North Carolina, and those colonies are not active each year. Wood storks have been observed in and around the Dr. Ray D. Minges Waterfowl Impoundment in the summer months. NCWRC and other entities conduct regular surveys for wood storks. They are listed as Endangered in North Carolina.

Inventory and monitoring needs

Seasonal surveys of swamps and impoundments should be conducted to determine use of these habitats by wood storks on the LRRWGL. Wood storks should be counted when other wading bird aerial surveys are conducted. Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Management needs

Management practices that would benefit wood storks include protection of forested swamplands, gradual drawdown of water levels in impoundments during early spring, and slow increases in water levels in the fall. Impoundments should be managed for diverse water levels to benefit the greatest number of waterbird and waterfowl species. Shallow (10-30 cm) water levels in mid- to late summer would increase density of fish in impoundments and greatly benefit wood storks. Wood storks are tactile feeders and increase their foraging success by feeding in shallow ponds and ditches with high densities of fish. In mid-to-late summer, wood storks are feeding chicks and teaching fledglings to obtain their own food.

Research needs

There are currently no known research needs.

Bald Eagle

Current knowledge

Bald eagles are commonly sighted on the game lands. Many times they can be seen perched in a tree overlooking the Roanoke River along Conoho Road. Statewide, eagle populations have been recovering since a ban on agricultural insecticide DDT was instituted in 1972. In 1982, the NCWRC started the North Carolina Bald Eagle Project and released 29 juvenile eagles between 1983 and 1988 from artificial nests near Lake Mattamuskeet. In 1984, the first North Carolina post-DDT ban eagle nest was documented near the lake.

Bald eagles nest in large living pines or cypress trees near water. On the LRRWGL, eagles forage on the river and impoundments. At the impoundments on the game land, eagles have been observed targeting ducks and coots. They will also feed on carrion left by hunters.

Inventory and monitoring needs

Observations of nests or suspected nesting activity should be reported to the Wildlife Diversity Section. When aerial surveys are conducted for wading birds, eagles should also be documented.

Management needs

Management practices that would benefit bald eagles include protection of forested swamplands and managing waterfowl impoundments to attract waterfowl and waterbirds that eagles prey on.

Research needs

There are currently no known research needs.

Cerulean Warbler

Current knowledge

The cerulean warbler is a neotropical migrant songbird that uses the levee forest mainly between Roanoke Rapids and Williamston. This is a rare bird which has been suffering from population declines in the eastern United States. The Roanoke River population nests in tall hardwood trees immediately along the Roanoke River levee and prefer forest with an open understory, understories that can be found in abundance on many areas of protected lands along the Roanoke River. Their distribution and abundance on the game land is considered rare. Surveys conducted by NCWRC Wildlife Diversity staff in 2011 and 2012 have recorded the occurrence of ceruleans on the Deveraux Swamp tract. The cerulean is listed in North Carolina as significantly rare.

Inventory and monitoring needs

Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species. Point count surveys along the Roanoke River should continue as staff and funding are available.

Management needs

Most of the game land acreage along the Roanoke River is Dedicated. This Dedicated status restricts the management actions that may benefit cerulean warblers on the levee forest. Management actions should be based on scientific knowledge. If habitat manipulation on the levee forest can promote the use by ceruleans, then a proposal for that action can be presented to the North Carolina Natural Heritage Program for consideration.

Management actions that may directly benefit ceruleans are the creation of small canopy gaps within the levee forest and protection of cerulean habitats through acquisition and easements to provide connectivity of habitats.

Research needs

Research should be conducted to determine specific habitat variables that cerulean warblers prefer on the levee forest, determine nest success information, and acquire information on adult survivorship and territory retention in the levee forest.

Little Blue Heron

Current knowledge

Juvenile little blue herons plumage is nearly completely white during their first fall and winter, which may lead to incorrect identification with snowy egrets. Little blue herons can be found foraging in the shallow areas of the impoundments, particularly the Dr. Ray D. Minges impoundments as these offer the greatest amounts of mud flats and shallow waters.

Inventory and monitoring needs

Seasonal surveys of the hardwood bottomlands, where accessible, and the waterfowl impoundments should be conducted to determine use. These efforts should be incorporated into NCWRC's Wildlife Diversity Program.

Management needs

Management practices that would benefit little blue herons include protection of the forested swamplands, gradual drawdown of water levels in the impoundments in early spring and slow increases in water levels in the fall. Impoundments should be managed for diverse water levels to benefit waterbirds and waterfowl.

Research needs

There are currently no known research needs.

Snowy Egret

Current knowledge

Snowy egrets numbers have been in decline since the 1990's. Foraging habitat loss does not seem to be a cause since they can be seen feeding in brackish tidal mudflats, shallow freshwater ponds, and shorelines. Snowy egrets can be found foraging in the shallow areas of the impoundments, particularly the Dr. Ray D. Minges impoundments as these offer the greatest amounts of mud flats and shallow waters.

Inventory and monitoring needs

Seasonal surveys of the hardwood bottomlands, where accessible, and the waterfowl impoundments should be conducted to determine use. These efforts should be incorporated into NCWRC's Wildlife Diversity Program.

Management needs

Management practices that would benefit snowy egrets include gradual drawdown of water levels in the impoundments in early spring and slow increases in water levels in the fall. Impoundments should be managed for diverse water levels to benefit waterbirds and waterfowl.

Research needs

There are currently no known research needs.

- ***Mammals***

Rafinesque's Big-eared Bat

Current knowledge

Rafinesque's big-eared bat is a non-migratory bat that uses the floodplain forest in the game land as roost sites and foraging areas. Hollow trees are probably the most preferred roosting and hibernating site. Unlike many other bat species that are crepuscular, this bat species is nocturnal. They are insectivores and are moth-specialists. They are considered "Threatened" in North Carolina.

Management needs

Protection of the floodplain forests should continue. The largest threat to this species on the game land may be during long-term flooding events that submerge the entrance hole at the base of the roosting tree. Also, long-term flooding events may also negatively affect insect reproduction which reduces forage for the bats.

Inventory and monitoring needs

Currently, a bat distribution project is being conducted and the LRRWGL is a part of that effort. The researchers are using acoustic listening devices and also will be conducting mist net surveys. Although no positive case of White Nose Syndrome (WNS) has been reported in Rafinesque's big-eared bats in North Carolina, NCWRC staff and game land users should report any cases of a white fungus on the nose of bats to the NCWRC.

Research needs

Research should be focused to determine seasonal roost site selection and specific maternity sites.

Southeastern Myotis

Current knowledge

Southeastern myotis use the floodplain forest and mesic sites near water on the game land. Roost sites include tree crevices and at times buildings. They can be found hibernating in small colonies in the winter. The Southeastern myotis is listed as a species of "Special Concern" in North Carolina.

Management needs

Protection of the floodplain and mesic forests should continue especially in areas near swamps and open water as these bats prefer to forage over water.

Inventory and monitoring needs

Currently, a bat distribution project is being conducted and the LRRWGL is a part of that effort. The researchers are using acoustic listening devices and also will be conducting mist net surveys. Although no positive case of White Nose Syndrome (WNS) has been reported in Southeastern myotis' in North Carolina, NCWRC staff and game land users should report any cases of a white fungus on the nose of bats to the NCWRC.

Research needs

There are currently no known research needs.

Star-nosed Mole

Current knowledge

The star-nosed mole is not known to occur on the LRRWGL however, the species is predicted to occur in this area of the State, according to the North Carolina Gap Analysis Project (KcKerrow et al. 2006). The coastal habitats for star-nosed moles include pocosins, wetlands, and saturated bottomlands. Neither forest age nor successional stage has been reported as a critical factor determining habitat suitability for this species (Laerm et al. 2007). The coastal plain population in North Carolina is listed as a species of "Special Concern".

Management needs

Not enough data currently exist to make detailed management recommendations at this time. However, we believe that protection and management of the previously mentioned habitats are suitable actions for management of star-nosed moles. Long-term flooding events reduce habitat availability to the mole. Work directed at reducing the hydroperiod on the floodplain should benefit the star-nosed mole.

Inventory and monitoring needs

Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Research needs

There are currently no known research needs.

Red Wolf

Current knowledge

There are no known occurrences of red wolves on the game land but they do deserve discussion because of the NCWRC partnership with the USFWS. There are no documented records of red wolves in the state prior to 1987; however, wolf biologist believe that they did occur throughout the southeast and eastern North Carolina. In the 1960's, biologist recognized the decline of red wolf populations in Texas and Louisiana and as a result the wolf was listed "Endangered" in 1967. A recovery plan was adopted in 1973, paving the way for a captive breeding program for releases into the wild. Alligator River National Wildlife Refuge was selected as a suitable site for the introduction of an "Experimental Population" with the release of 4 breeding pairs. Since those reintroductions, wolves occupy mainland Dare, Tyrell, Beaufort, Hyde, and Washington counties. Sightings have been documented in the southern part of the state.

Red wolf genetic integrity is being compromised with the hybridization with coyotes. This is the primary threat that USFWS biologist are facing for the recovery of the species. Other treats include vehicle injury and death and gunshots. Being that red wolves are difficult to distinguish from coyotes, the NCWRC has agreed to not allow hunting of coyotes on the LRRWGL, of which the RRNWR is a part of. Red wolves in North Carolina are listed as "Endangered-Experimental/Non-essential".

Management needs

The LRRWGL falls outside the restoration area identified by the USFWS and therefore no habitat management will directly include red wolf needs. Efforts should be made to educate hunters that coyotes are not permitted to be hunted on the game land.

Inventory and monitoring needs

Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Research needs

There are currently no known research needs.

- *Amphibian*

Dwarf Salamander

Current knowledge

According to the range map provided by North Carolina Gap Analysis Project, the dwarf salamander is predicted to occur on the LRRWGL (KcKerrow et al. 2006). Dwarf salamanders are commonly found along the margins of ponds in pine forests or savannahs. They may also be found around swamps and bottomland hardwood forests, under logs, leaf litter, and moss. They are listed as a species of "Special Concern" in North Carolina.

Management needs

This species of salamander requires shallow, still, and fishless ephemeral ponds for reproduction. Therefore, management techniques to maintain or enhance these ponds should be practiced if possible.

Inventory and monitoring needs

Any inventory of herps on the game land should be coordinated through the Wildlife Diversity Program of the NCWRC pending available staffing and funding. Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Research Needs

There are currently no known research needs.

- ***Reptile***

Timber (Canebrake) Rattlesnake

Current knowledge

Timber rattlesnakes are known to occur on the LRRWGL. In the Coastal Plain, their use of habitat varies from pocosins to pine woodlands. They primarily feed on small rodents but adults are capable of consuming small rabbits and squirrels. They are a long lived species with recorded lifespans of up to 28 years in captivity. Declining trends in populations can be attributed to loss of habitat, wanton killing, road kills, and poaching. Timber rattlesnakes are listed as a species of "Special Concern" in North Carolina.

Management needs

Protection and management of upland forest communities will benefit timber rattlesnakes. Techniques include maintaining open canopies of forested areas and the use of prescribed fire. Management of early successional habitat for small game will also prove beneficial for this species.

Inventory and monitoring needs

Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application to document occurrences and/or range expansion for this species.

Research needs

There are currently no known research needs.

Game Animals

White-tailed Deer

Current Knowledge

White-tailed deer (*Odocoileus virginianus*) is the most abundant big game species on the game land with Bertie and Martin county deer densities averaging 45 or more deer/mi² (Appendix XI). The deer in the Roanoke River floodplain live in a dynamic system. Population densities likely vary considerably due to flooding. Deer will be pushed onto the uplands during these flooding events. Growing season floods prevent the herbaceous layer from developing in the forest reducing the amount of browse that is available to deer living in the floodplain. Deer hunting on the LRRWGL follows the eastern deer season. Hunting is by permit only. During the Archery Only Season, hunters can hunt any day except Sundays. During the Muzzleloader/Archery Season, hunters are drawn for a week hunt and can hunt any day except Sunday. During the Gun Season, hunters are drawn for a three-day hunt starting on the Thursday of each week. The only exceptions are the Disabled Sportsman Hunts that occur on Mondays and Tuesdays. Maximum harvest (either sex the entire season) is allowed.

Based on 2010-2012 averages, the total deer harvest per square mile on the Martin County portion of the LRRWGL was in line with the total harvest on all lands in Martin County (all lands includes both private and public lands; i.e., all huntable lands) (Fig. 21). Antlered buck harvest per square mile was slightly higher on the game land than it was on all lands in Martin County. The doe harvest per square mile was lower on the game land than in the rest of Martin County. This information comes from the registered harvest and gives a snapshot of harvest and its use may provide for a consistent index of the harvest over time. Bertie County total harvest and the harvest on the Roquist Pocosin Tract were not compared because harvest from the Roquist Pocosin Tract could not be separated from RRNWR tracts of the LRRWGL.

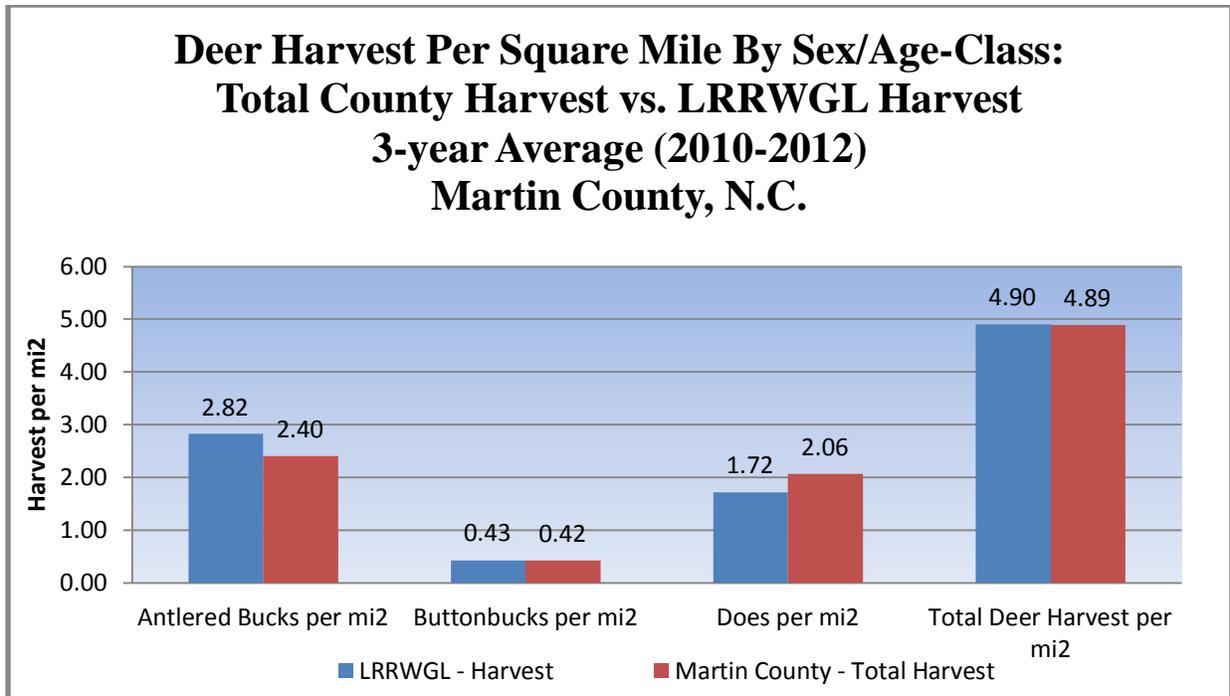


Fig. 21. Harvest per square mile.

The deer harvest on the Game Lands is composed of a higher percentage of male deer (includes button bucks) than the rest of Martin county as a whole (Fig. 22). This data is gathered from the big game harvest reporting system which can provide for a consistent index of harvest over time. The reasons for the difference in hunter selection between private lands and games lands may vary. Game land users may not be willing to drag harvested deer great distances, yearling buck movement may increase the bucks chances of being seen and therefore harvested, game land users may be content harvesting any antlered deer and not pass up the smaller bucks, or private land hunters/clubs may have adopted antler restrictions therefore reducing harvest mortality on the younger bucks.

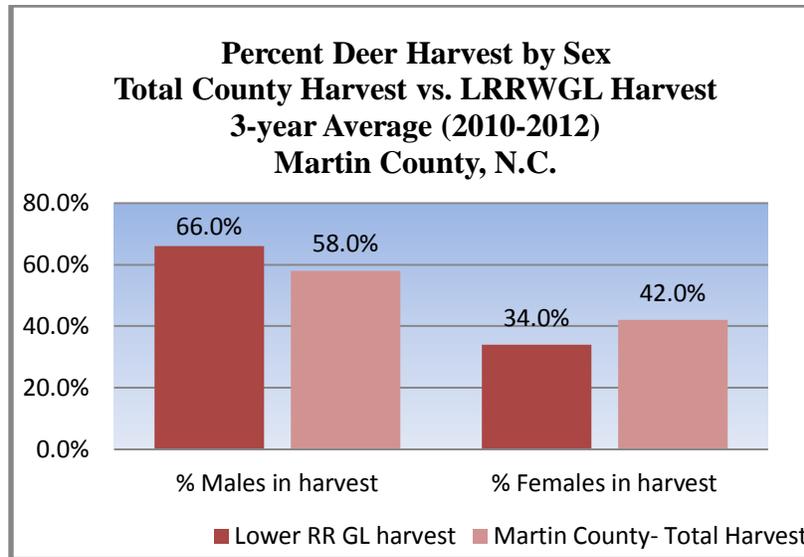


Fig 22. Percent harvest by sex.

Adequate biological data can provide some index of age-composition of the harvest. In this case, its use represents only a small portion of the harvest rather than a true measure of all aspects of the deer herd itself. One parameter for determining a well-managed deer herd set by the ad hoc deer evaluation tool is that the harvest of yearling does (1.5 years old) should be between 30%-35% of the antlerless harvest. Figure 23 suggests that the game lands and private lands in Martin County both appear to be below that 30%-35% goal. Figure 23 also indicates that, of the 13 does sampled on the game lands in years 2010-2012, that there is a higher percentage of older does versus younger does on the game land. Older does typically have a higher fecundity than younger does (Delgiudice et al. 2007). A possible higher reproduction rate by the deer on the game lands may lead to a higher percentage of younger deer available for harvest. Conclusions based on these data can only be speculative due to the low sample size. Collection of biological data from hunter harvested deer on and off the game land is extremely labor intensive. More biological data must be collected on both the game land and private land in order to use age and sex data to guide deer management actions.

**Adult Female Deer Harvest by % Age-class:
County Harvest, Private Lands vs. LRRWGL Harvest
(2010, 2011, and 2012 Data Pooled)
Martin County, N.C.**

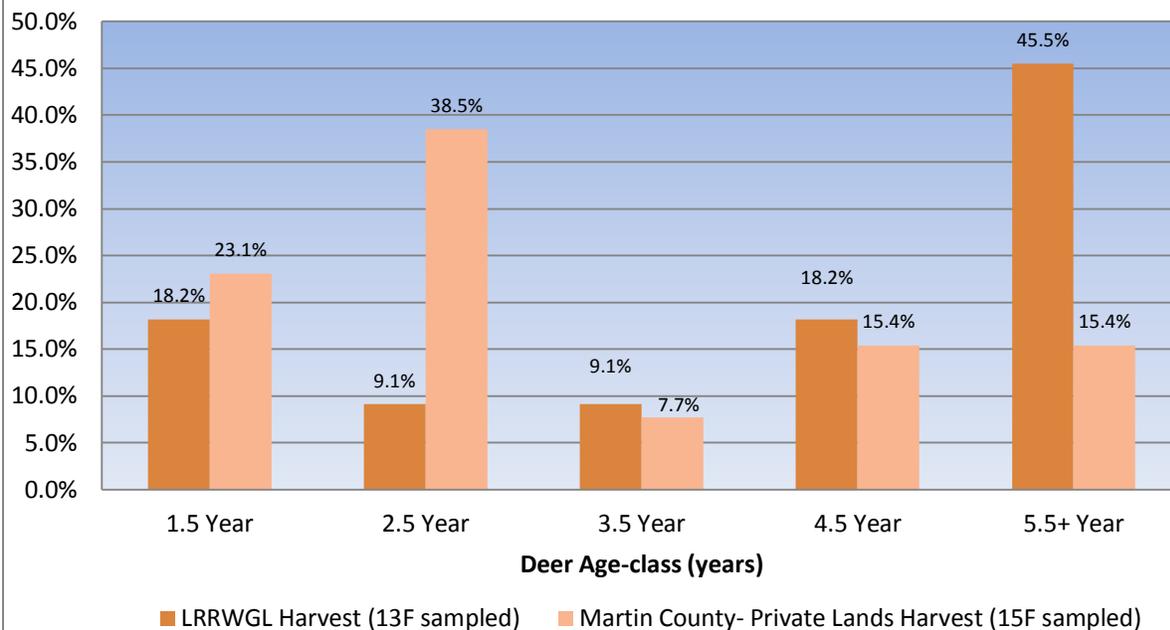


Fig. 23. Age-class distribution of harvested does.

Figure 24 shows the age-class of hunter harvested bucks sampled on the game land and private land in Martin County. It is interesting to note that older age-class bucks are not well represented in the graph. Many times, these older bucks are considered “trophy” animals and hunters are less likely to submit jawbones for age determinations as these bucks go to the taxidermist. These data can be biased for example; some hunters or hunt clubs may impose antler restrictions on private land or hunter preference being between a “trophy hunter” and a “meat hunter”. The ad hoc deer evaluation tool set a goal for a well-managed herd at having antlered buck harvest comprising of no more than 30% yearling bucks (1.5 years old). Due to the small sample size, confidence in making recommendations to reduce yearling buck harvest cannot be given.

**Antlered Buck Harvest by % Age-class:
County Harvest, Private Lands vs. LRRWGL harvest
(2010, 2011, and 2012 Data Pooled)
Martin County, N.C.**

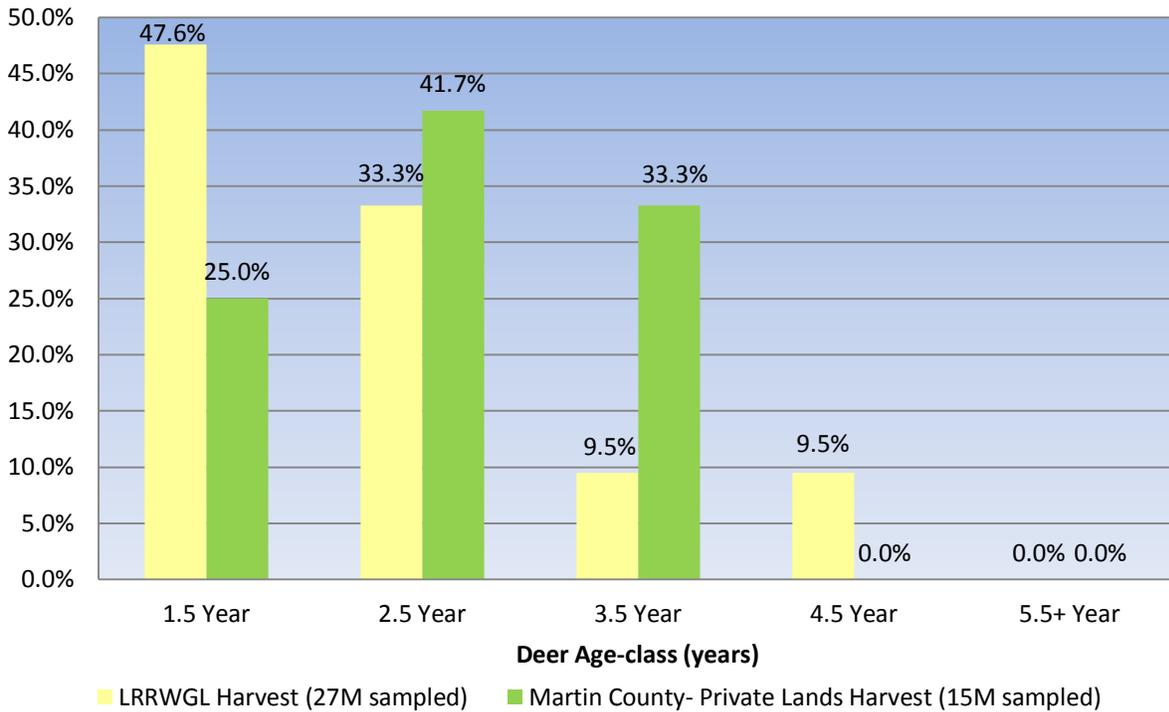


Fig. 24. Antlered buck harvest by age-class.

Inventory needs

Based on an evaluation of registered harvest and limited biological data, deer harvest levels and harvest composition on the LRRWGL tracts likely represent more "traditional" deer hunting activities (e.g., low selectivity by hunters, focus on antlered deer, etc.). Staff will continue investigating whether other methods may better to assist us in monitoring and managing the deer population trends on LRRWGL.

The NCWRC could implement a jawbone/biological data mail survey and/or mail surveys that estimate hunter effort on the LRRWGL that could provide an index of changes in the harvest over time. Baseline information should be collected for deer densities and/or population trends on LRRWGL. These data could be collected via forward looking infrared (FLIR), spotlight, and camera trap surveys. Staff should continue to develop ways of annually collecting biological data from deer taken from the game land that will allow monitoring of the deer harvest over time while at the same time contributing to WRC statewide and local biological data collection goals.

Biological data collection should also be collected from private land harvest to compare to game land harvest. Data collection should occur opportunistically and also as funding and staffing allows.

Staff should continue to investigate reports of diseased animals. When a diseased animal is reported on the game land, attempts will be made to diagnose what disease process is occurring. Also, as disease surveillance is conducted, the game land will be incorporated into the surveillance effort when appropriate.

Management Strategy

It is our desire to manage deer on LRRWGL accordance to with the statewide deer management goals and objectives outlined in the ad hoc deer evaluation tool as well as providing a quality hunting opportunity. Deer management recommendations for the game land to meet the parameters for a well-managed deer herd set by the ad hoc deer evaluation tool are only possible if collection of biological data is increased. The data collected so far gives us only a small window into what is taken place on the game land.

As a habitat generalist, the white-tailed deer will benefit from the continuation of current land management practices. NCWRC will continue to manage the open lands in a manner that supports a wide array of wildlife species. Most of the timberland is under Dedication restrictions limiting what management actions can be taken.

However, biological data collected on game land contributes to data collection goals as expressed by the ad hoc deer evaluation tool. During the public input process, only one commenter asked that we institute a point restriction on buck harvest. Management parameters addressed in the ad hoc deer evaluation tool include:

- "Harvest of at least 1.0 antlered buck/mi²...."
- "Total harvest comprised of at least 50% does".
- "Total adult doe harvest (excluding fawns) is comprised of 30-35% yearling does (1.5 years old)".
- "Total antlered buck harvest (excluding button bucks) is comprised of no more than 30% yearling bucks (1.5 years old)".

One goal for the LRRWGL is to manage for quality hunting opportunities on the game land through the permit hunt system to control hunter densities and harvest. If monitoring and biological data indices over time show harvest levels possibly falling outside parameters set by the ad hoc deer evaluation tool (e.g., herd is markedly reduced by average doe harvest remaining greatly above the 50% of the total harvest level, the average yearling doe harvest exceeding the 30%-35% threshold, etc.), then NCWRC staff should examine ways to achieve and maintain some balance between biological goals for the herd and stated hunter satisfaction goals.

Deer habitat needs are thought to be adequate on the game lands. River flooding will push deer to uplands and retreating water levels will allow deer to disperse back into the floodplain affecting the number of deer that hunters see. Many acres are planted annually, both as part of the Co-op Farm Lease and food plots planted by NCWRC staff. This planting should continue on the game land.

Research needs

No known research needs at present.

Eastern Wild Turkey

Current Knowledge

The Roanoke River basin and the Conoho Farms tract in particular, was a source of birds used for the statewide turkey restoration effort. Turkey hunting on the LRRWGL is by permit only. The Youth Hunts are 3 day hunts. The regular turkey hunts are 3 day hunts, Thursday, Friday, and Saturday. The LRRWGL tracts generally consist of a prime mix of bottomland hardwoods, managed upland forest stands, food plots, and old-field brood habitat areas. These managed lands provide exceptional potential for high turkey numbers. The potential for flooded conditions of adjacent Roanoke River bottomlands during the growing season likely increases the importance of turkey brood habitat provided by managed uplands in some years. These areas provide good numbers of turkeys for public hunting, as well as contributing locally to turkey flocks using the surrounding private lands.

The 3-year average spring wild turkey harvest on the LRRWGL exceeds the average harvest per square mile of huntable land for Martin County (Fig. 25).

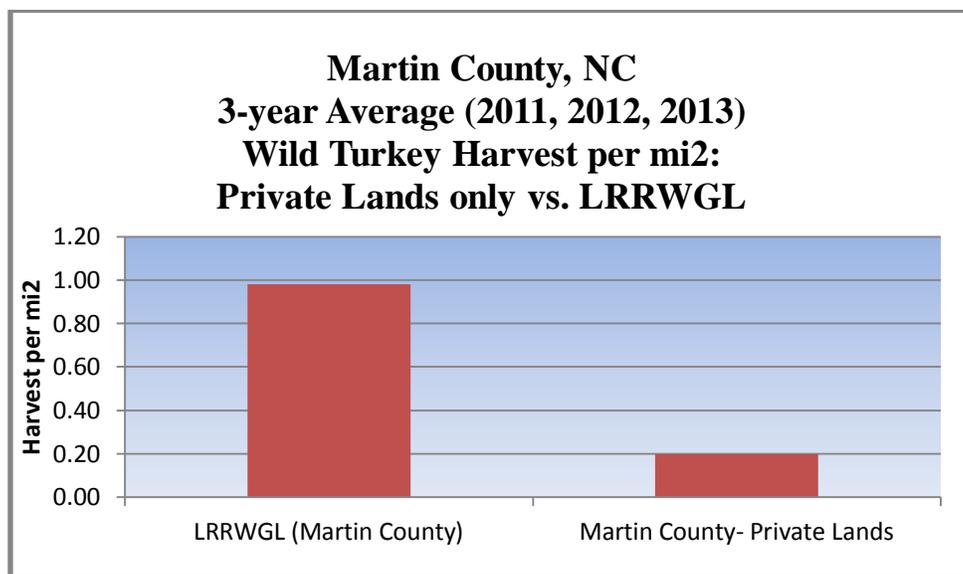


Fig. 25. Wild Turkey harvest per square mile.

Inventory/monitoring needs

Currently there are no baseline data for turkey abundance. Several options are available to gather these data. One that could be utilized could be the direct observation by chance encounters similar to the Wild Turkey Summer Observation Survey, a turkey hunter observation survey, and/or a deer hunter survey. Another could be gobbling bird point counts.

Staff should continue to investigate reports of diseased animals. When a diseased turkey is reported on the game land, attempts will be made to diagnose what disease process is occurring. Also, as disease surveillance is conducted the game land will be incorporated into the surveillance effort when appropriate.

Management Strategy

A turkey goal for the LRRWGL is to manage for quality spring gobbler hunting opportunities on the game land through the permit hunt system to control hunter densities and harvest. Current levels of hunter harvest will be maintained until better data exists. The creation of field borders in open land areas will provide nesting and escape cover in close proximity to areas planted with small grains, which provide bugging areas as well. Continued habitat management on the game land, particularly for quality brood habitat areas, will play a key role in maintaining annual turkey numbers on the game land while allowing continued expansion into adjacent lands.

Research needs

No known research needs at present.

American Black Bear

Current Knowledge

Bear sign and observations have increased in recent years on the LRRWGL. Distribution across the game land is unknown and numbers are thought to be extremely low. Frequent flooding of the bottomland systems likely prohibits the establishment of a sustainable population that can be hunted. The game lands, including the RRNWR, act as a de facto bear sanctuary as no permits are issued allowing the take of bears. Although, hunting for black bear is not permitted on the LRRWGL, bear populations are well-established off of the game land. The 5-year average harvest in Bertie and Martin counties are 71 and 42 bears, respectively.

Inventory/monitoring needs

At this point, only a few observations of bears have been reported. Inventory and monitoring should be considered on an as needed basis.

Management Strategy

Bears on the game land should be managed following the guidelines outlined in the NC Black Bear Management Plan (NCBBMP) available to the public on the NCWRC website.

Many studies have concluded that black bear habitat preferences are simply a function of food. Therefore, any land management practices to improve/sustain food availability (soft and hard mast) will benefit black bears. Open land management and prescribed fire will enhance/maintain habitat for black bears on the LRRWGL. Black bears move extensive distances during certain times of the year. It is important for movement to occur between the various subpopulations of bears across the state to help maintain bear numbers and genetic diversity. Corridors can also assist in reducing human-bear interactions by decreasing the proximity of traveling bears to human development. Outside of the Roanoke River floodplain, bottomland hardwood forests are fragmented and surrounded by agricultural lands, hindering bear movement between forested tracts. As such, forested corridors for movement are important. In addition, large hollow trees, such as cypress and tupelo, should not be removed, as they serve as potential bear den sites. The entire LRRWGL including the refuge tracts provide an important travel corridor for bears.

Continued acquisition of adjacent lands would support efforts to meet the NCBBMP objective 4, strategies 3, 4, 5, and 6 listed below (North Carolina Wildlife Resources Commission 2012).

- 3. Identify, acquire, and maintain property that would provide habitat for black bears.
- 4. Identify key movement corridors and work, either through acquisition, easements, or agreements, to conserve these areas.
- 5. Identify game lands that can be managed to create or maintain bear habitat and bear travel corridors.
- 6. Support habitat management practices that benefit bear management objectives on both private and public lands.

Research needs

No known research needs at present.

Furbearers

Current Knowledge

Overall, furbearers are thought to be “common” on LRRWGL. Hunting opportunities exist for bobcat, fox, opossum, and raccoon. Trapping opportunities exist for beaver, bobcat, coyote, opossum, raccoon, river otter, mink, muskrat, nutria, and long-tailed weasel. Although the resource exists on the game land, they are somewhat under-utilized. Fox trapping is not allowed by local law in Bertie or Martin County. In cooperation with the Roanoke River National

Wildlife Refuge and the possibility that red wolves may be on the game land and confused with coyotes, coyotes cannot be hunted on the game land.

Inventory/monitoring needs

Inventory and monitoring should be considered on an as needed basis. Scent stations and track counts could be used for some species.

Management Strategy

Maintain current trapping season to allow for trapping opportunities and the harvest of surplus furbearers. Continue current land management techniques to benefit furbearers in each habitat type. Encourage trappers to utilize the game lands.

United States Department of Agriculture-Wildlife Services, NCWRC staff, and licensed trappers may be required to remove beaver, nutria, and muskrat from culvert areas and impoundments. Nutria not only damage impoundments and reduce wetland habitat, but they may displace muskrats.

Research needs

No known research needs at present.

Eastern Fox Squirrel

Current knowledge

Fox squirrels are a game animal in 27 counties, mainly in the southeastern portion of the state from Edgecombe and Pitt counties toward the southwest to South Carolina and there is a hunting season in the northwestern part of the state. Because of low numbers in both Bertie and Martin counties, fox squirrels are not allowed to be harvested. Fox squirrels have been observed by NCWRC staff on the Conoho Farms tract and the Deveraux Swamp tract. Fox squirrels are considerably larger than gray squirrels. They prefer open forest with a majority of pine stems versus oaks. Longleaf pine stands are lacking on the LRRWGL but the squirrels have been able to adapt to the open hardwood stands typically seen on the oak dominated bottomlands on Deveraux Swamp. On the Conoho Farms tract, fox squirrels have been seen foraging in agricultural fields and utilize the oak/pine stands on the Everett tract where prescribed fire is used.

Management needs

Many areas where fox squirrels have been observed are Dedicated. On areas that we can manipulate the habitat, forest thinning and prescribed burning will benefit the species. Forest thinning will include removing some hardwood stems while protecting mast bearing trees and

those larger oaks that may offer cavity nest sites. The forest thinnings and burning will not only benefit fox squirrels but many species including rabbit, deer, quail, wild turkey, and many songbirds.

Inventory and monitoring needs

The habitat work described above will benefit fox squirrels; however, fox squirrels are not the guiding species for the habitat manipulations. Until District Wildlife Biologist and NCWRC staff conclude that population numbers for fox squirrels in Martin and/or Bertie counties are at levels that can support harvest, the season in these counties will remain closed. Observations should be reported to staff or recorded on the NCWRC's online Wildlife Observation Application. No inventory needs are required at this time.

Research needs

There are currently no known research needs.

Gray Squirrel

Current knowledge

Gray squirrels are common small game species on the game land. Gray squirrels inhabit numerous forest types, although they are most abundant in hardwood forests containing a variety of mast-producing trees. On this game land, they commonly occur in the floodplain forests, mixed hardwoods and pine forests, and occasionally in the pine woodlands.

Inventory and monitoring needs

There are currently no inventory and monitoring needs but they should be considered on an as-needed basis.

Management needs

Current hunting opportunities should be maintained. Maintaining mature forest types on the game land will provide for the habitat needs of squirrels.

Research needs

There are currently no known research needs.

Eastern Cottontail Rabbit and Marsh Rabbit

Current knowledge

Eastern cottontail rabbits and possibly marsh rabbits occur on the LRRWGL in open land where shrubs, grasses, and forbs dominate. Briar patches, brush piles, and other dense vegetation are

needed for escape cover. Interspersion of different cover types is ideal for rabbits. Most of the rabbit hunting occurs on the Conoho Farms where early successional habitats have been created and maintained. The amount of area considered suitable rabbit habitat is only a very small portion of the game land. Extensive hunting pressure could reduce the numbers to levels that reduce hunter's desirability to hunt rabbits.

Inventory and monitoring needs

There are currently no inventory and monitoring needs but they should be considered on an as-needed basis.

Management needs

Current hunting opportunities should be maintained. Land management techniques that provide brushy cover will be beneficial for rabbits. These include thinning and burning of pine communities, early successional habitat management, and the creation and/or protection of brush piles and briar thickets.

Northern Bobwhite Quail

Current knowledge

Northern bobwhite quail inhabit early successional habitat found in non-forested areas and in forest communities with open canopies and an herbaceous understory. Transitional areas found between community types are critical for quail, especially areas between upland sites and agricultural fields. The amount of area considered suitable quail habitat is only a very small portion of the game land. Quail numbers on the game land are extremely low. Very little hunting pressure occurs on these birds. It is suspected that most quail will be harvested by hunters pursuing rabbits. Efforts have been made in the last decade to increase the amount of early successional habitats by maintaining fallow fields and establishing native warm season grass areas.

Inventory and monitoring needs

There are currently no inventory and monitoring needs but they should be considered on an as-needed basis.

Management needs

Current hunting opportunities should be maintained. Existing land management practices should continue to provide suitable habitat with an emphasis on improving the quality and acreage of early successional habitat. The maintenance strategies outlined in the *Early Successional Habitat* section of this plan should be implemented.

Increasing the amount of upland land area in the LRRWGL system through acquisition would lead to the opportunity to increase the amount of early successional habitats that can be established and maintained.

Research needs

There are currently no known research needs.

Webless Migratory Birds

Current knowledge

The most hunted webless migratory bird species on the game land is the mourning dove. Approximately 40 acres of annual grains are planted each year as an attractant for doves providing opportunities for dove hunters. Woodcock, snipe, and Sora rails are not specifically managed for. Woodcock may be found in the hardwood drains and wet fields. Sora rails and snipe may be found around the impoundments but their abundance is thought to be very low.

There is a huge demand for public dove hunting opportunities in the state. We feel that trying to provide additional hunting opportunities by adding another dove hunting field within the current boundary of the LRRWGL will only take away from the quality hunt that is offered on the Conoho Farms tract. Should additional open lands be acquired that would not pull the same birds that are using the Conoho Farms tract, we would consider creating additional permit hunt opportunities.

Inventory and monitoring needs

The dove banding program should continue on the game land. Banding efforts on the game land are dictated by work load and staff time. When possible, NCWRC staff should take advantage of banding opportunities in order to increase the numbers of doves banded.

Management needs

Current hunting opportunities should be maintained following the framework set by the USFWS. Current land management practices should provide suitable habitat for webless migratory birds. These practices include management of wildlife openings, waterfowl impoundments and other wetland habitats, and upland pine woodlands.

Additional open land acquisitions could expand dove hunting opportunities on the game land. Any additional dove fields will have to be located in an area away from the current dove fields as not to split birds between two sites.

Research needs

There are currently no known research needs.

Waterfowl

Current knowledge

The purpose for the creation of the RRNWR and by default the procurement of large tracts of the state-owned portions of the LRRWGL was to address declining waterfowl populations, especially black ducks, by protecting large tracts of bottomland hardwoods. Waterfowl use on the LRRWGL is primarily dependent on beaver ponds and backswamp flooding. The degree of flooding depends on seasonal rainfall and releases from upstream dams. Waterfowl use on the game land at times is very high. Common species observed include wood duck, mallard, black duck, green-winged and blue-winged teal, ring-necked duck, hooded merganser, and Canada goose. The occasional tundra swan will use the impoundments.

Management needs

Providing quality moist-soil vegetation, cereal grains, abundant open water, and flooded timber should continue to be the primary goals of waterfowl impoundment management.

Techniques to accomplish these goals should include timely and gradual flooding and drawdowns of these areas. Timely soil disturbance is critical to stimulating the seed bank in order to promote highly desirable vegetation like smartweed. Impoundment management is covered in more detail in the *Early Successional Habitat* section.

Inventory and monitoring needs

Waterfowl hunter harvest surveys should continue at their current intensity. Annual vegetation surveys should be conducted in August-October to evaluate fall foods and May-June to assess moist soil crops prior to any planting activities. Very little is known about the use of our waterfowl impoundments in relation to the availability of invertebrates. It has been proposed that invertebrate sampling be conducted in order to potentially help guide future management.

Pre-season wood duck banding should continue on the game land. Recent efforts to band wood ducks in the impoundments have been extremely helpful in meeting statewide banding quotas.

There is also potential to gather valuable information from game land waterfowl hunters. A mail survey has been proposed that would identify hunter effort, number, and species of waterfowl harvested and gain input on hunter satisfaction. This information will help guide future management on the area.

Research needs

There are currently no known research needs.

Fish

Anadromous Fish

Current knowledge

The LRRWGL is located in one of the most important river basins for anadromous fishes in North Carolina. Each spring, striped bass, American shad, and hickory shad migrate up the Roanoke River to their spawning grounds at the fall line near Weldon, NC. Atlantic sturgeon, an endangered species, has recently been discovered to migrate and spawn in the Roanoke River during the fall of the year. Additionally, alewife and blueback herring, collectively known as river herring, also migrate up the Roanoke River to spawn. River herring spawn in smaller, tributary streams as well as backwater swamp habitats. Juveniles of all anadromous species utilize the lower Roanoke River as nursery habitat until moving into Albemarle Sound and eventually the Atlantic Ocean. Many streams contained within boundaries of the LRRWGL are designated as Anadromous Fish Spawning Areas and have potential to support spawning populations of river herring (Fig. 26). However, a recent survey by NC Division of Marine Fisheries did not collect any spawning river herring in streams that are on or adjacent to LRRWGL properties (A. Larimer, North Carolina Division of Marine Fisheries, personal communication with J. McCargo).

River herring have experienced coast wide declines in abundance over the last two decades and are now at all-time low population levels. A combination of many factors, including recreational and commercial fishing as well as habitat loss and degradation, has led to the river herring decline on the Atlantic coast (Atlantic States Marine Fisheries Commission 2009). Current harvest moratoria are designed to protect river herring stocks and may result in increases in abundance.

Management needs

Habitat improvements in tributary streams may also facilitate local increases in spawning populations. Impediments to fish migration within streams on LRRWGL should be identified and removed to facilitate access to spawning habitat. These impediments may include beaver dams, severe log jams, or culverts that restrict fish access. Culvert replacement projects should consider improvements to fish passage.

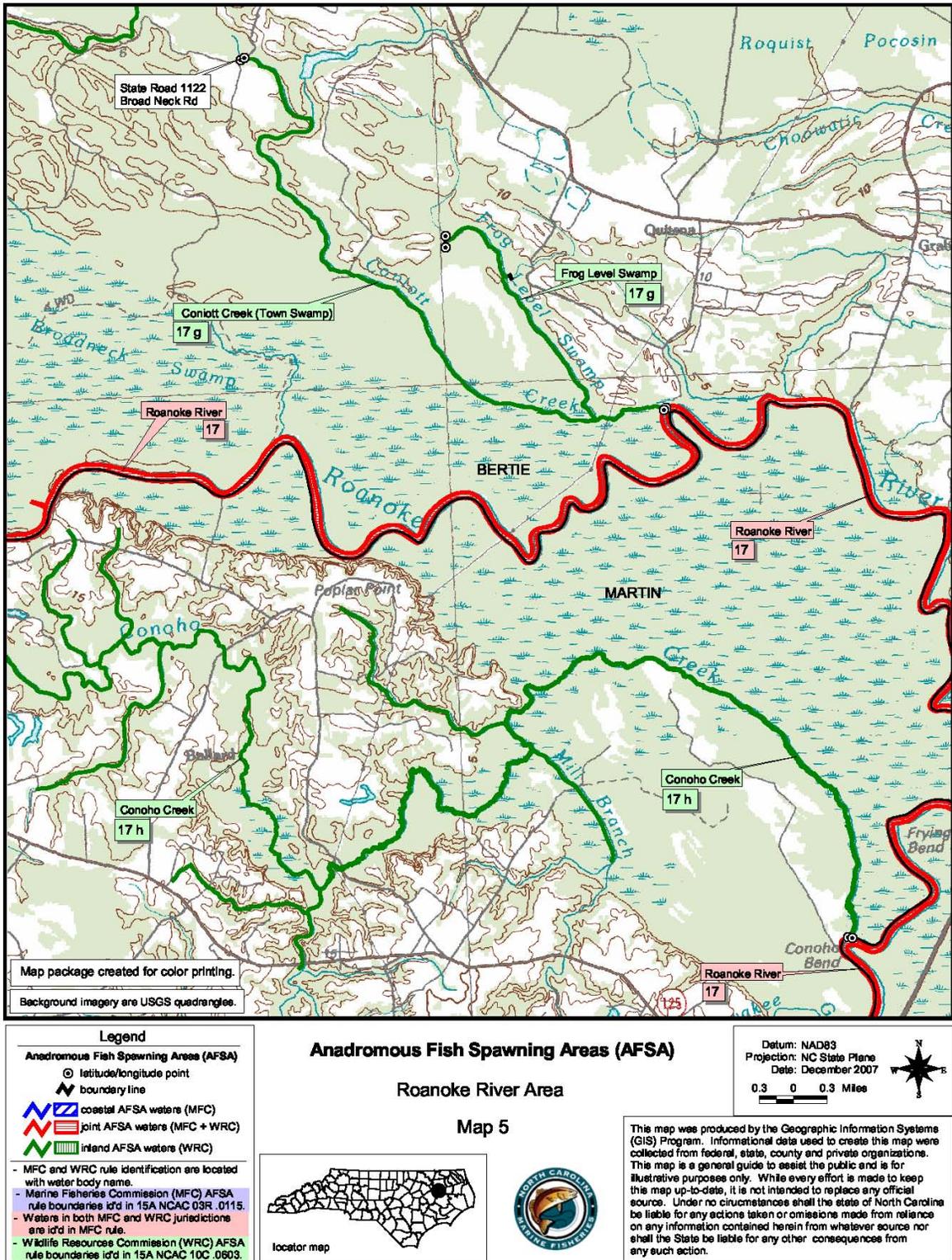


Fig. 26. Anadromous Fish Spawning Areas on the Lower Roanoke River Wetlands Game Land (North Carolina Division of Marine Fisheries 2014).

Inventory and monitoring needs

Monitoring should continue based on guidelines set by NCWRC Division of Inland Fisheries and the NC Division of Marine Fisheries (NCDMF). As river herring populations eventually rebuild, streams within the LRRWGL should be monitored to detect presence of spawning river herring.

Division of Inland Fisheries staff periodically conduct fish sampling activities in the vicinity of the LRRWGL. The majority of the sampling is conducted on the Roanoke River mainstem, which is adjacent to game lands boundaries. Annual sportfish surveys are planned for the foreseeable future.

Research needs

There are currently no known research needs for the game land.

Catadromous Fish

Current knowledge

American eel is the lone catadromous fish found in North Carolina. Catadromous fishes spawn in marine environments but migrate as juveniles to freshwater habitats where they grow and mature. Recent collection activities conducted by Dominion Power at the Roanoke Rapids dam in Halifax County have documented tremendous migrations of juvenile American eel in the upper Roanoke River. It is likely that American eel are also utilizing stream habitat within the LRRWGL, but sampling data are not available.

Management needs

Habitat improvements in tributary streams may benefit eel populations. Impediments to fish migration within streams on LRRWGL should be identified and removed to facilitate access to spawning habitat. These impediments may include beaver dams, severe log jams, or culverts that restrict fish access. Culvert replacement projects should consider improvements to fish passage.

Inventory and monitoring needs

There are currently no known monitoring needs on the game land.

Research needs

There are currently no known research needs for the game land.

Aquatic Diversity

Current knowledge

The LRRWGL harbors numerous North Carolina Wildlife Action Plan (NCWAP) priority aquatic species, including fishes (7), freshwater mussels (4), and crayfish (1). Figure 27 lists NCWAP priority aquatic species that are known or suspected to live in waterways on LRRWGL. Most of these species typically inhabit in the Roanoke River; however, some species (e.g., Banded Pygmy Sunfish) typically inhabit smaller tributaries and swamps.

Table 9. Aquatic non-game species found on the LRRWGL or in the Roanoke River

Taxonomic Group	Scientific Name	Common Name	NC Status	US Status	NC Ranking	US Ranking
Fish	<i>Elassoma zonatum</i>	Banded Pygmy Sunfish	-	-	-	-
Fish	<i>Moxostoma collapsum</i>	Notchlip Redhorse	-	-	-	-
Fish	<i>Fundulus lineolatus</i>	Lined Topminnow	-	-	-	-
Fish	<i>Enneacanthus chaetodon</i>	Blackbanded Sunfish	SR	-	S2	G4
Fish	<i>Moxostoma macrolepidotum</i>	Shorthead Redhorse	-	-	-	-
Fish	<i>Moxostoma pappillosum</i>	V-Lip Redhorse	-	-	-	-
Fish	<i>Notropis amoenus</i>	Comely Shiner	-	-	-	-
Mussel	<i>Anodonta implicate</i>	Alewife Floater	T	-	S1	G5
Mussel	<i>Elliptio roanokenisi</i>	Roanoke Slabshell	T	-	S1	G3
Mussel	<i>Ligumia nasuta</i>	Eastern Pondmussel	T	-	S1	G4
Mussel	<i>Leptodea ochracea</i>	Tidewater Mucket	T	-	S1	G3G4
Crayfish	<i>Orconectes virginianensis</i>	Chowanoke Crayfish	SC	FSC	S3	G3

Management needs

Culvert replacement projects should consider improvements to allow for aquatic organism passage. Protection of waterways from sedimentation by maintaining forested riparian corridors and minimizing sedimentation and erosion from roads, firelines, and other soil disturbance activities.

Inventory and monitoring needs

Division of Inland Fisheries staff periodically conduct aquatic diversity sampling activities in the vicinity of the LRRWGL. These activities should continue as needed.

Research needs

There are currently no known research needs for the game land

Financial Assets and Future Needs

The financial assets of the LRRWGL include a variety of assets in the form of infrastructure, personnel, vehicles, and heavy equipment. It should be noted that the large majority of these assets are also used to manage other game lands in the Northern Coastal Ecoregion and some assets, including personnel, are periodically used in other areas of North Carolina where they may be needed by the NCWRC to achieve management objectives in those areas.

Equipment and other asset needs are evaluated annually and operating budgets are allocated annually based on these equipment needs, upcoming projects, the costs of normal operating procedures, and the availability of these funds. The financial report below in Table 10 is an estimate based on existent infrastructure and habitat maintenance and future infrastructure development. The figures use the 2003-2013 10 year average Consumer Price Index annual inflation rate of rate of 2.48%.

Table 10: Financial Summary of Activities for the Lower Roanoke River Wetlands Game Land

Table 10: Financial Summary of Activities for the Lower Roanoke River Wetlands Game Land																
Habitat Activities																
Project	Description	Activity	Quantity	Unit	Unit Cost	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	Total
H	Firebreaks	Maintain firebreaks	4	mi	\$ 525	2100	2152	2205	2260	2316	2374	2433	2493	2555	2618	\$ 23,506
H	Herbaceous Seeding	Admin. Co-Op farm leases	1	Lease/GL	\$ 1,000	1000	1025	1050	1076	1103	1130	1158	1187	1217	1247	\$ 11,193
H	Herbaceous Seeding	Seed or maintain	169	ac	\$ 175	29575	30308	31060	31830	32620	33429	34258	35107	35978	36870	\$ 331,036
H	Population Controls	Beaver/muskrat trapping	1	GL	\$ 3,000	3000	3074	3151	3229	3309	3391	3475	3561	3650	3740	\$ 33,579
H	Vegetation Control	Prescribe burning	30	ac	\$ 150	4500	4612	4726	4843	4963	5086	5213	5342	5474	5610	\$ 50,369
H	Water Level Management	Diesel Unit Pump-Deep Pond	2000	hr	\$ 27	53000	54314	55661	57042	58456	59906	61392	62914	64475	66074	\$ 593,235
H	Water Level Management	Diesel Unit Pump-Minges 1	3000	hr	\$ 27	79500	81472	83492	85563	87685	89859	92088	94372	96712	99110	\$ 889,852
H	Water Level Management	Diesel Unit Pump-Minges 2	1000	hr	\$ 27	26500	27157	27831	28521	29228	29953	30696	31457	32237	33037	\$ 296,617
H	Water Level Management	Diesel Unit Pump-Suzie Slough 1	800	ac	\$ 27	21200	21726	22265	22817	23383	23962	24557	25166	25790	26429	\$ 237,294
H	Water Level Management	Diesel Unit Pump-Suzie Slough 2	800	ac	\$ 27	21200	21726	22265	22817	23383	23962	24557	25166	25790	26429	\$ 237,294
H	Water Level Management	Manage Water Levels	5	Sub-Impd	\$ 1,166	5831	5975	6123	6275	6431	6590	6754	6921	7093	7269	\$ 65,262
															Subtotal	\$ 2,769,236
Operation and Maintenance Activities																
Project	Description	Activity	Quantity	Unit	Unit Cost	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	Total
O & M	Bridges	Replace Culvert	1	culvert	\$ 2,500	2500	2562	2626	2691	2757	2826	2896	2968	3041	3117	\$ 27,983
O & M	Buildings	Maintain buildings	4	blg	\$ 4,000	16000	16397	16803	17220	17647	18085	18533	18993	19464	19947	\$ 179,090
O & M	Dams and Dikes	Maintain dams and dikes	4	mi	\$ 500	2000	2050	2100	2153	2206	2261	2317	2374	2433	2493	\$ 22,386
O & M	Public Use Facilities	Maintain campgrounds	6	ea	\$ 225	1350	1383	1418	1453	1489	1526	1564	1603	1642	1683	\$ 15,111
O & M	Public Use Facilities	Maintain observation tower	1	ea	\$ 225	225	231	236	242	248	254	261	267	274	281	\$ 2,518
O & M	Public Use Facilities	Maintain parking areas	3	ea	\$ 225	675	692	709	726	744	763	782	801	821	842	\$ 7,555
O & M	Road and Trails	Maintain gates	16	gate	\$ 100	1600	1640	1680	1722	1765	1808	1853	1899	1946	1995	\$ 17,909
O & M	Road and Trails	Maintain roads	9.5	mi	\$ 2,500	23750	24339	24943	25561	26195	26845	27510	28193	28892	29608	\$ 268,836
O & M	Road and Trails	Maintain trails	8	mi	\$ 2,500	20000	20496	21004	21525	22059	22606	23167	23741	24330	24933	\$ 223,862
O & M	Signs and Boundaries	Maintain boundary	15	mi	\$ 135	2025	2075	2127	2179	2233	2289	2346	2404	2463	2525	\$ 22,666
															Subtotal	\$ 784,916.51
Development Activities																
Project	Description	Activity	Quantity	Unit	Unit Cost	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	Total
D	Road Upgrade	Depot Road/ADA Blind Access	0.3	mi	\$ 200,000	60,000										\$ 60,000.00
D	Road Upgrade	Conoho Road Phase I	1	mi	\$ 250,000	250,000										\$ 250,000.00
D	Road Upgrade	Conoho Road Phase II	3.3	mi	\$ 60,606		204,960									\$ 204,959.80
D	Road Upgrade	Conoho Road ADA Left 1	0.3	mi	\$ 116,666		35,868									\$ 35,867.80
D	Road Upgrade	Conoho Road ADA Right 1	0.1	mi	\$ 150,000			15,744								\$ 15,744.00
D	Road Upgrade	Doug's Gun Shop Road	0.3	mi	\$ 33,333				10,744							\$ 10,743.89
D	Road Upgrade	Minges Road	1.1	mi	\$ 90,909					109,920						\$ 109,919.89
D	Road Upgrade	Conoho Road ADA Right 2	0.2	mi	\$ 125,000						28,100					\$ 28,100.00
D	Road Upgrade	Rpberson Tract Road	0.2	mi	\$ 50,000							11,480				\$ 11,480.00
D	Road Upgrade	Cattle Crossing	1	ea	\$ 1,500				1,612							\$ 1,611.60
D	Road Upgrade	Deveraux Road South	0.1	mi	\$ 100,000								11,736			\$ 11,736.00
D	Parking Areas	Parking Area Construction	2	ea	\$ 10,000				21,488							\$ 21,488.00
D	Culverts	Conoho Road Culvert 1	1	ea	\$ 40,000	40,000										\$ 40,000.00
D	Culverts	Conoho Road Culvert 2	1	ea	\$ 40,000	40,000										\$ 40,000.00
D	Culverts	Conoho Road Culvert 3	1	ea	\$ 10,000	10,000										\$ 10,000.00
D	Culverts	Depot Road	1	ea	\$ 15,000	15,000										\$ 15,000.00
D	Culverts	Culvet Replacements	2	ea	\$ 5,000									11,980		\$ 11,980.00
D	Culverts	Deveraux Culvert Replacement	4	ea	\$ 11,250			47,232								\$ 47,232.00
															Subtotal	\$ 925,862.97
Capital Improvements																
Project	Description	Activity	Quantity	Unit	Unit Cost	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	Total
C	Shelter	Conoho Equipment/Camping	2	ea	\$ 60,000	\$120,000										\$120,000
															Subtotal	\$ 1,045,862.97
															Grand Total	\$ 5,525,878.81

Staffing

The current game land management staff of the LRRWGL includes 3 permanent, full-time technicians and an 11 month temporary technician. One of these technicians is the Team Leader and assumes the most responsibility for implementing work duties. Additional staff that assist with management of the game land includes the Northern Coastal Ecoregion Management Biologist, Northern Coastal Ecoregion Wildlife Forester, and the Northern Coastal Ecoregion Technician Supervisor. Overseeing all previously mentioned staff is the Coastal Ecoregion Supervisor that supervises personnel throughout the entire Coastal Region. The Northern Coastal EcoRegion work area consists of 21 game lands totaling 216,329 acres, 50 boating access areas, and 9 public fishing areas (Fig. 27).

There are currently no needs for additional personnel at the Williamston Depot. However, because the previously mentioned staff also conducts management activities on other game lands and boating access areas within the work area, additional staffing needs will be evaluated if demands for more intensive management increases or additional lands are acquired.

Infrastructure

A wildlife management depot is located on the LRRWGL that serves as a headquarters for land management operations, BAA, and PFA maintenance. This location includes a large metal building that includes a shop area, office, and restrooms. In compliance with rules for storing hazardous materials, two small storage sheds are on-site for the storage of containerized combustible liquids and herbicides. Additional buildings include an enclosed 5-bay metal building and an open air pole shed used to house equipment. On the Conoho Farms tract, two open air pole sheds double as camping areas and temporary equipment storage areas. The buildings located at the depot are in good condition and only normal maintenance is required. The pole sheds in Conoho Farms are older buildings and maintenance of these buildings is covered in the Infrastructure Development and Maintenance section of this plan.

Other infrastructure throughout the game land includes numerous culverts for drainage, 3 wells and 8 water control structures for the management of water levels in 5 waterfowl impoundments, gates that are used to control access, and an observation tower overlooking two impoundments.

Major infrastructure upgrades planned over the ten year planning horizon for the LRRWGL include repairs to the impoundments, upgrades to the wells, culvert replacements, and road improvements. All of these improvements are covered in the Infrastructure Development and Maintenance section.

Heavy equipment and vehicles

There is currently an adequate supply of heavy equipment and vehicles to conduct management activities on the game lands. Heavy equipment includes 4 farm tractors with various

implements, an excavator, motor grader, and a bulldozer. Tractor implements include, but are not limited to, disk harrows, rotary mowers, a no-till grain drill, a 4-row planter, sprayer, and box blade. Other equipment includes 2 ATV's, and 3 types of boats.

Personnel at the Williamston Depot are currently outfitted with an adequate supply of vehicles. These include 4 pickup trucks, one of which is used for prescribed burning operations and the application of herbicide on roadsides. Additional vehicles and equipment often shared with other depots include a hauling unit, dump truck, and a belly-mounted side mower unit.

As previously stated, the replacement or addition of these assets is evaluated annually based on existing and predicted needs and are acquired if funding is available.

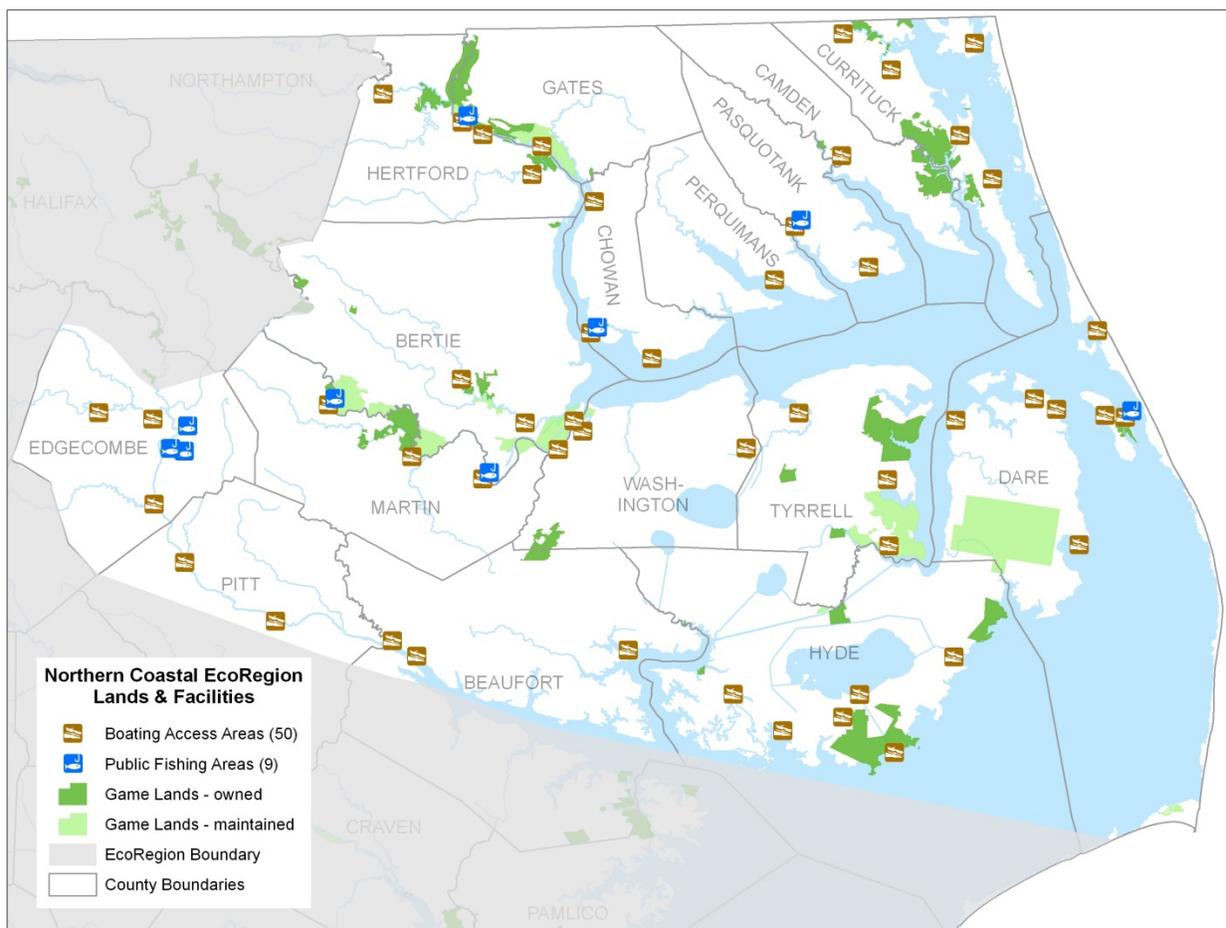


Fig. 27. Northern Coastal EcoRegion Lands and Facilities. Map created by Anna Stefanowicz: Engineering & Lands Management, North Carolina Wildlife Resources Commission.

Acquisition Plan

The NCWRC's plans for future acquisition will include inholdings, adjacent lands, and critical habitats. Critical habitats that have rare and/or endangered species, provide outstanding ecological benefits, or provide outstanding opportunities for game land users will be high priority. Special considerations will be given to; lands that provide corridors for the connectivity of key parcels or are critical to enhance the NCWRC's ability to protect rare habitats, the land management needs of a property, and the public access and public uses that a property provides.

Prior to any acquisition, initial land investigations will be conducted by NCWRC staff and evaluations will be submitted by Phase I and II acquisitions forms (Appendix XII). Land will only be acquired from willing sellers and/or through donations, and all purchases will be based off of available funding. Furthermore, all potential acquisitions will be evaluated on a case-by-case basis by NCWRC staff.

Regulations and Enforcement

Enforcement of all rules and regulations falls to the Wildlife Enforcement Division of the NCWRC. Primary enforcement activities on the game land include: aircraft patrols for bait, check points for license and game compliance, foot and boat patrols, remote camera setups on bait and littering sites, nighttime poaching setups and surveillance, and routine road patrols. These activities occur throughout the year across the game land, with the highest frequency of enforcement activities occurring during hunting and fishing seasons. Critical times for the Enforcement Division on the game land occur during the first two weeks of dove season, the deer, waterfowl, turkey seasons, and during the striped bass runs in the spring.

As with most game lands, the major enforcement problems on the LRRWGL pertain to littering, regulation violations, license/permit issues, ATV riding, drug use, baiting, and adjoining landowner issues and conflicts. Engineering and Lands Management staff and the Enforcement Division have an excellent working relationship and communication on game land issues between the two groups should continue.

The following is a list of regulations specifically related to the LRRWGL:

- LRRWGL is designated as a permit-only game land.
- Gun either-sex deer season falls under maximum season regulations.
- Vehicles are prohibited on roads or trails, except those vehicles operated on official Wildlife Resources Commission business or by permit holders.
- ATV riding is prohibited except by disabled sportsman with valid permits on roads posted for such use.
- Camping is restricted to September 1 – February 28 and March 31 – May 14. Camping is allowed anytime within 100 yards of the Roanoke River.

Partnerships and Collaborations

Partnerships and collaborations among various conservation groups, universities, state and federal agencies, non-governmental agencies, non-profit groups, national organizations, clubs, and private citizens have been pivotal to the successful management of the Lower Roanoke River Wetlands Game Land. Newly created and continued partnerships between the NCWRC and these groups will be essential for meeting the goals and needs outlined in this plan. Below is a list of partners that have assisted with conservation efforts on the LRRWGL.

Atlantic Coast Joint Venture

Mission Statement: *“to provide a forum for federal, state, regional and local partners to coordinate and improve the effectiveness of bird conservation planning and implementation in the Atlantic Flyway region of the United States.”*

Ducks Unlimited

Mission Statement: *“DU conserves, restores and manages wetlands and associated habitats for North America’s waterfowl. These habitats also benefit other wildlife and people.”*

National Wild Turkey Federation

Mission Statement: *“Dedicated to the conservation of the wild turkey and the preservation of our hunting heritage.”*

North American Wetland Conservation Act

Purpose: *“The North American Wetlands Conservation Act of 1989 provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico for the benefit of wetlands-associated migratory birds and other wildlife.”*

North Carolina Clean Water Management Trust Fund

Mission Statement: *“to clean up pollution in the State's surface waters and to protect, preserve and conserve those waters that are not yet polluted.”*

North Carolina Forest Service

Mission Statement: *“To protect, manage and promote forest resources for the citizens of North Carolina.”*

North Carolina Natural Heritage Program

Mission Statement: *“To provide science and incentives to inform conservation decisions and support conservation of significant natural areas in our state.”*

North Carolina State University

Mission Statement: *“As a research-extensive land-grant university, North Carolina State University is dedicated to excellent teaching, the creation and application of knowledge, and engagement with public and private partners. By uniting our strength in science and technology with a commitment to excellence in a comprehensive range of disciplines, NC State promotes an integrated approach to problem solving that transforms lives and provides leadership for social, economic, and technological development across North Carolina and around the world.”*

The Nature Conservancy

Mission Statement: *“To conserve the lands and waters upon which all life depends.”*

United States Fish and Wildlife Service

Mission Statement: *“Working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.”*

Waterfowl Festival, Inc. formally Easton, Maryland Waterfowl Festival

Mission Statement: *“Waterfowl Festival Inc. is a nonprofit, 501(c)(3) organization dedicated to wildlife conservation, the promotion of wildlife art, and the celebration of life on Maryland's Eastern Shore.”*

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Development Team and Public Input

A Lower Roanoke River Wetlands Game Land Management Plan Development Team was formed in July 2013 consisting of NCWRC Biologist and Staff from various areas of expertise. Topics at this meeting included guiding policies and partnerships, adjacent land uses and management, what makes the Lower Roanoke River Wetlands Game Land special, key game and non-game species, game land user groups, landscape and habitat level goals, future acquisitions, existing data and data gaps, threats to the game lands and game land goals, forest management, game land infrastructure, natural resources stakeholders, and enforcement issues.

Public comment was gathered at a Public Input Meeting held at Martin Community College on July 23, 2013. After a presentation on the Lower Roanoke River Game Land, the 20 attendees were split into groups and a NCWRC staff facilitator worked through a list of questions to gather input (Appendix XIII). Attendees included Town of Williamston officials, private land owners, horseback riders, hunters, fishermen, and an ecotourism business owner. Thirteen questionnaires were returned at the meeting. Some attendees opted to post comments on the online “Comment on Game Land Plans” link that was found on the NCWRC website. Attendees who returned questionnaires at the meeting could also submit comments using the online comment link. The online comment period ended August 31, 2013. Ninety-seven comments were recorded for the same seven questions that were presented at the public input meeting. Four email comments were received for public input consideration (Appendix XIV). Final draft comments were received and listed with responses in Appendix XVIII.

One letter from the North Carolina Department of Environment and Natural Resources, North Carolina Natural Heritage Program was also received. This letter emphasizes the natural significance of the Lower Roanoke River Wetlands and some of the potential threats to the habitats on the Lower Roanoke River Wetlands Game Land that could occur with certain actions (Appendix XV).

After natural resources stakeholders and public comments were considered a draft plan was developed by the Development Team and circulated for in-house review and edits made. The draft plan was presented to the NCWRC Land Use and Access Committee. After their review and edits made the final draft was available for public comment online for 30 days. After public comments were considered, this final plan was presented to the Land Use and Access Committee and the full Commission.

Appendices

I. Archeological Resources Protection Act

Archaeological Resources Protection Act North Carolina General Statutes Chapter 70, Article 2

This statute applies to all state-owned, occupied or controlled property except for highway rights-of-way.

The purpose of the statute is to provide for the protection of archaeological resources on state lands. Major provisions of the law are as follows:

1. Archaeological resources are defined as any material remains of past human life or activities which are at least 50 years old and which are of archaeological interest, including pieces of pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, rock paintings, rock carvings, intaglios, graves or human skeletal materials.
2. Permits are required in order to conduct archaeological investigations on state lands.
3. (The 1991 amendment to ARPA, effective July 1, 1991, transferred to the Department of Cultural Resources--from Department of Administration--the authority to issue permits under G.S. 70, Article 2.)
4. Information on archaeological site locations is exempted from unrestricted public access may result in damage to or destruction of the archaeological resources
5. All archaeological resources, equipment and vehicles utilized in conjunction with violation of the law are subject to forfeiture.

Prohibitions and penalties under the law are as follows:

1. No person may excavate, remove, damage or otherwise alter or deface any archaeological resource located on state lands without a permit.
2. No person may sell, purchase, exchange, transport, receive or offer to sell, purchase, exchange, transport or receive any archaeological resource excavated or removed from state lands in violation of the law.
3. Any person who knowingly and willfully violates or employs any other person to violate any prohibition of the law, shall upon conviction, be fined not more than \$2,000 or imprisoned not more than six months, or both.
4. Each day on which a violation occurs shall be a separate and distinct offense.
5. Civil penalties may also be assessed against any person who violates the provisions of the act.

II. Memorandum of Understanding between the US Department of Interior, Fish and Wildlife Service and the State of North Carolina, Wildlife Resources Commission

EXHIBIT 2

MEMORANDUM OF UNDERSTANDING

between the

UNITED STATES DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service

and the

STATE OF NORTH CAROLINA
Wildlife Resources Commission

THIS MEMORANDUM is made and entered into this 10th day of August, 1989, between the UNITED STATES DEPARTMENT OF THE INTERIOR, Fish and Wildlife Service, acting by and through its Regional Director, Southeast Region, under authority contained in 16 U.S.C. section 661 and 16 U.S.C. sec 715, hereinafter referred to as the Service and the STATE OF NORTH CAROLINA WILDLIFE RESOURCES COMMISSION, hereinafter referred to as the Commission.

Witnesseth

WHEREAS, the Service proposes to establish the Roanoke River National Wildlife Refuge in Bertie, Halifax, and Martin Counties, North Carolina, and

WHEREAS, the Commission owns the Roanoke River Wetlands comprising approximately 13,600 acres in six tracts in these same counties, and

WHEREAS, the Commission wishes to accommodate concerns of the Martin County Board of Commissioners over the presence of a National Wildlife Refuge in the county, and

WHEREAS, the Commission and the Service desire to work together to protect the bottomland hardwood and swamp habitat found along the Roanoke River.

NOW, THEREFORE, in consideration of the foregoing premises and of the mutual covenants hereinafter contained, the parties hereto agree that the Roanoke River Wetlands and the proposed Roanoke River National Wildlife Refuge would be established and operated subject to the following conditions:

1. The Service agrees to exclude from its proposed acquisition all lands in Martin County, except the tract known as Devil's Gut owned by Georgia Pacific.
2. The Service will acquire, through a third party, Commission lands in Bertie County. Proceeds from this acquisition will be used by the third party to acquire replacement lands in

Martin and Halifax Counties for the Commission. All land transfers between the Service and Commission through the third party will be on a basis of "like kind" and "like value."

3. All dedications on existing Commission tracts will be removed prior to acquisition by the Service and the Commission, immediately subsequent to acquisition, will dedicate under the North Carolina Nature Preserves Act, those tracts within the replacement lands identified as appropriate for dedication by The Nature Conservancy.
4. The Company Swamp tract in Bertie County currently owned by the State and allocated to the Commission will be exchanged with the "land mitigation bank" in place, intact, and unchanged from the agreement of parties to the "bank" (the Commission, the Service, The Nature Conservancy, and the N.C. Department of Transportation). The "land mitigation bank" does not encumber the deed and will not reduce the value of the tract for exchange purposes.
5. All exchanges of State-owned lands will be presented to and approved by the North Carolina Council of State, Governor presiding.
6. The costs of the land exchange will be shared as appropriate and agreeable by the Commission and Service with the details of the arrangement to be contained in a separate contract to be negotiated at a later date.
7. The Service and the Commission will work together for the cooperative management of the entire joint venture project. Both parties recognize hunting, fishing, trapping, and other outdoor recreational pursuits as legitimate uses of joint venture lands where no conflict with primary project objectives would be created by such activities and agree to continue providing these opportunities insofar as legal considerations allow. Each party will retain primary jurisdiction over the administration of their respective wetlands/refuge. A yearly plan will be developed jointly which describes how the areas will be managed. The National Wildlife Refuge hunt regulations will be published in the Commission hunt schedules but may differ in some respects from regulations on Commission lands.
8. Both parties agree to a single hunting permit for the joint venture area to be issued by the Commission. State and Federal law enforcement officers may make cases on joint venture lands. Prosecution of violations on joint venture lands may be processed in either Federal or State court depending on the jurisdiction of the rule violated and the ownership of the land where the violation occurred.

9. All references to operation and management of the refuge mentioned in the Environmental Assessment will apply.

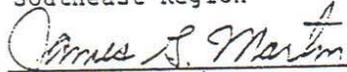
10. SEE ADDENDUM FOR POINT 10 IN MEMORANDUM OF UNDERSTANDING

U.S. Department of the Interior
Fish and Wildlife Service

State of North Carolina
Wildlife Resources Commission


James W. Pulliam, Jr.
Regional Director
Southeast Region


Charles R. Fullwood, Jr.
Executive Director


James G. Martin
Governor
State of North Carolina

Date

ADDENDUM

MEMORANDUM OF UNDERSTANDING

between the

UNITED STATES DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service

and the

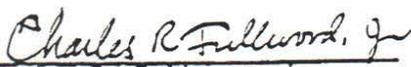
STATE OF NORTH CAROLINA
Wildlife Resources Commission

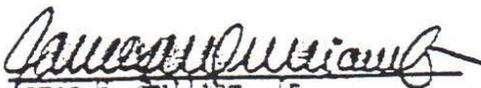
Roanoke River Wetlands
Roanoke River National Wildlife Refuge

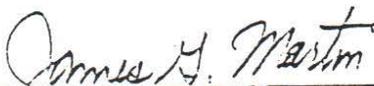
- 10. Both parties agree to receive applications for access to the Roanoke River from persons who traditionally have used or who plan to use water from the Roanoke River for irrigational, industrial, or other purposes and to grant easements for access to the extent that no serious damage to the environment nor interference with primary objectives of the Refuge or Wetlands is caused.

State of North Carolina
Wildlife Resources commission

U.S. Department of the Interior
Fish and Wildlife Service


 Charles R. Fullwood, Jr.
 Executive Director


 James W. Fulliam, Jr.
 Regional Director
 Southeast Region


 James G. Martin, Governor
 State of North Carolina

Date: August 14, 1989

III. Articles of Dedication through the North Carolina Natural Heritage Program

NAT-058.001



North Carolina Department of Administration

James B. Hunt, Jr., Governor

Katie G. Dorsett, Secretary

January 19, 1994

Mr. Charles R. Fullwood, Executive Director
N.C. Wildlife Resources Commission
512 N. Salisbury Street
Raleigh, North Carolina 27603-8003

Mr. Jonathan B. Howes, Secretary
Department of Environment, Health, and Natural Resources
512 N. Salisbury Street
Raleigh, North Carolina 27603-8003

Subject: Dedication of Portions of the Roanoke River Game Land
(in Martin County) as a North Carolina Nature Preserve

Gentlemen:

Pursuant to Article 9A, Chapter 113A of the North Carolina General Statutes, this letter of allocation is executed for the purpose of dedicating the State-owned lands hereinafter described as a North Carolina Nature Preserve.

These real properties are currently administered by the North Carolina Wildlife Resources Commission as portions of the Roanoke River Game Land, consisting of approximately 8,366 acres and located in Martin County:

1. A large portion of the Deveraux Swamp section (approx. 5,496 acres) (consisting of the assembled Deveraux, Speller-Outlaw, Rogerson, and Whitaker tracts), excluding a previously clearcut 130-acre block, equipment storage area, and agricultural fields) (see Map 1); and
2. Smaller portions of the Conoho Farms section (approx. 2,259 acres) (consisting of parts of the assembled Nicholson, Lindsley, and Whitley tracts), excluding the previously and currently farmed areas and at the 100-foot wide buffer adjacent to those farmed lands) (see Map 1); and

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3. The GP-Beech House tract (611 acres) (see Map 1), all of which are more specifically described in Exhibit A and additional maps attached thereto and by reference made a part hereof.

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

1. As used in this Letter the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes 113A-163.3(3)(4), respectively.
2. Pursuant to North Carolina General Statutes 113A-164.8 all State-owned lands lying within the above-designated areas are hereby dedicated as a nature preserve to be known as the Roanoke River Nature Preserve (hereinafter "preserve") for the purposes provided in the Nature Preserves Act, as amended, and other applicable law, and said State-owned land shall be held, maintained and used exclusively for said purpose.
3. Primary Custodian. The primary Custodian of the Roanoke River Nature Preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 15 NCAC 12H.300.
4. Primary Classification. The Primary classification and purpose of the preserves shall be conservation, nature education, wildlife management, hunting, fishing, trapping, boating, and passive recreation.
5. Management Areas. For the purposes of management, the preserve shall be considered to consist of a Primary Area and a Buffer Area, as more particularly described in Exhibit A and Maps 2 and 3, attached hereto and by this reference made a part hereof.

The Primary Area is deemed by the Secretary of the North Carolina Department of Environment, Health and Natural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 113A-164.6) and further serves all the public purposes for a dedicated preserve as stated in Administrative Rules 15 NCAC 12H.0301(b).

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The Primary Area shall consist of all the dedicated preserve lands within the Game Land's Deveraux Swamp section on the northern side of Conoho Creek, except for the excluded 130-acre, previously clearcut block; all of the Beech House section; and parts of the Deveraux Swamp and Conoho Farm sections along the south side of Conoho Creek (see Maps 2 and 3).

The Buffer Area, which contributes to the management and protection of the Primary Area, shall consist of all the remainder of the dedicated preserve lands in the Game Land's Conoho Farm section not within the Primary Area, but excluding the active agricultural fields and a 100-foot-wide border around those fields (see Maps 2 and 3).

6. Rules for Management of the Primary Areas

- A. Character of Visitor Activity. The principal visitor activities in the preserves shall be hunting, fishing, trapping, boating, nature study, research and observation. These activities shall be regulated to prevent disturbance of the preserves beyond what they can tolerate without significant environmental degradation.

Activities and uses which are unrelated to the activities listed above are prohibited except as provided for herein or unless necessary to carry out the purposes of the preserve. Prohibited activities include, but are not limited to: construction; commercial activities and development; commercial silviculture; agriculture and grazing; mineral exploration and development; dumping; changes in the topography; the gathering of plants or plant products; and the removal, disturbance, molestation, or defacement of minerals, archaeological features, or natural features except for research purposes as approved by the Custodian. There shall be no collecting of anything from the preserve except as herein provided. There shall be no littering permitted.

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

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Mr. Jonathan B. Howes
January 19, 1994
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- B. Hunting and Fishing. Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations, and management by the North Carolina Wildlife Resources Commission.

- C. Orientation and Guidance of Visitors. The Custodian may construct and maintain parking and access areas including service roads for patrol, fire control, right-of-way maintenance, and other management activities, with safeguards to protect the ecological resources of the preserve. The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may establish and maintain canoe trails and canoe camping sites in the preserve. The Custodian may restrict access to visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.

- D. Disturbance of Natural Resources. The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, snagging and clearance of fallen trees and maintenance of the boat navigational channel in Conoho Creek, or for purposes of ecological management as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in the manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program. Activities necessary for the control and suppression of wildfire will also be permitted.

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Mr. Jonathan B. Howes
January 19, 1994
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- E. Visitor Protection. Fences, steps, and bridges may be provided when essential to the safety of reasonably alert and cautious visitors. The Custodian reserves the right to erect such structures as may be necessary to protect the preserve from unwanted or excessive visitor traffic.
- F. Control of Vegetational Succession. Control of vegetational succession may be undertaken if necessary to maintain or restore a particular ecosystem type or to preserve endangered, threatened, rare, or unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem.
- G. Control of Populations. Any control of animal or plant populations or the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve or in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals.
- H. Research and Collecting Permits. Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- I. Roads and Trails. At its discretion, the Custodian may maintain the roads presently existing on the tract and may locate, build and maintain trails where ecologically sound and adequate to provide for permitted use of a preserve. Otherwise the construction of roads and trails shall be kept to a minimum.
- J. Water Level Control. The purpose of water level control shall be to maintain the preserve's natural water regime. Water levels which previously have been altered by man may be changed, if necessary to restore a preserve to its natural condition and if permitted by federal agencies. Structures to accomplish these controls may be constructed.

Mr. Charles R. Fullwood
Mr. Jonathan B. Howes
January 19, 1994
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- K. Other Structures and Improvements. Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.

 - L. Management Plan. The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of Environment, Health & Natural Resources a management plan for the preserve. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 15 NCAC 12H.0300 and such other regulations as may be established from time to time by the Secretary of Environment, Health & Natural Resources. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
7. Rules for Management of the Buffer Area(s). Rules for Management of the Primary Area will equally apply to the management of the Buffer Area with the following exception: The cutting and removal of trees according to established best management practices, the construction of water impoundments and their appurtenant structures, wildlife habitat improvements, and the control or manipulation of vegetation may be permitted, provided that these activities do not affect natural conditions on the Primary Areas and are consistent with rules and regulations as established by the Custodian.
8. Amendment and Modification. The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and the Secretary of Environment, Health & Natural Resources and approved by the Council of State. The Roanoke Island Marshes dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 113A-164.8.

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Mr. Jonathan B. Howes
January 19, 1994
Page 7

9. Permanent Plaque. The Custodian may erect and maintain a permanent plaque or other appropriate marker at a prominent location on the within described premises bearing the following statement: "This Area is Dedicated as a State Nature Preserve."

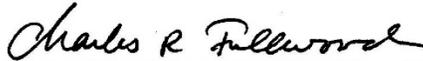
The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the Roanoke Island Marshes to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of Raleigh, North Carolina, on the 10th day of November, 1993.

Sincerely,

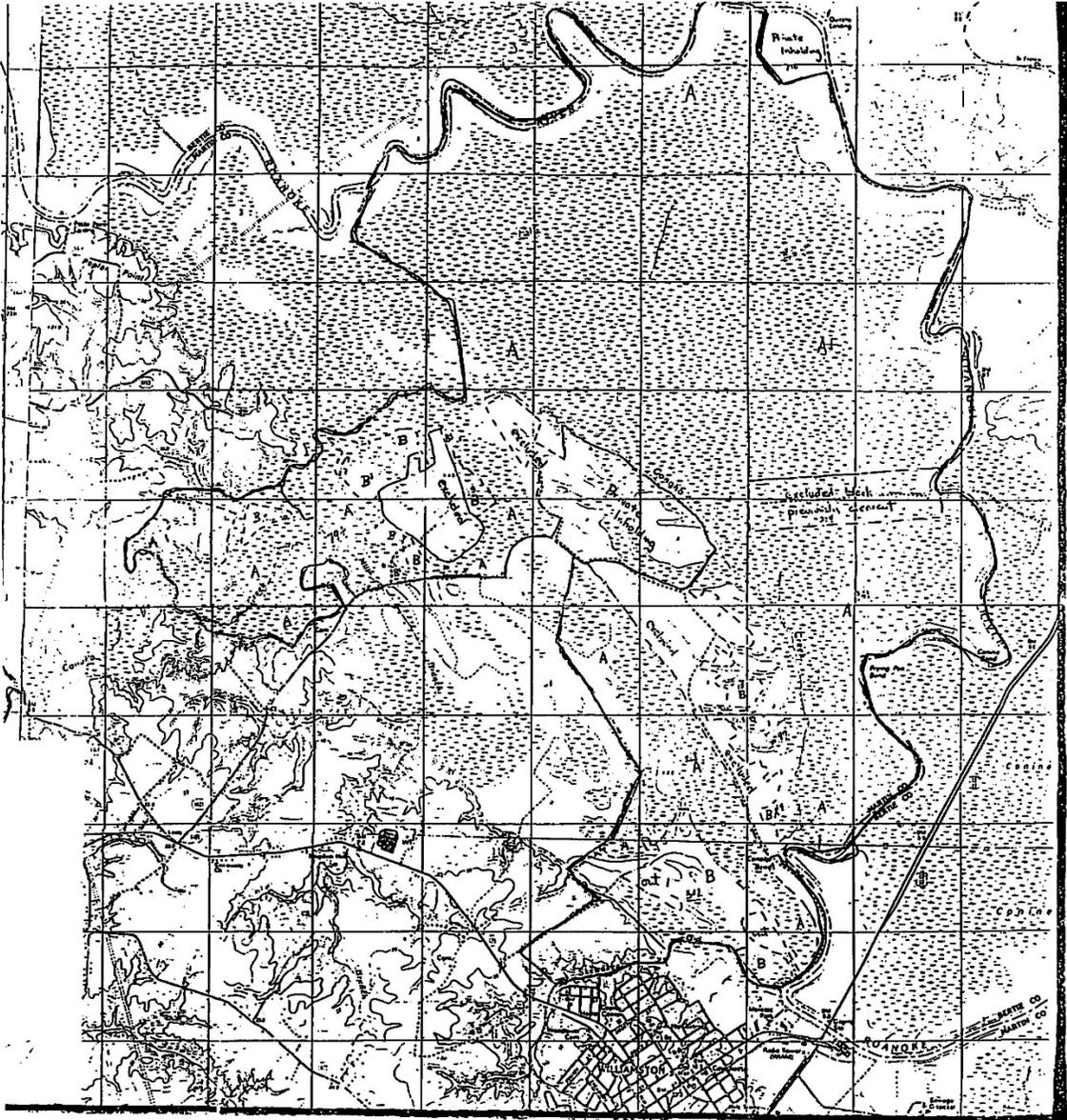
Katie G. Dorsett

KGD/mrm

CONSENTED AND AGREED TO:


Charles R. Fullwood, Executive Director
Wildlife Resources Commission


Jonathan B. Howes
Department of Environment, Health
and Natural Resources



ROANOKE RIVER PRESERVE

QUITSNA, N. C.
NE¼ WILLIAMSTON 1/4 QUADRANGLE
N35S2-5-W70N7.5

WILLIAMSTON, N. C.
SE¼ WILLIAMSTON 1/4 QUADRANGLE
N35S4-5-W70N7.5



North Carolina Department of Administration

James B. Hunt, Jr., Governor

October 26, 1999

Katie G. Dorsett, Secretary

Secretary Bill Holman
Department of Environment and Natural Resources
512 N. Salisbury Street
Raleigh, North Carolina 27603-8003

Mr. Charles R. Fullwood, Executive Director
N.C. Wildlife Resources Commission
512 N. Salisbury Street
Raleigh, North Carolina 27603-8003

Subject: Dedication of Portions of the **Roanoke River Game Land**, Martin County

Gentlemen:

Pursuant to Article 9A, Chapter 113A of the North Carolina General Statutes, this letter of allocation is executed for the purpose of dedicating the State-owned lands hereinafter described as a North Carolina Nature Preserve

These real properties are currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Roanoke River Game Land** and consist of approximately 146 acres located in Martin County and composed of:

1. Roberson Tract 138 acres primary, 8 acres buffer (146 total)

which is specifically described in Exhibit A, attached hereto and by reference made a part hereof. The dedicated lands shall be known collectively as the **Roanoke River Game Land Dedicated Nature Preserve**.

The terms of the grant agreement between the North Carolina Wildlife Resources Commission and the North Carolina Recreation and Natural Heritage Trust Fund require dedication of the qualified portions of the Roberson tract, acquired as state lands with grants from the Fund.

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THIS DEDICATION OF THE ROANOKE RIVER GAME LAND NATURE PRESERVE IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes 113A-163.2(3) (4) respectively.
2. Pursuant to North Carolina General Statutes 113-164.8, all State-owned lands lying within the above designated area(s) are hereby dedicated as a nature preserve to be known collectively as the **Roanoke River Game Land Nature Preserve** (hereinafter "preserve") for the purposes provided in the North Carolina Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Primary Custodian:** The primary custodian of the **Roanoke River Game Land Nature Preserve** will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 15 NCAC 12H.300.
4. **Primary Classification:** The primary classifications and purposes of the preserve will be conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the Preserve is described in Exhibit A.
5. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 138 acres) and a Buffer Area (approximately 8 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof. The Primary Area consists essentially of the natural area encompassing Cypress-Gum Swamp (Brownwater Subtype) and Mesic Mixed Hardwood Forest (Coastal Plain Subtype) natural communities, along with a known rare species occurrence.

The Primary Area—composed of the natural area as described above—is deemed by the Secretary of the North Carolina Department of Environment and Natural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 113A-164.6) and further serves all of the public purposes for a dedicated preserve as stated in Administrative Rules 15 NCAC 12H.0301(b).

The Buffer Area, which contributes to the management and protection of the Primary Area, consists of a centrally located pine plantation within the Primary Area.

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

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

and natural resources, except for research purposes as approved by the Custodian; and those activities specifically restricted in these Articles.

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

- B. Consumptive Wildlife Uses: Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. Orientation and Guidance of Visitors: The Custodian may construct and maintain access areas including service paths for patrol, right-of-way maintenance, and other management activities. Numbers of new paths will be minimized, and sensitive areas avoided when possible. When advance planning is possible, it will include consultation with the North Carolina Natural Heritage Program. The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may restrict access to visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. Disturbance of Natural Resources: The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.
- E. Wild Fire Control: Wild fires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wild fire does not threaten human life or structures, it may be allowed to burn with minimal control. If wild fire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wild fire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.
- F. Water Control: The purpose of water control shall be to maintain the preserve's natural water regime. Water levels that have been altered by man may be changed if necessary to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology or may be restored to natural condition. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.

- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge spoil in, on, or under the Preserve. No underground storage tanks may be placed within the Preserve. No surface or ground waters of the Preserve may have pollutants added within the Preserve.
 - H. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wild fire historically suppressed woody vegetation and promoted herbaceous diversity.
 - I. Control of Populations: Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.
 - J. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
 - K. Roads and Trails: Construction of roads and trails and other access structures will be limited to the level necessary to appropriately manage the preserve. New roads shall not be constructed in the primary area. Access management and construction will be part of the overall management planning process and will include appropriate interagency coordination.
 - L. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.
 - M. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Environment and Natural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the gamelands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 15 NCAC 12H.0300 and such other regulations as may be established from time to time by the Secretary of the Department of Environment and Natural Resources. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
7. Rules for Management of the Buffer Area(s): Primary area rules also apply to buffer areas except that forestry and wildlife management activities may be planned and carried out as needed. These

activities will be conducted in accordance with policy of the N.C. Wildlife Resources Commission and general management philosophy as outlined in Commission planning documents. These rules and guidelines require the protection and enhancement of wildlife populations and habitat so that hunting, fishing, trapping and other wildlife recreational opportunities are available to citizens of this State. Forest management is primarily conducted to enhance wildlife habitat. Based on these general objectives, the following buffer functions will be addressed in the management plan: 1) retention of naturally occurring plant and animal species, 2) maintenance of habitat connectivity and continuity, 3) management needs of rare animal and plant species populations occurring within the buffer area, and 4) protection of soil and hydrologic resources. Management plans will be reviewed, as appropriate, by the Natural Heritage Program staff to ensure that the integrity of the Nature Preserve is protected.

* "Retaining naturally occurring plant and animal species assemblages, to the extent that they are known" primarily includes the following:

- a) avoidance of type conversion of forest canopy, except in instances where type conversion restores the canopy to a more natural composition;
- b) avoidance of introduction of invasive exotics, which damage the integrity of the naturally occurring herbaceous layer; and
- c) minimization of direct mechanical or chemical impacts to the naturally occurring herbaceous layer.

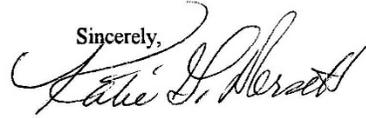
** "Maintenance of habitat connectivity and continuity" primarily includes the following:

- a) preservation of functional riparian corridors;
- b) preservation of functional connecting corridors between primary areas within the dedicated area and to high quality natural areas outside the dedicated area;
- c) in planning active management, utilization of methods which most closely approximate natural processes when possible;
- d) in planning active management, retention of other habitat features which serve specific wildlife functions (see Wetland Forestry and Wildlife Management section of draft 1996 Best Management Practices for Forestry in North Carolina's Wetlands).

8. **Amendment and Modification:** The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Environment and Natural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 113A-164.8.
9. **Permanent Plaque:** The Custodian should erect and maintain a permanent plaque or other appropriate marker at a prominent location within the preserve bearing the following statement: "This Area is Dedicated as a State Nature Preserve."

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the **Roanoke River Game Land Nature Preserve** to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of Wilmington, North Carolina, on the 7th of June, 1999.

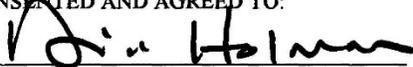
Sincerely,



Katie G. Dorsett

KGD/BH

CONSENTED AND AGREED TO:



Secretary Bill Holman
Department of Environment and Natural Resources



Charles R. Fullwood, Executive Director
Wildlife Resources Commission

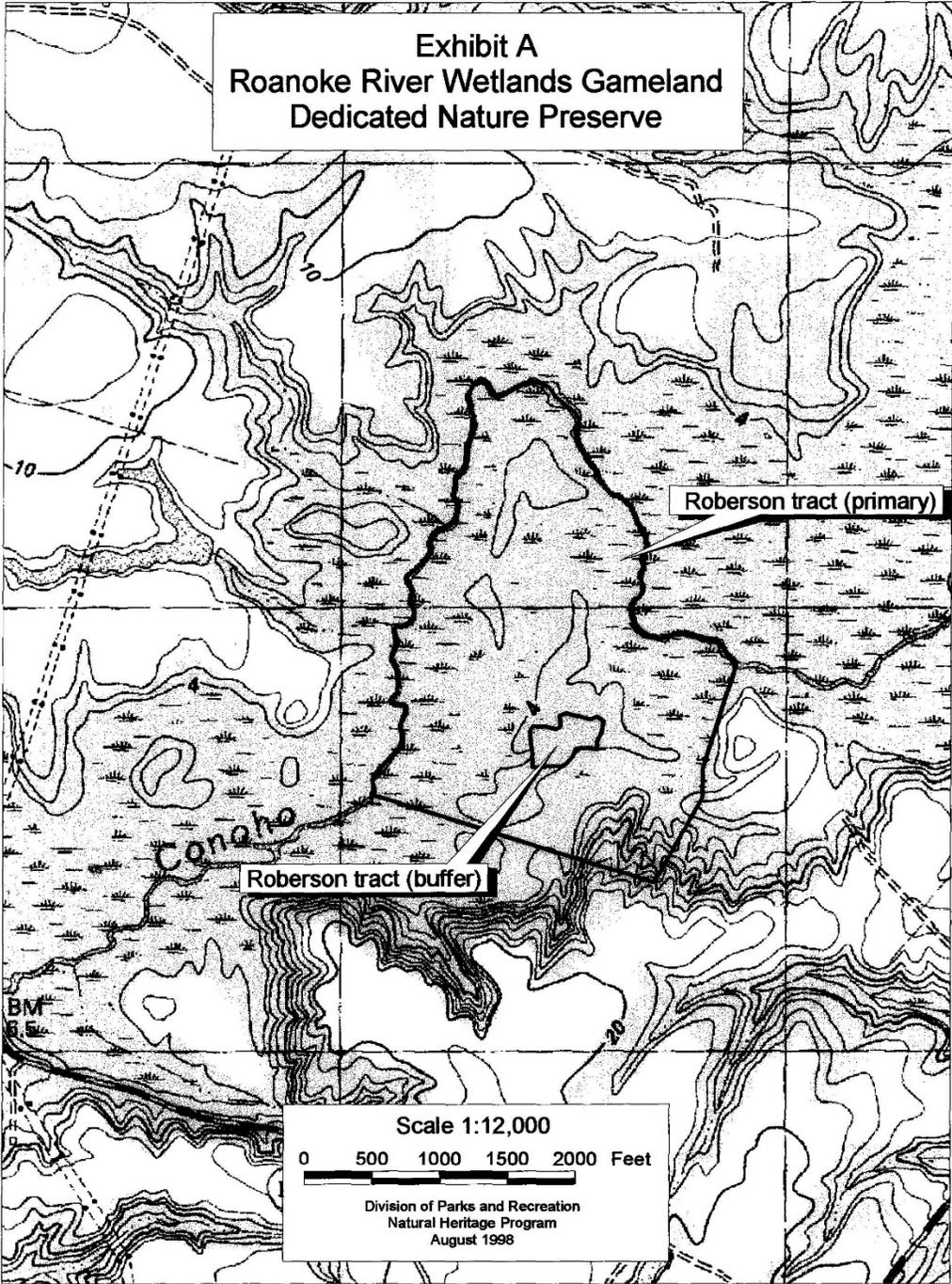


EXHIBIT A

ROANOKE RIVER GAME LAND DEDICATED NATURE PRESERVE

COUNTY: Martin

TOPOGRAPHIC QUAD: Quitsna 7.5'

PHYSIOGRAPHIC PROVINCE: Coastal Plain

SIZE OF AREA: 146.88 acres total
(primary area 138 acres; buffer area 8 acres)

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

LOCATION: The Roberson Tract is located along Conoho Creek downstream from SR 1417. It lies inside a large northward bend of Conoho Creek, so that the creek borders it on the west, north, and east. The tract is adjacent to the previously dedicated Whitaker Tract of the Roanoke River Game Land. It is 5 miles northwest of Williamson and 2 air miles south of the Roanoke River.

DESCRIPTION: The Roberson Tract consists of a segment of the floodplain and adjacent slopes of Conoho Creek, near where it joins the Roanoke River floodplain. Conoho Creek is a backwater creek, inundated with muddy water from the Roanoke River during major floods as well as by the water from its own watershed. The tract supports good examples of several natural community types, particularly Cypress--Gum Swamp (Brownwater Subtype) and Mesic Mixed Hardwood Forest (Coastal Plain Subtype). It contains a population of the magnolia vine (*Schisandra glabra*), listed as threatened in the state. This is one of only two populations of this globally rare plant in North Carolina.

The Mesic Mixed Hardwood Forest occurs on upland slopes and on higher ridges on an apparent floodplain terrace. It has a canopy consisting of a mixture of hardwood trees, of which beech (*Fagus grandifolia*) is most common. The understory is similarly diverse. This community is unusual in containing several species not usually found in the Coastal Plain Subtype, including red oak (*Quercus rubra*) and umbrella magnolia (*Magnolia tripetala*). It also contains good populations of typical Coastal Plain species such as silky camelia (*Stewartia malacodendron*).

The Cypress--Gum Swamp is part of the large contiguous swamp extending to the Roanoke River. It is typical in composition, with water tupelo (*Nyssa aquatica*) dominating and bald-cypress (*Taxodium distichum*) abundant. The trees range from mature to quite old.

The varied habitats on the Roberson Tract are part of the system of wildlife habitat provided by the Roanoke River wetlands. This is a rich area for wildlife, including waterfowl, wild turkey, deer, small game birds and mammals, furbearers, and neotropical migrant birds.

BOUNDARY JUSTIFICATION: The primary area contains all of the Cypress- Gum Swamp (Brownwater Subtype) and Mesic Mixed Hardwood Forest (Coastal Plain Subtype) suitable for designation within the dedicated area. The buffer area contains a pine plantation.

MANAGEMENT AND USE: The dedicated nature preserve is a portion of the 26,507-acre Roanoke River Game Land owned by the state and federal government. Public use of the tract will be greatly increased over present use. Both consumptive and nonconsumptive opportunities will be expanded to utilize and enjoy the rich resources available. Hunting will be allowed for waterfowl, deer, wild turkey, and small game. Quotas will be imposed on numbers of hunters and hunt days to control harvests and to maintain a quality hunting experience. Other public recreation opportunities will include fishing, canoeing, bird watching, and nature study.

(prepared 8/11/98, NHP)

NAT-58.3



North Carolina Department of Administration

Michael F. Easley, Governor

Britt Cobb, Secretary

April 5, 2006

Secretary William G. Ross, Jr.
Department of Environment and Natural Resources
1615 Mail Service Center
Raleigh, North Carolina 27699-1615

Mr. Richard B. Hamilton, Executive Director
N.C. Wildlife Resources Commission
1701 Mail Service Center
Raleigh, North Carolina 27699-1701

Re: Dedication of Portions of the **Roanoke River Wetlands Game Land**
Halifax and Martin Counties

Dear Secretary Ross and Mr. Hamilton:

Pursuant to Article 9A, Chapter 113A of the North Carolina General Statutes, this letter of allocation is executed for the purpose of dedicating the State-owned lands hereinafter described as a North Carolina Nature Preserve. These articles of dedication replace the articles of dedication dated December 1, 1999 and January 19, 1994. The articles were amended to create a single letter of allocation document and to reflect additions of property to the preserve.

This real property is currently administered by the North Carolina Wildlife Resources Commission as a portion of the **Roanoke River Wetlands Game Land** and consists of approximately 10,934 acres located in Halifax and Martin Counties, composed of:

- | | |
|--|--------------|
| 1. Roanoke River Wetlands Game Land (Primary Area) | 10,574 acres |
| 2. Roanoke River Wetlands Game Land (Buffer Area) | 360 acres |

all of which are specifically described in Exhibit A, attached hereto and by reference made a part hereof. The dedicated land shall be known collectively as the Roanoke River Wetlands Game Land Dedicated Nature Preserve.

Dedication of the qualified portions of the tract fulfills the terms of any prior grant agreements, including those of the Natural Heritage Trust Fund and the Clean Water Management Trust Fund.

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919) 807-2425
Fax (919) 733-9571
State Courier #51-01-00
e-mail Britt.Cobb@ncmail.net
An Equal Opportunity/Affirmative Action Employer

Location Address:
116 West Jones Street
Raleigh, North Carolina



The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the Roanoke River Wetlands Game Land Nature Preserve to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of Raleigh, North Carolina, on the 7th day of February, 2006.

Sincerely,



Britt Cobb

BC

CONSENTED AND AGREED TO:

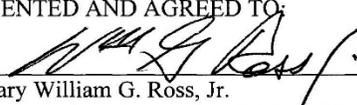
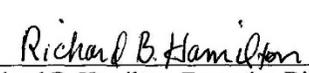

Secretary William G. Ross, Jr.
Department of Environment and Natural Resources
Richard B. Hamilton, Executive Director
Wildlife Resources Commission

EXHIBIT A

ROANOKE RIVER WETLANDS GAME LAND DEDICATED NATURE PRESERVE

COUNTY: Halifax and Martin Counties

TOPOGRAPHIC QUADS: Boones Crossroads, Scotland Neck, Quitsna, Hamilton, Jamesville, Williamston

PHYSIOGRAPHIC PROVINCE: Coastal Plain

SIZE OF AREA: ca. 10,934 acres (primary area 10,574 acres; buffer area 360 acres)

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

DESCRIPTION: The preserve contains good to excellent examples of Coastal Plain Levee Forest (Brownwater Subtype), Coastal Plain Bottomland Hardwoods (Brownwater Subtype), and Cypress-Gum Swamp (Brownwater Subtype), with some Mesic Mixed Hardwood Forest (Coastal Plain Subtype) in isolated locations. One of the most significant natural community types is the Levee Forest, present along the Roanoke River and in Conoconnara Swamp. Well-developed examples of this community are uncommon in the Coastal Plain except along the Roanoke. Not only is it a good example, but the levee forest is broad, ranging back from the river for up to 1000 feet in some places. There is also an unusual floodplain "island" in the Conoconnara Swamp floodplain; it is often isolated by high water from the uplands, but this hill seems to also contain Levee Forest vegetation.

This levee community along the river contains mature to middle-aged canopy trees such as sugarberry (*Celtis laevigata*), green ash (*Fraxinus pennsylvanica*), bitternut hickory (*Carya cordiformis*), American elm (*Ulmus americana*), and eastern cottonwood (*Populus deltoides*). Some oaks such as Shumard oak (*Quercus shumardii*) are also present. The scarce silver maple (*Acer saccharinum*) is frequent on the levee. The shrub layer is quite dense and is dominated by painted buckeye (*Aesculus sylvatica*), spicebush (*Lindera benzoin*), and pawpaw (*Asimina triloba*). Of most significance is the lush herb layer, especially dominated by spring ephemeral herbs. Rare plants include sessile trillium (*Trillium sessile*) and dwarf stinging nettle (*Urtica chamaedryoides*); the latter is apparently more common here than anywhere else in the state. Uncommon species include Virginia bluebells (*Mertensia virginica*), green violet (*Hybanthus concolor*), and the shrub eastern wahoo (*Euonymus atropurpureus*). Common native species include spring beauty (*Claytonia virginica*), baby-blue-eyes (*Nemophila microcalyx*), and golden corydalis (*Corydalis flavula*); the latter two are good indicators of rich, high pH soils such as found on these natural levees. There are dense stands of exotic species such as common chickweed (*Stellaria media*) and Japanese honeysuckle (*Lonicera japonica*), but they are not overly dominant, and especially not in the spring season.

A second uncommon community type, Mesic Mixed Hardwood Forest, occurs along the upland slopes and higher ridges of Conoho Creek where it joins the Roanoke River floodplain. It contains a population of the magnolia vine (*Schisandra glabra*), listed as threatened in the state, with only one other population of the species occurring in the state. It has a canopy consisting of a mixture of hardwood trees, of which beech (*Fagus grandifolia*) is the most common. The understory is similarly diverse. This community is unusual in containing several species not usually found in the Coastal Plain Subtype, including northern red oak (*Quercus rubra*) and umbrella magnolia (*Magnolia tripetala*). It also contains good populations of typical Coastal Plain species such as silky camellia (*Stewartia malacodendron*).

Cypress-Gum Swamp in the inundated areas and Coastal Plain Bottomland Hardwood communities extend along the lower portions of the tributaries and along the river itself. The Cypress-Gum Swamp is typically dominated by both bald cypress (*Taxodium distichum*) and water tupelo (*Nyssa aquatica*), with tupelo being most common in areas where the cypress has been removed. American hornbeam (*Carpinus caroliniana*) is a very common subcanopy tree. These swamps contain very little herb layer. Coastal Plain Bottomland Hardwoods occurs on several isolated ridges on the south-facing slopes of Conoho Creek, with a canopy of laurel oak (*Quercus laurifolia*) and swamp chestnut oak (*Q. michauxii*) and an understory of American hornbeam.

The northernmost portion of the preserve contains a backswamp behind the levee, harboring a small heronry, with both great blue herons (*Ardea herodias*) and great egrets (*Ardea alba*) present. However, the heronry seems to have declined greatly in recent years, for no apparent reason, and birds appear to have been scarce in 2003 and early 2004.

The Roanoke River floodplain is arguably the richest wildlife habitat in the state for a variety of animals. Breeding bird populations in the hardwood forests are abundant and are high in diversity, and game species such as wild turkey and white-tailed deer are common to abundant. The rare Mississippi kite (*Ictinia mississippiensis*) is often seen foraging over the fields and woodlands, and it presumably nests in tall trees in the general area. The Federal Species of Concern cerulean warbler (*Dendroica cerulea*) occurs in levee forests along the river from Weldon to Williamston.

BOUNDARY JUSTIFICATIONS: That portion of the property existing in middle-aged to mature hardwood forest is being proposed for dedication as primary area. Those portions currently existing as pine stands or young hardwood stands are proposed as buffer areas. Existing fields and other farmlands are being excluded from the dedication.

MANAGEMENT AND USE: The preserve, managed as part of the Roanoke River Wetlands Game Land, was acquired primarily to provide public hunting, trapping, and wildlife observation opportunities. It is expected that the Commission will maintain the farm fields in agriculture to provide food and cover for game species such as mourning doves. The largest field has been considered for possible flooding to produce a very shallow impoundment for waterfowl food and cover.

Some restoration management within the primary area may be necessary to remove exotic plants such as privet. Use of off-road vehicles poses a problem in portions of the preserve and needs to

be controlled. It should be noted that levee vegetation is easily damaged by disturbance and does not recover quickly; once disturbed, it is particularly vulnerable to exotic invasion.

THIS DEDICATION OF THE ROANOKE RIVER WETLANDS GAME LAND NATURE PRESERVE IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes, section 113A-164.3.
2. Pursuant to North Carolina General Statutes 113-164.8, all State-owned lands lying within the above designated area(s) are hereby dedicated as a nature preserve to be known collectively as the Roanoke River Wetlands Game Land Nature Preserve (hereinafter "preserve") for the purposes provided in the North Carolina Nature Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 15 NCAC 12H.300.
4. **Primary Classification:** The primary classifications and purposes of the preserve will be conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the preserve is described in Exhibit A.
5. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 10,574 acres) and a Buffer Area (approximately 360 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof. The Primary Area consists essentially of the Cypress-Gum Swamp, Coastal Plain Bottomland Hardwoods, Coastal Plain Levee Forests, and Mesic Mixed Hardwood Forest natural community types and their associated rare species and wading bird rookeries.

The Primary Area is deemed by the Secretary of the North Carolina Department of Environment and Natural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 113A-164.6) and further serves all of the public purposes for a dedicated preserve as stated in Administrative Rules 15 NCAC 12H.0301(b).

The Buffer Area, which contributes to the management and protection of the Primary Area, consists of consists of younger hardwood stands and small pine stands, contributing to the protection of the primary area.

6. **Rules for Management of the Primary Area(s):**

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

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

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

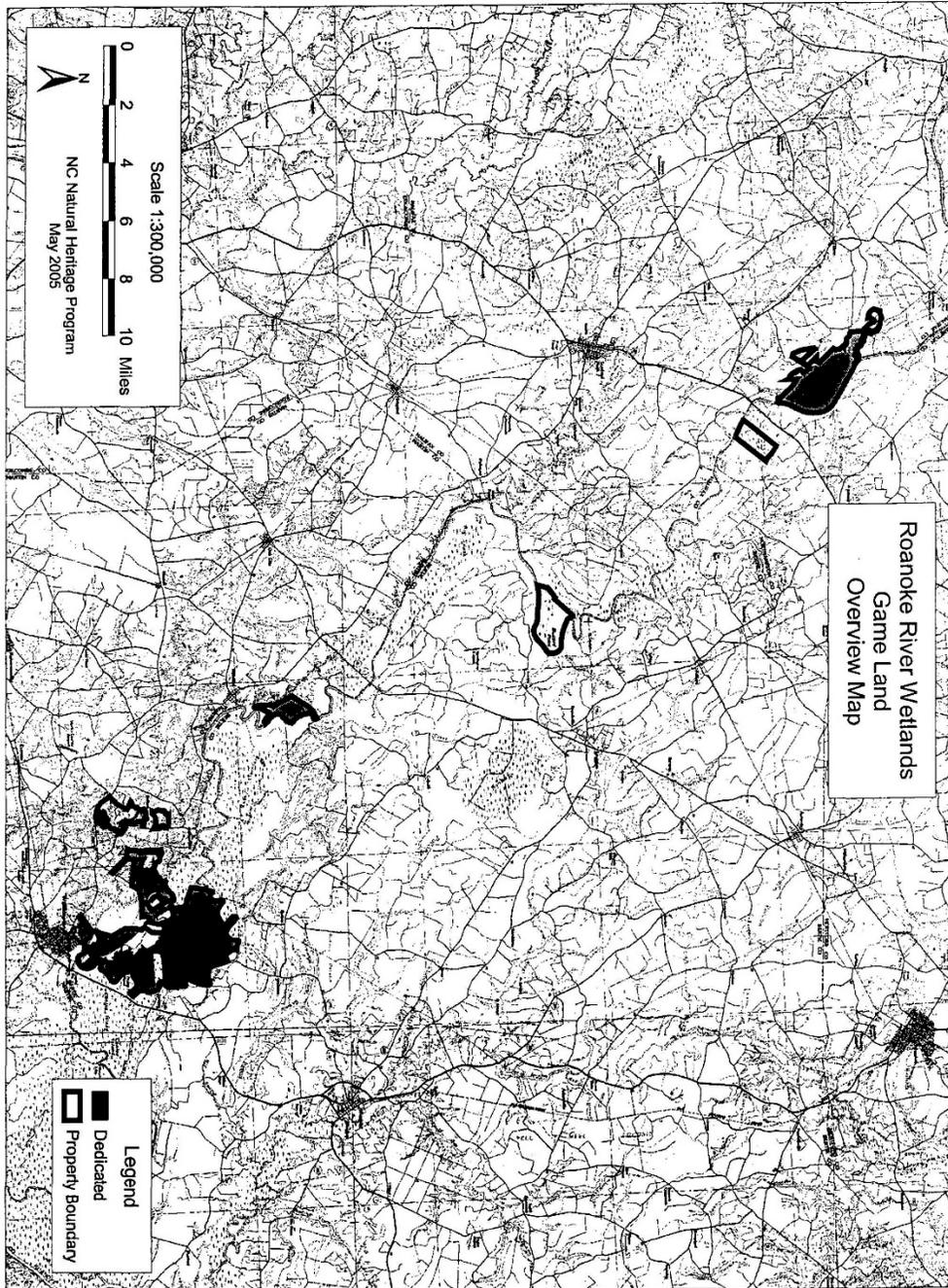
- B. **Consumptive Wildlife Uses:** Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. **Orientation and Guidance of Visitors:** The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may establish and maintain canoe trails and canoe camping sites in the preserve. The Custodian may restrict access to visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. **Disturbance of Natural Resources:** The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease or insect infestations that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, snagging and clearing of the boat navigational channel in Conoho Creek, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.

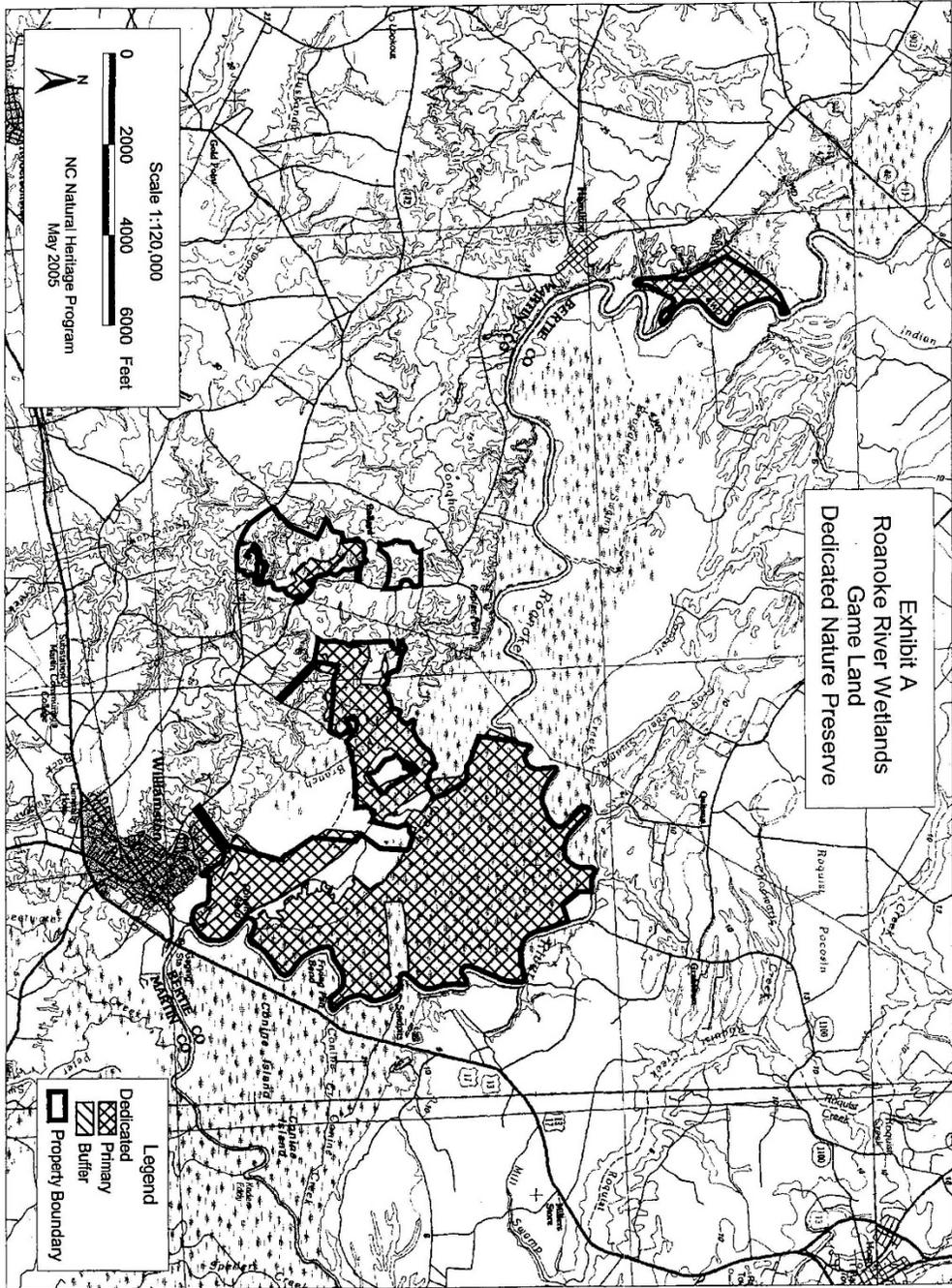
- E. Wild Fire Control/Prescribed Burning: Wild fires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wild fire does not threaten human life or structures, it may be allowed to burn with minimal control. If wild fire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wild fire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.
- F. Water Control: The purpose of water control shall be to maintain the preserve's natural water regime. Water levels that have been altered by man may be changed if necessary to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology or may be restored to natural condition. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge spoil in, on, or under the preserve. No underground storage tanks may be placed within the preserve. No surface or ground waters of the preserve may have pollutants added within the preserve.
- H. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wild fire historically suppressed woody vegetation and promoted herbaceous diversity.
- I. Control of Populations: Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.

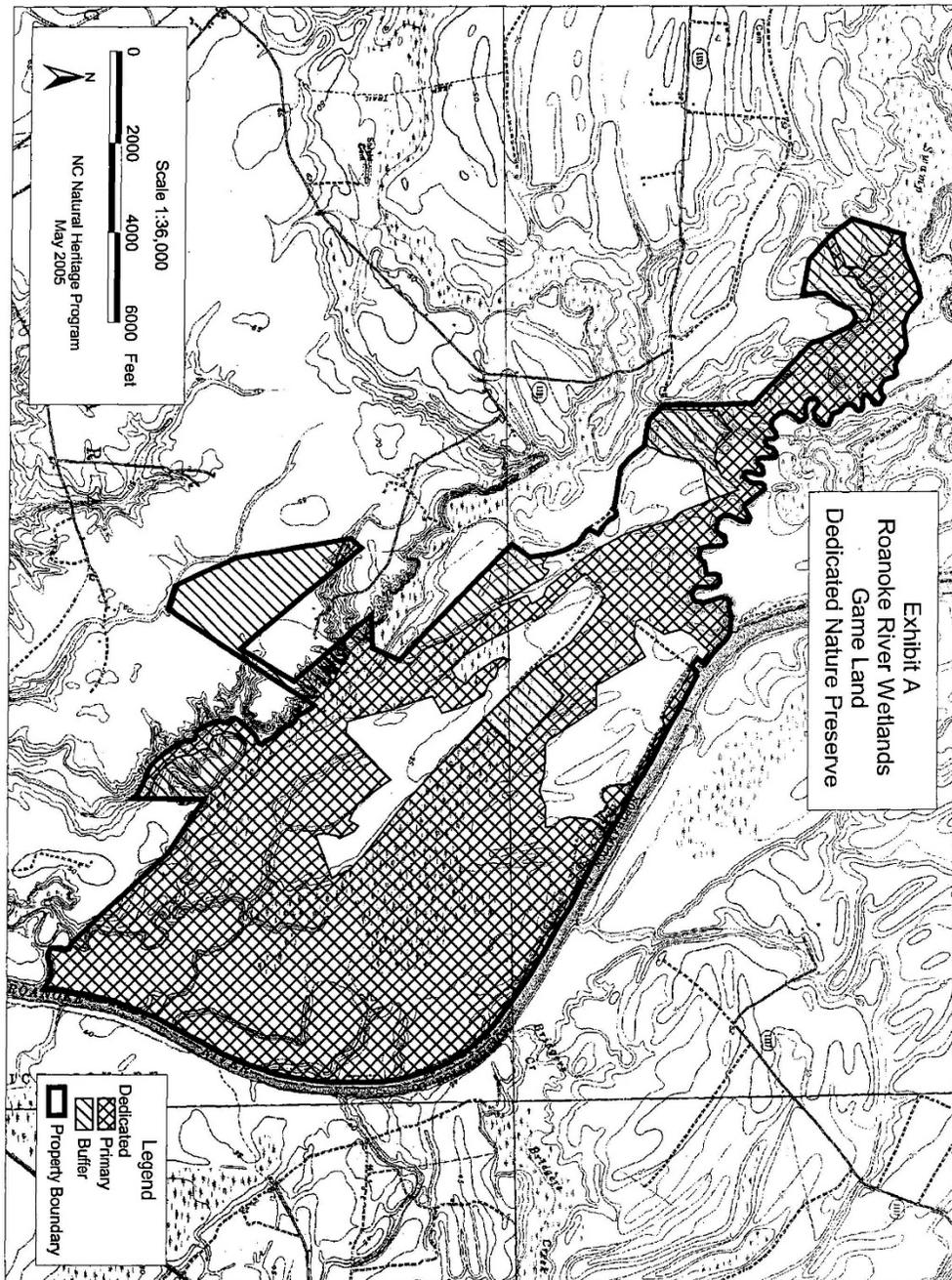
- J. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
 - K. Roads and Trails: New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to staff use for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. Existing roads that occur within or form a boundary of the Primary Area may be maintained by grading of the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.
 - L. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.
 - M. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Environment and Natural Resources a management plan for the preserve. The management plan will be part of the larger management plan developed for the gamelands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 15 NCAC 12H.0300 and such other regulations as may be established from time to time by the Secretary of the Department of Environment and Natural Resources. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.
7. Rules for Management of the Buffer Area(s): Primary area rules also apply except that additional forestry and wildlife management activities may be planned and carried out as needed. Construction and maintenance of roads, trails, and other access structures within buffer area(s) of the preserve will be limited to the level necessary to appropriately manage the preserve. These activities will be conducted in accordance with policy of the N.C. Wildlife Resources Commission and general management philosophy as outlined in Commission planning documents, in addition to providing for the buffer functions in relation to the primary area(s). WRC rules and guidelines require the protection and enhancement of wildlife populations and habitat so that hunting, fishing, trapping and other wildlife recreational opportunities are available to citizens of this State. Forest management is primarily conducted to enhance wildlife habitat.

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

- 1) Landscape level function of community type and structure. (Buffer area management may involve timber harvest and other forms of stand manipulation, but will not involve forest canopy type conversion over more than limited areas, other than to restore stands to types suited for the site. Introduction of exotic species known to be invasive in natural communities will be avoided.)
 - 2) Maintenance of habitat connectivity and continuity among primary areas.
 - 3) Providing for habitat diversity.
 - 4) Management needs of rare animal and plant species populations occurring within the buffer area; and
 - 5) Protection of soil and hydrologic resources and processes within the primary area and extending into the buffer. (Buffers will be retained along streams, and watersheds of primary areas will be protected from hydrologic alteration.)
8. **Amendment and Modification:** The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Environment and Natural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 113A-164.8.
9. **Permanent Plaque:** The Custodian should erect and maintain a permanent plaque or other appropriate marker at a prominent location within the preserve bearing the following statement: "This Area is Dedicated as a State Nature Preserve."









North Carolina Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

December 27, 2010

Secretary Dee Freeman
Department of Environment and Natural Resources
1615 Mail Service Center
Raleigh, North Carolina 27699-1615

Mr. Gordon S. Myers, Executive Director
Wildlife Resources Commission
1701 Mail Service Center
Raleigh, North Carolina 27699-1701

Re: Dedication of Portions of the **Roanoke River Wetlands Game Land**, Bertie, Halifax, Martin, and Northampton Counties

Dear Secretary Freeman and Mr. Myers:

Pursuant to Article 9A, Chapter 113A of the North Carolina General Statutes, this letter of allocation is executed for the purpose of dedicating the State-owned lands hereinafter described as a North Carolina Nature Preserve. These articles of dedication replace the articles of dedication dated April 5, 2006. The articles were amended to reflect additions of property to the preserve and improve ownership boundary accuracy.

This real property is currently administered by the North Carolina Wildlife Resources Commission as a portion of the Roanoke River Wetlands Game Land and consists of approximately 17,987 acres located in Bertie, Halifax, Martin, and Northampton Counties, composed of:

- | | |
|--|--------------|
| 1. Roanoke River Wetlands Game Land (Primary Area) | 15,062 acres |
| 2. Roanoke River Wetlands Game Land (Buffer Area) | 2,925 acres |

all of which are specifically described in Exhibit A, attached hereto and by reference made a part hereof. The dedicated land shall be known collectively as the Roanoke River Wetlands Game Land Dedicated Nature Preserve.

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919) 807-2425
Fax (919) 733-9571
State Courier #51-01-00
e-mail: moses.carey@doa.nc.gov
An Equal Opportunity Affirmative Action Employer

Location Address:
116 West Jones Street
Raleigh, North Carolina 27603



Dedication of the qualified portions of the tract fulfills the terms of any prior grant agreements, including those of the Natural Heritage Trust Fund and the Clean Water Management Trust Fund.

The Governor and Council of State have approved the dedication of the State-owned lands hereinabove described as the Roanoke River Wetlands Game Land Nature Preserve to be held in trust by the Custodian for the uses and purposes expressed in the Nature Preserves Act at a meeting held in the City of Raleigh, North Carolina, on the 3rd of August, 2010.

Sincerely,



Moses Carey, Jr.

MC

Attachment

CONSENTED AND AGREED TO:

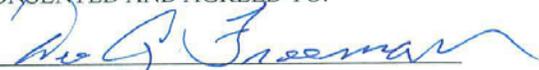
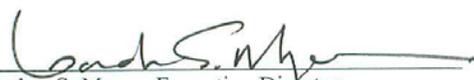

Secretary Dee Freeman
Department of Environment and Natural Resources
Gordon S. Myers, Executive Director
Wildlife Resources Commission

EXHIBIT A

ROANOKE RIVER WETLANDS GAME LAND DEDICATED NATURE PRESERVE (ROANOKE RIVER SEGMENT)

COUNTY: Bertie, Halifax, Martin, and Northampton Counties

PHYSIOGRAPHIC PROVINCE: Coastal Plain

TOPOGRAPHIC QUADS: Boones Crossroads, Scotland Neck, Norfleet, Kelford, Palmyra, Quitsna, Hamilton, Jamesville, Williamston

SIZE OF AREA: ca. 17,729 acres (primary area 15,017 acres, including 1,698-acre restoration area; buffer area 2,712 acres)

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

DESCRIPTION: The preserve lies largely in the floodplain of the Roanoke River. The Roanoke River is a brownwater river, which flows through the Piedmont and, prior to construction of upstream dams, carried a substantial load of nutrient-rich sediment. The floodplain has substantial microtopography created by migration of the river, including natural levees, sloughs, backswamps, and ridge-and-swale systems. A few parts of the preserve include sloping bluffs, upland terraces, and floodplains of small creeks in the uplands. Also of note are beaver ponds impounded in some of the sloughs and creeks.

The preserve contains numerous good to excellent examples of floodplain natural communities, especially Coastal Plain Levee Forest (Brownwater Subtype), Coastal Plain Bottomland Hardwoods (Brownwater Subtype), and Cypress-Gum Swamp (Brownwater Subtype), but also including Coastal Plain Semipermanent Impoundment. Mesic Mixed Hardwood Forest (Coastal Plain Subtype) occurs in isolated locations. The Roanoke River floodplain as a whole contains the most extensive and intact examples of brownwater floodplain communities in North Carolina and represents one of the best examples anywhere in the Southeast. The Roanoke River Wetlands Game Land protects a substantial part of this system.

One of the most significant natural community types in the preserve is the Coastal Plain Levee Forest. The levees are high, broad, and well-developed along the Roanoke River, though parts have been reduced to only narrow bands of intact forest. The Levee Forest contains a mix of trees including sugarberry (*Celtis laevigata*), green ash (*Fraxinus pennsylvanica*), sycamore (*Platanus occidentalis*), American elm (*Ulmus americana*), and eastern cottonwood (*Populus deltoides*). Some oaks such as Shumard oak (*Quercus shumardii*) are also present. The scarce silver maple (*Acer saccharinum*) is frequent on the levee. The shrub layer is quite dense and is dominated by painted buckeye (*Aesculus sylvatica*), spicebush (*Lindera benzoin*), and pawpaw (*Asimina triloba*). The herb layer is lush. It contains several rare species, including sessile trillium (*Trillium sessile*) and dwarf stinging nettle (*Urtica chamaedryoides*). Uncommon species include

Virginia bluebells (*Mertensia virginica*), green violet (*Hybanthus concolor*), and the shrub eastern wahoo (*Euonymus atropurpureus*). Common native species include spring beauty (*Claytonia virginica*), baby-blue-eyes (*Nemophila microcalyx*), and golden corydalis (*Corydalis flavula*); the latter two are good indicators of rich, high pH soils such as found on these natural levees. As is typical of rich floodplain communities, non-native species are abundant and in places have serious impacts on the native herbs, shrubs, and tree seedlings. Stilt grass (*Microstegium vimineum*), Japanese honeysuckle (*Lonicera japonica*), common chickweed (*Stellaria media*), and privet (*Ligustrum sinense*) are of greatest concern.

Cypress-Gum Swamp communities are extensive in the backswamps and sloughs of the floodplain, and occupy large expanses in the downstream areas such as Conoho Neck. They are dominated by water tupelo (*Nyssa aquatica*) and bald cypress (*Taxodium distichum*). Ironwood (*Carpinus caroliniana*) and water ash (*Fraxinus caroliniana*) dominate the understory, and there is generally little shrub layer. The herb layer may be sparse or dense, with sedges most abundant.

Coastal Plain Bottomland Hardwoods communities are of limited extent in the preserve, because past logging and forest conversion have eliminated them from much of the appropriate habitat. Much of the buffer and restoration area of the preserve likely was formerly Bottomland Hardwoods. A few isolated ridges retain intact patches. Where they remain intact, Bottomland Hardwoods are dominated by laurel oak (*Quercus laurifolia*), swamp chestnut oak (*Q. michauxii*), and cherrybark oak (*Quercus pagoda*) in higher areas, and by laurel oak and overcup oak (*Quercus lyrata*) in lower areas. In the lowest areas these oaks often mix with bald cypress and water tupelo. Ironwood is the most common understory tree.

Where beavers have dammed sloughs or flooded backswamps, Coastal Plain Semipermanent Impoundment communities are formed. The cypress and tupelo trees may persist in shallower parts, while deeper parts have open water or marshy vegetation.

Mesic Mixed Hardwood Forest communities occur on the bluffs or higher bottomland ridges in a few places. They generally are dominated by beech (*Fagus grandifolia*), though red oak (*Quercus rubra*), white oak (*Quercus alba*), and tulip poplar (*Liriodendron tulipifera*) may be important. The uncommon silky camellia (*Stewartia malacodendron*) occurs in some. Of particular note are the mesic slopes and ridges along lower Conoho Creek, which contain a population of the magnolia vine (*Schisandra glabra*), one of few places in North Carolina this species occurs.

The Roanoke River floodplain is arguably the richest wildlife habitat in the state for a variety of animals. Breeding bird populations in the hardwood forests are abundant and are high in diversity, and game species such as wild turkey and white-tailed deer are common to abundant. Cerulean warbler (*Dendroica cerulea*), southeastern myotis (*Myotis austroriparius*), Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) are present in several places. Bald eagle (*Haliaeetus leucocephalus*) and Mississippi kite (*Ictinia mississippiensis*) also occur in the area. Several heron nesting colonies are present in the preserve, generally isolated in larger backswamps.

BOUNDARY JUSTIFICATIONS: The primary boundaries are mostly based on the extent of the natural communities in good condition. Some younger forests or more altered areas are included where they are known to support rare species or where they occur adjacent to rivers or streams. Additional areas are dedicated as primary restoration areas. These are primarily recent clearcuts,

younger successional forests, and some pine plantations in the river floodplain. While invasive species are a threat, the passage of time, perhaps aided by the removal of planted and weedy tree species, should return these areas to more natural communities. Because they are in the floodplain, these areas interact ecologically and hydrologically with the Roanoke River, and restoring them should be beneficial to the river.

Buffer areas include altered lands on uplands and on higher ridges and terraces that are unlikely to flood. These areas help buffer the primary areas from edge effect and from runoff, as well as providing more extensive habitat for habitat generalist species. Existing fields and other farmlands are excluded from the dedication.

MANAGEMENT AND USE: The preserve, managed as part of the Roanoke River Wetlands Game Land, was acquired primarily to provide public hunting, trapping, and wildlife observation opportunities.

The primary management need on the natural areas is control of invasive exotic plants. Populations are dense in many areas, especially in the Levee Forests and in the buffer areas; further spread and additional ecological damage is possible. Any control measures must be specifically targeted and avoid undue damage to the native communities and species the preserve protects.

The primary restoration areas may benefit from additional management, including cutting of planted trees or selective cutting of tree species that have greatly increased due to past logging. The value of any silvicultural treatments needs to be weighed against the risk of greater spread of exotic plants.

EXHIBIT B

ROANOKE RIVER WETLANDS GAME LAND DEDICATED NATURE PRESERVE (ROQUIST POCOSIN SEGMENT)

COUNTY: Bertie County TOPO QUAD: Elizabethtown North 7.5' quad

SIZE OF AREA: ca. 258 acres total
(primary area 45 acres; buffer area 213 acres)

OWNER/ADMINISTRATOR: State of North Carolina
Wildlife Resources Commission

LOCATION: Roquist Pocosin is southeast of Lewiston-Woodville, midway between NC 11 on the west, SR 1120 on the north, and SR 1108 on the south. The dedicated area is on the north side, with access from SR 1118. See Exhibit B map.

DESCRIPTION: Roquist Pocosin is a large wetland system in a broad shallow depression. The center of the basin is occupied by Nonriverine Swamp Forest, grading to a ring of Nonriverine Wet Hardwood Forest around the edge. The bluffs on the north side support Mesic Mixed Hardwood Forest. Much of the natural vegetation of basin has been clearcut recently and supports young successional vegetation, but large patches of intact natural communities are present in several places.

The dedicated area on the north edge has areas of all three community types. All are quite mature forests with unusually large trees. The largest community in the primary area is Nonriverine Wet Hardwood Forest. Its canopy is a mix of the characteristic trees species: laurel oak (*Quercus laurifolia*), swamp chestnut oak (*Quercus michauxii*), cherrybark oak (*Quercus pagoda*), red maple (*Acer rubrum*), and sweetgum (*Liquidambar styraciflua*). The understory is primarily red maple and ironwood (*Carpinus caroliniana*), and the shrub layer is sometimes dense cane (*Arundinaria tecta*). The Nonriverine Wet Hardwood Forest community in Roquist Pocosin as a whole represents one of the largest remaining examples. The part in the dedicated area is a relatively small portion of it, but is the most mature portion of the larger community.

The southern edge of the primary area includes the edge of a large expanse of Nonriverine Swamp Forest. It is dominated by swamp black gum (*Nyssa biflora*), with abundant red maple and some cypress (*Taxodium distichum*) and sweetgum. A small area on the upland slope of the primary area is Mesic Mixed Hardwood Forest, dominated by beech (*Fagus grandifolia*), swamp chestnut oak, and tulip poplar (*Liriodendron tulipifera*).

BOUNDARY JUSTIFICATION: The primary area includes the intact natural communities within the tract. The buffer area includes pine plantations and recent clearcuts that are within the wetland basin or on the slope above it. These areas serve to buffer the primary area and significant communities on the adjacent state lands.

MANAGEMENT AND USE: The preserve is part Roanoke River Game Land, which is managed for wildlife and public hunting.

No special management treatment is needed in this segment, but the area should be monitored for invasive exotic plants. Murdannia (*Murdannia keisak*) and stilt grass (*Microstegium vimineum*), among others, have not been observed but are potential threats.

THIS DEDICATION OF THE ROANOKE RIVER WETLANDS GAME LAND NATURE PRESERVE IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. As used in this Letter, the terms "natural area" and "nature preserve" shall have the same meaning as contained in North Carolina General Statutes, section 113A-164.3.
2. Pursuant to North Carolina General Statutes 113-164.8, all State-owned lands lying within the above designated area(s) are hereby dedicated as a nature preserve to be known collectively as the Roanoke River Wetlands Game Land Nature Preserve (hereinafter "preserve") for the purposes provided in the North Carolina Nature Preserves Act, as amended, and other applicable law, and said State-owned land, shall be held, maintained, and used exclusively for said purposes.
3. **Primary Custodian:** The primary custodian of the preserve will be the North Carolina Wildlife Resources Commission, which will be responsible for managing the preserve in accordance with State Administrative Code 15A NCAC 12H.0300 and .0400.
4. **Primary Classification:** The primary classifications and purposes of the preserve will be conservation, nature education, wildlife management, hunting, fishing, trapping, and other recreational uses authorized by the Primary Custodian. The ecological significance of the preserve is described in Exhibit A.
5. **Management Areas:** For the purposes of management, the preserve shall be considered to consist of a Primary Area (approximately 15,062 acres) and a Buffer Area (approximately 2,925 acres), as more particularly described in Exhibit A, attached thereto and by this reference made a part hereof. The Primary Area in the Roanoke River segment consists essentially of the intact and restorable Cypress-Gum Swamp, Coastal Plain Bottomland Hardwoods, Coastal Plain Levee Forests, Mesic Mixed Hardwood Forest, and Coastal Plain Semipermanent Impoundment natural community types and their associated rare species and wading bird rookeries. The Primary Area in the Roquist Pocosin segment includes Nonriverine Swamp Forest, Nonriverine Wet Hardwood Forest, and Mesic Mixed Hardwood Forest natural community types.

The Primary Area is deemed by the Secretary of the North Carolina Department of Environment and Natural Resources to qualify as an outstanding natural area under statutory criteria for nature preserve dedication (G.S. 113A-164.6) and further serves all of the public purposes for a dedicated preserve as stated in Administrative Rules 15 NCAC 12H.0301(b).

The Buffer Area, which contributes to the management and protection of the Primary Area, consists of consists of younger hardwood stands and small pine stands, contributing to the protection of the primary area.

6. **Rules for Management of the Primary Area(s):**

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

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

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

- B. **Consumptive Wildlife Uses:** Hunting, fishing, and trapping shall be permitted on the preserve subject to regulations and management by the North Carolina Wildlife Resources Commission.
- C. **Orientation and Guidance of Visitors:** The Custodian reserves the right to orient and guide visitors for educational programs, hunting and fishing uses, scientific research, and for preserve management. Exhibits, programs, and printed materials may be provided by the Custodian in service areas. The Custodian may establish and maintain canoe trails and canoe camping sites in the preserve. The Custodian may restrict access to visitors in those instances or in such areas that restrictions may be determined necessary to safeguard sensitive environmental resources in the preserve.
- D. **Disturbance of Natural Resources:** The cutting or removal of trees, dead or alive, or the disturbance of other natural resources is prohibited except as necessary for removal of hazards to visitors, control of disease or insect infestations that would damage or reduce the significance of the preserve, restoration after severe storm damage, trail clearance and maintenance, snagging and clearing of the boat navigational channel in Conoho Creek, or for purposes of maintenance or restoration of natural communities or rare species populations as stipulated in the preserve management plan and that which is consistent with the purposes of these Articles. Salvage timber cuts which may be necessary due to natural catastrophe will be allowed in both Primary and Buffer Areas, but in a manner that will contribute to the recovery of the prevailing natural conditions of the forest and in consultation with the North Carolina Natural Heritage Program.

Specifically, a component of the management plan, the floodplain hardwood restoration plan, will address restoration of areas (identified as Primary (Restoration) Areas in the Exhibit A map) which have previously been planted in off-site species or otherwise impacted within the Primary Area. Restoration may mostly occur through natural regeneration without active management, but may focus on removal of unnatural canopy or shrub layer components. The floodplain hardwood restoration plan will be submitted to the Natural Heritage Program for review and approval. Subsequent modification of the floodplain hardwood restoration plan may occur through mutual consent of Wildlife Resources Commission and Natural Heritage Program staff, as additional areas in need of restoration or new methods of restoration area determined.

There are several preexisting powerline rights-of-way. One is located on one of the tracts approximately 1.5 miles from the intersection of SR 308 and SR 1135 in Bertie County. The right-of-way runs in a northeasterly direction from the Roanoke River. The second is located south of the Odom State Prison, west of SR 1108, and east of the river, running in a southeasterly direction. These will be continued to be maintained as powerline rights-of-way, but their use is otherwise prescribed by the management of the adjoining or surrounding dedicated areas.

- E. Wild Fire Control/Prescribed Burning: Wild fires may mimic natural processes historically occurring in an ecosystem on a landscape level. When the extent of a wild fire does not threaten human life or structures, it may be allowed to burn with minimal control. If wild fire control is necessary, firebreaks may need to be established. When possible, existing roads and firebreaks will be utilized for wild fire control. When new firebreaks need to be established, environmentally sensitive areas will be avoided when possible. Old firebreaks which affect the natural hydrology of wetlands will be filled and allowed to revegetate. Planning of firebreak restoration should occur in consultation with the North Carolina Natural Heritage Program.
- F. Water Control: The purpose of water control shall be to maintain the preserve's natural water regime. Water levels that have been altered by man may be changed if necessary to restore the preserve to its natural condition. In a preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology or may be restored to natural condition. This decision should be made in consultation with the Natural Heritage Program. Millponds are an example of situations in which water levels have been historically managed.
- G. Pollution and Dumping: There will be no storage or dumping of ashes, trash, garbage, hazardous substances, toxic waste, other unsightly or offensive material, or fill material, including dredge spoil in, on, or under the preserve. No underground storage tanks may be placed within the preserve. No surface or ground waters of the preserve may have pollutants added within the preserve.

- H. Control of Vegetational Succession: Control of vegetational succession may be undertaken if necessary to maintain or restore a particular natural ecosystem type or to preserve endangered, threatened, rare, or other unusual species. Controls will be done in the manner that best imitates the natural forces believed responsible for maintaining the natural ecosystem type, or that minimizes unnatural effects on non-target portions of the ecosystem. Prescribed burning is particularly essential to ecosystems where natural wild fire historically suppressed woody vegetation and promoted herbaceous diversity.
- I. Control of Populations: Any control of animal or plant populations on the preserve shall be for the purpose of correcting those situations where those populations are significantly affecting natural conditions on the preserve, and in accordance with the Custodian's established regulations for hunting, trapping, or fishing of designated game animals. The Custodian may, in consultation with the North Carolina Natural Heritage Program, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the preserve. Because of potential impacts on native species, no exotic flora or fauna shall be introduced into the preserve.
- J. Research and Collecting Permits: Any person wishing to engage in scientific research requiring collecting or otherwise affecting anything within the preserve shall first secure written permission from the Custodian.
- K. Roads and Trails: New roads shall not be constructed in the Primary Area. When necessary, the Custodian may construct and maintain access limited to staff use for management purposes, such as service paths (single lane vegetated paths) for patrol, right-of-way maintenance, and other management activities, within the Primary Area. Number and width of new paths will be minimized, and sensitive areas avoided when possible. Existing roads that occur within or form a boundary of the Primary Area may be maintained by grading of the roadbed, replacing culverts, or adding stone as needed in order to maintain the integrity of the road for vehicular use. Daylighting of roads within the Primary Area should be minimized, but may be used if necessary to maintain the condition of the road. Access management and construction will be part of the overall management planning process and will include consultation with the North Carolina Natural Heritage Program.
- L. Other Structures and Improvements: Structures or facilities shall not be erected by the Custodian within a preserve, except as may be consistent with the purposes of the preserve as stated in this dedication. Site selection shall be consistent with this dedication.
- M. Management Plan: The Wildlife Resources Commission, as Primary Custodian of the preserve, shall be required to prepare and submit for approval to the Secretary of the Department of Environment and Natural Resources a management plan for

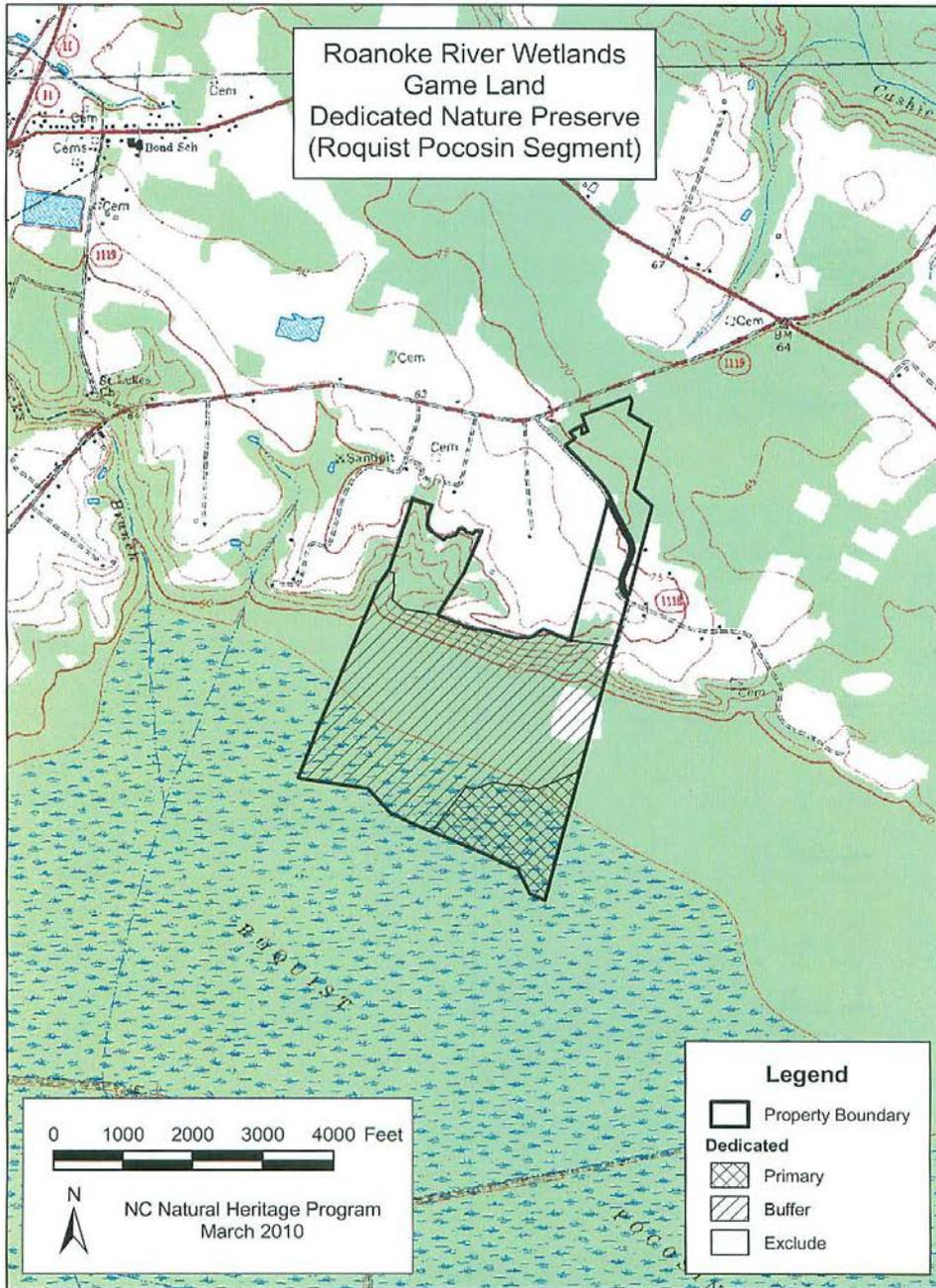
the preserve. The management plan will be part of the larger management plan developed for the gamelands. This plan shall be subject to all the provisions of this dedication and shall additionally be consistent with the management principles set forth in the North Carolina Administrative Code 15 NCAC 12H.0300 and .0400 and such other regulations as may be established from time to time by the Secretary of the Department of Environment and Natural Resources. In any case where contradictions may arise between this instrument of dedication and other management regulations, the terms of this dedication shall take precedence.

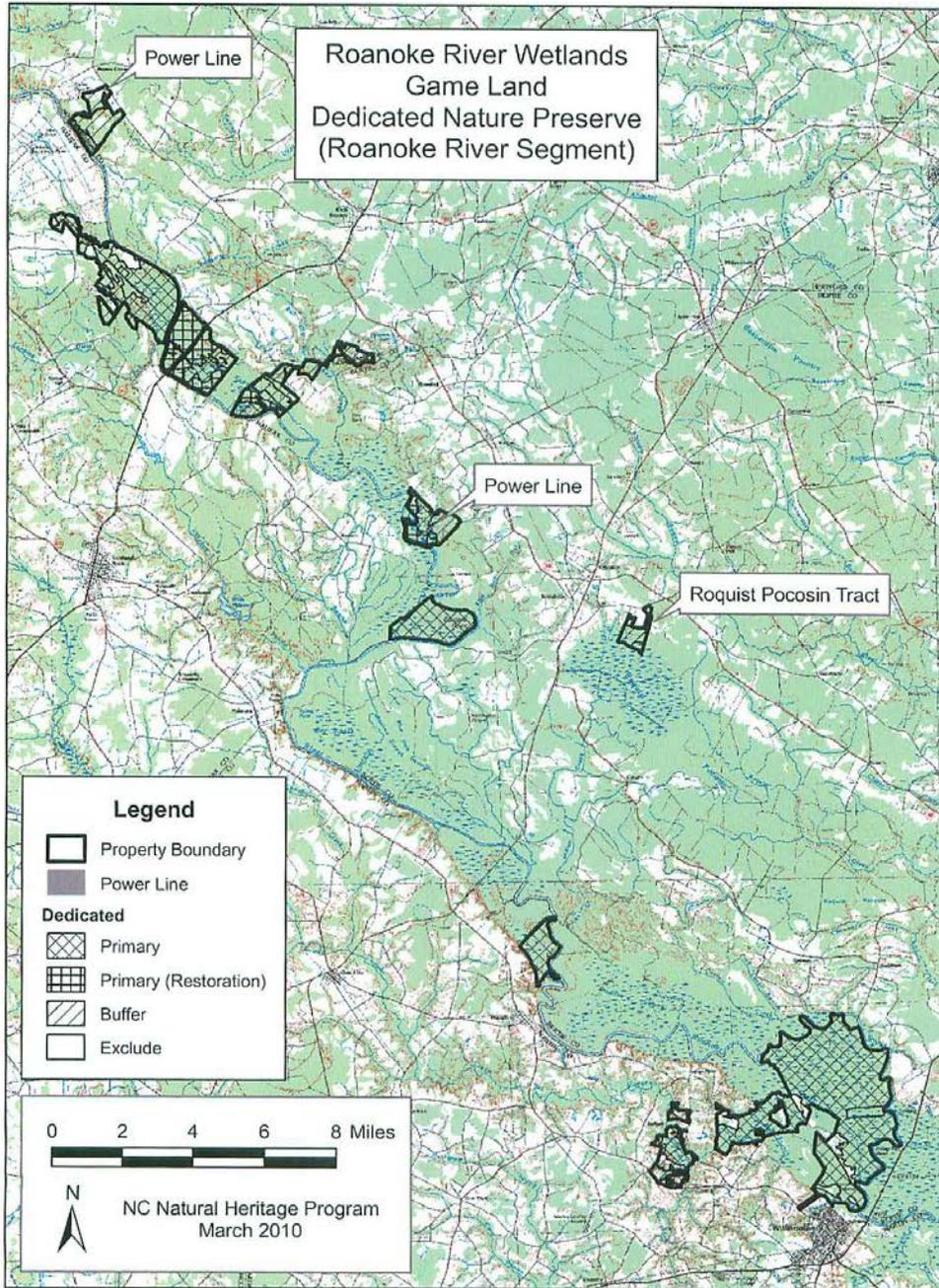
7. **Rules for Management of the Buffer Area(s)**: Primary area rules also apply except that additional forestry and wildlife management activities may be planned and carried out as needed. Construction and maintenance of roads, trails, and other access structures within buffer area(s) of the preserve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

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

- 1) Landscape level function of community type and structure. (Buffer area management may involve timber harvest and other forms of stand manipulation, but will not involve forest canopy type conversion over more than limited areas, other than to restore stands to types suited for the site. Introduction of exotic species known to be invasive in natural communities will be avoided.)
 - 2) Maintenance of habitat connectivity and continuity among primary areas.
 - 3) Providing for habitat diversity.
 - 4) Management needs of rare animal and plant species populations occurring within the buffer area; and
 - 5) Protection of soil and hydrologic resources and processes within the primary area and extending into the buffer. (Buffers will be retained along streams, and watersheds of primary areas will be protected from hydrologic alteration.)
8. **Amendment and Modification**: The terms and conditions of this dedication may be amended or modified upon agreement of the Wildlife Resources Commission and Secretary of the Department of Environment and Natural Resources, and approved by the Council of State. Any portion of the tract dedicated pursuant to this instrument may be removed from dedication in accordance with the provisions of North Carolina General Statutes 113A-164.8.

9. **Permanent Plaque**: The Custodian should erect and maintain a permanent plaque or other appropriate marker at a prominent location within the preserve bearing the following statement: "This Area is Dedicated as a State Nature Preserve."





IV. Cooperative Farm Leases

North Carolina Wildlife Resources Commission Co-Op Farm Bid Information

Please review the information contained in this package, if you are interested in bidding on WRC Co-Op Farms located on the Roanoke River Wetlands in Martin County, North Carolina.

Included in this package is a standard farm lease agreement required of all Co-Op farmers. This agreement outlines the terms of Co-Op farming. Carefully review the lease agreement prior to bidding.

A bid form is provided for your use. Please complete this form and return it to the address listed below prior to the bid deadline. A check for the full amount of your bid for one year lease price must accompany the bid form. Checks should be made payable to the North Carolina Wildlife Resources Commission. Checks for unsuccessful bidders will be returned after bid opening.

Craig Wolff
Conservation Technician II
19455 NC HWY 125
Williamston, NC 27892

If you have any questions concerning Co-Op farming, please call:

Craig Wolff
Conservation Technician II
252-792-3868
252-802-0076 cell

**North Carolina Wildlife Resources Commission
Co-Op Farm Bid Form**

BID DEADLINE: 1:00 P.M., Oct. 1, 2013

Roanoke River Wetlands, Martin County, North Carolina

Co-Op Farm	Farm Acreage	Bid/Acre Per Year (\$)	Total Farm Bid Per Year(\$)
Conoho Farm	109	\$	\$
Whitley	22		
Total Acres	131	TOTAL	\$

(Bidder Signature)

(Date)

Send Bid Form and Check (Check should be made payable to North Carolina Wildlife Resources Commission) to the Following:

Craig Wolff
Conservation Technician II
19455 NC HWY 125
Williamston, NC 27892

CO-OP FARM LEASE

STANDARD FARM LEASE

This Lease is entered into this _____ day of _____ between the North Carolina Wildlife Resources Commission, 1722 Mail Service Center Raleigh, N.C. 27699-1722, (WRC) and (tenant).

A. PROPERTY RIGHTS

The WRC hereby leases to the tenant, to occupy and use for agricultural purposes, the following described property, hereinafter referred to as the Co-Op Farm, located in Martin County, State of North Carolina and commonly known as the Conoho Co-Op Farm

(See Attached Map)

and consisting of 131 Acres more or less together with all buildings and improvements there on and all rights thereto except as specified below.

1. RIGHT OF ENTRY:

The WRC reserves the right to enter the Co-Op Farm at any time.

2. ADDITIONAL AGREEMENTS REGARDING PROPERTY RIGHTS:

Access to the Co-Op Farm is restricted to those personnel directly involved in the farming operation.

Only personnel associated with the farming operation are authorized beyond locked gates. Keys to locked gates shall not be duplicated.

Tenant shall abide by all N.C. Wildlife Resources Commission Regulations. (No plants, wildlife, artifacts, etc...shall be removed from the Co-Op Farm unless authorized by the WRC.)

Tenant shall not hinder the public's use of the area as regulated by the N.C. Wildlife Resources Commission.

Tenant shall restore roads damaged in connection with farming activities to original condition.

Tenant shall not have the privilege of regulation NCAC 10-B-0106 (no depredating wildlife can be destroyed on lands owned or controlled by the WRC).

Tenant is not granted permission to hunt or trap on the Co-Op Farm without proper license or permit.

B IMPROVING, CONSERVING AND MAINTAINING THE CO-OP FARM:

1. FIELD BORDERS:

Tenant will maintain a 30-foot field border around all fields, unless otherwise specified by WRC personnel. Lease acres reflect farmable land. Field borders are not counted in acreage totals.

2. PLANTING AND PLANTING AREAS:

Tenant shall plant only grain-type crops, such as corn, milo, soybeans, wheat and oats. Peanuts are permitted to be grown pending that no Restricted Use Pesticides are used. Any crop selection other than those mentioned above must be approved by the WRC prior to planting. Cotton and tobacco are not permitted.

Tenant shall not mow, disk, spray or plant on the Co-Op Farm until execution of the lease and as outlined in the conditions of the lease.

Tenant will not be permitted to mow, disk, spray or plant in areas designated for tree or wildlife plantings.

Double cropping will be permitted, provided that one-tenth of each crop shall be left standing for wildlife food (IE. The area planted to the second crop will be smaller by one-tenth than that planted on the first crop.) These areas will be specified and marked by WRC personnel or their agent.

If no crop is planted in the Spring or Summer, then Tenant will be required to plant oats, rye, or wheat in the Fall, unless access is not available due to high water.

3. SOIL FERTILITY:

Tenant will purchase at his expense and apply to the land all fertilizer and lime necessary to maintain soil fertility during his tenancy in as good condition as at the beginning of the lease.

4. PESTICIDE USE:

Tenant shall not apply any restricted use pesticides to the Co-Op Farm, unless requested in advance and approved by the WRC. Prior to planting, tenant must file a pesticide use plan with the WRC outlining pesticides to be used, application rates, methods and times, crop and pest targets. The WRC will review each plant and will authorize, deny or recommend changes in pesticide use.

Tenant shall not apply any pesticide to the Co-Op Farm until authorized by the WRC.

Pesticides shall be applied only by or under the direct supervision of a certified pesticide applicator.

Tenant shall dispose of all pesticide containers, fertilizer bags and other related materials and any other hazardous substance as required by law.

5. MAINTENANCE OF IMPROVEMENTS:

Tenant will keep any buildings, fences, farm roads and other improvements on the farm in as good repair and condition as they are when he takes possession, ordinary wear and tear, loss by fire or unavoidable depreciation or destruction excepted.

6. CONSERVATION PRACTICES:

Tenant shall use such conservation farming practices recommended by the Agricultural Extension Service and Soil Conservation Service as they pertain to land use and the culture of the various crops being grown.

Tenant is required to plant a cover crop where land is broken in the fall.

All conservation practices employed on the Co-Op Farm must be approved in advance by the WRC.

C. RENTAL RATES

The tenant agrees to lease the Co-Op Farm at a rate of \$_____ per acre. Agricultural lands leased and cultivated (See Attached Map) shall not exceed a total of 131 acres at a total lease value of \$_____.

D. HAZARDOUS MATERIALS

All hazardous spills should be reported to the appropriate regulatory agency and the WRC.

E. TERM OF LEASE:

1. TERM:

The term of this lease shall be for the period: January 1, 2014 through December 31, 2016, renewable annually. Annual rent payment will be due January 1 of each year of the lease.

2. CONTINUOUS OCCUPANCY:

The tenant agrees that he shall not sublet the Co-Op Farm during the term of the lease.

3. SURRENDER OF POSSESSION:

The tenant agrees to surrender possession and occupancy of the premises peaceably at the termination of the lease.

4. REVIEW OF LEASE:

A request for general review of the lease may be made at least 30 days prior to the final date for giving notice to terminate this lease. Amendments and alterations to the lease shall be made in writing.

5. TERMINATION OF LEASE:

This lease may be terminated immediately, by prior written notice, by either party, if the conditions outlined within the agreement are violated.

F. MISCELLANEOUS PROVISIONS:

1. NO PARTNERSHIP CREATED:

This lease shall not be deemed to give rise to a partnership relation, and neither party shall have authority to obligate the other without written consent, except as specifically provided in this lease.

2. GOVERNMENT PROGRAMS:

The farm will be operated in compliance with all Government programs, unless otherwise noted.

3. DEBTS AND ACCIDENTS:

The tenant agrees that the WRC shall in no way be responsible for the debts of or liabilities for accidents or damages caused by the tenant.

4. WILLFUL NEGLECT:

Willful neglect, failure, or refusal by the tenant to carry out any substantial provision of this lease shall give the WRC the benefits of any proceeding by law.

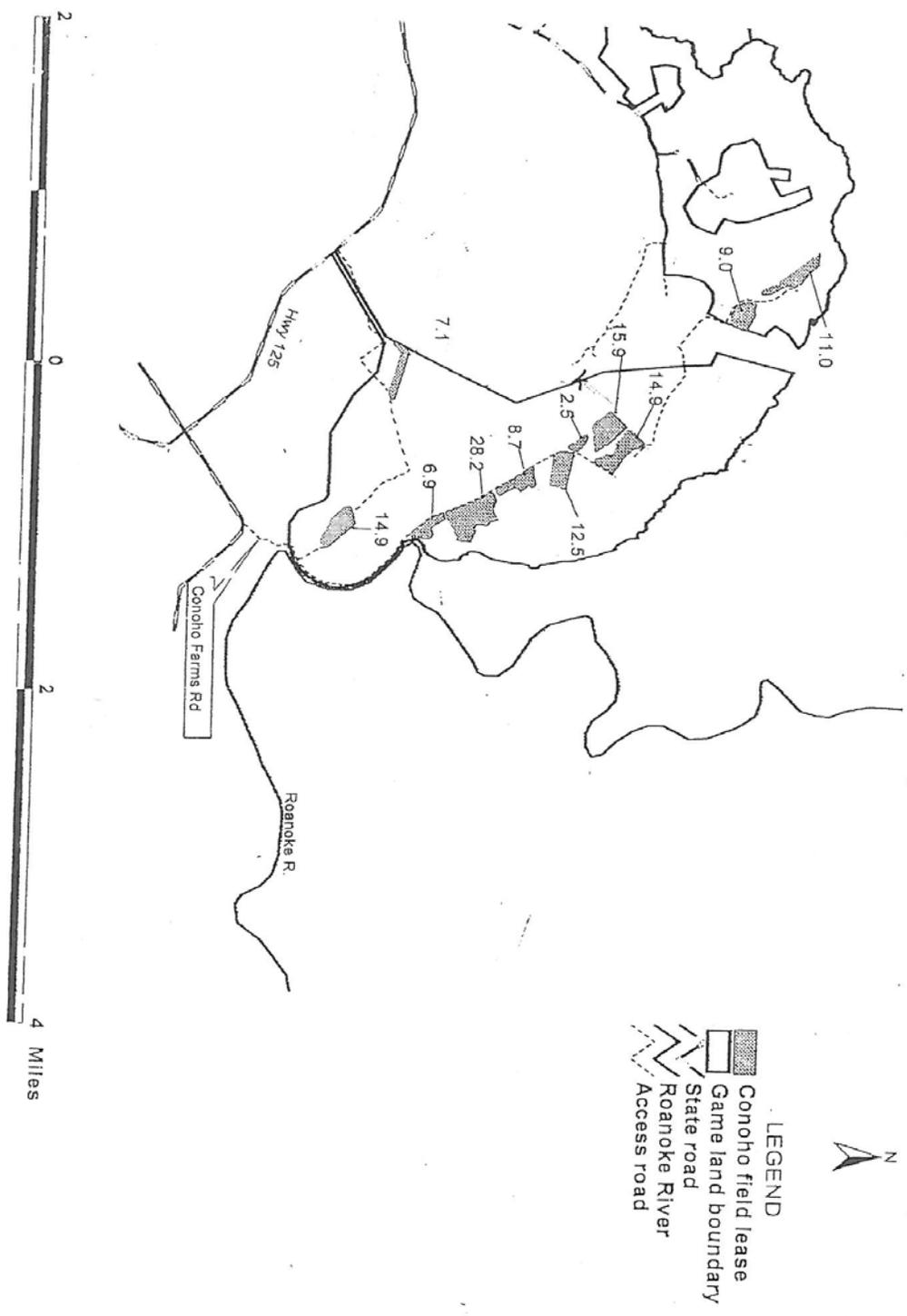
IN WITNESS WHEREOF, the parties have signed this lease on the date first above written.

Witnesses:

_____(SEAL)
(North Carolina Wildlife Resources Commission)

_____(SEAL)
(Tenant)

Roanoke River Game Land
 Conoho Farm Lease



North Carolina Wildlife Resources Commission Co-Op Farm Bid Information

Please review the information contained in this package, if you are interested in bidding on WRC Co-Op Farms located on the Roanoke River Wetlands in Martin County, North Carolina.

Included in this package is a standard farm lease agreement required of all Co-Op farmers. This agreement outlines the terms of Co-Op farming. Carefully review the lease agreement prior to bidding.

A bid form is provided for your use. Please complete this form and return it to the address listed below prior to the bid deadline. A check for the full amount of your bid for one year lease price must accompany the bid form. Checks should be made payable to the North Carolina Wildlife Resources Commission. Checks for unsuccessful bidders will be returned after bid opening.

David Turner
Wildlife Management Technician III
19455 NC HWY 125
Williamston, NC 27892

If you have any questions concerning Co-Op farming, please call:

David Turner
Wildlife Management Technician III
252-792-3868
252-802-0217 Cell

**North Carolina Wildlife Resources Commission
Co-Op Farm Bid Form**

BID DEADLINE: 1:00 P.M., Oct. 10 2012

Roanoke River Wetlands, Martin County, North Carolina

Co-Op Farm	Farm Acreage	Bid/Acre (\$)	Total Farm Bid (\$)
Whitaker/Rodgerson Farm	42	\$	\$
Rogers	34		
Total Acres	76	TOTAL	\$

(Bidder Signature)

(Date)

Send Bid Form and Check (Check should be made payable to North Carolina Wildlife Resources Commission) to the following:

David Turner
Wildlife Management Technician III
19455 NC HWY 125
Williamston, NC 27892

Bids must be received by 1:00 p.m.

CO-OP FARM LEASE

STANDARD FARM LEASE

This Lease is entered into this _____ day of _____ between the North Carolina Wildlife Resources Commission, 1722 Mail Service Center Raleigh, N.C. 27699-1722, (WRC) and (tenant).

A. PROPERTY RIGHTS

The WRC hereby leases to the tenant, to occupy and use for agricultural purposes, the following described property, hereinafter referred to as the Co-Op Farm, located in Martin County, State of North Carolina and commonly known as the Deveraux Co-Op Farm

(See Attached Map)

and consisting of 76 Acres more or less together with all buildings and improvements there on and all rights thereto except as specified below.

3. RIGHT OF ENTRY:

The WRC reserves the right to enter the Co-Op Farm at any time.

4. ADDITIONAL AGREEMENTS REGARDING PROPERTY RIGHTS:

Access to the Co-Op Farm is restricted to those personnel directly involved in the farming operation.

Only personnel associated with the farming operation are authorized beyond locked gates. Keys to locked gates shall not be duplicated.

Tenant shall abide by all N.C. Wildlife Resources Commission Regulations. (No plants, wildlife, artifacts, etc...shall be removed from the Co-Op Farm unless authorized by the WRC.)

Tenant shall not hinder the public's use of the area as regulated by the N.C. Wildlife Resources Commission.

Tenant shall restore roads damaged in connection with farming activities to original condition.

Tenant shall not have the privilege of regulation NCAC 10-B-0106 (no depredating wildlife can be destroyed on lands owned or controlled by the WRC).

Tenant is not granted permission to hunt or trap on the Co-Op Farm without proper license or permit.

B IMPROVING, CONSERVING AND MAINTAINING THE CO-OP FARM:

7. FIELD BORDERS:

Tenant will maintain a 30-foot field border around all fields, unless otherwise specified by WRC personnel. Lease acres reflect farmable land. Field borders are not counted in acreage totals.

8. PLANTING AND PLANTING AREAS:

Tenant shall plant only grain-type crops, such as corn, milo, soybeans, wheat and oats. Peanuts are permitted if no Restricted Use Pesticides are used. Any crop selection other than those mentioned above must be approved by the WRC prior to planting. Cotton and tobacco are not permitted.

Tenant shall not mow, disk, spray or plant on the Co-Op Farm until execution of the lease and as outlined in the conditions of the lease.

Tenant will not be permitted to mow, disk, spray or plant in areas designated for tree or wildlife plantings.

Double cropping will be permitted, provided that one-tenth of each crop shall be left standing for wildlife food (IE. The area planted to the second crop will be smaller by one-tenth than that planted on the first crop.) These areas will be specified and marked by WRC personnel or their agent.

9. SOIL FERTILITY:

Tenant will purchase at his expense and apply to the land all fertilizer and lime necessary to maintain soil fertility during his tenancy in as good condition as at the beginning of the lease.

10. PESTICIDE USE:

Tenant shall not apply any restricted use pesticides to the Co-Op Farm, unless requested in advance and approved by the WRC. Prior to

planting, tenant must file a pesticide use plan with the WRC outlining pesticides to be used, application rates, methods and times, crop and pest targets. The WRC will review each plan and will authorize, deny or recommend changes in pesticide use.

Tenant shall not apply any pesticide to the Co-Op Farm until authorized by the WRC.

Pesticides shall be applied only by or under the direct supervision of a certified pesticide applicator.

Tenant shall dispose of all pesticide containers, fertilizer bags and other related materials and any other hazardous substance as required by law.

11. MAINTENANCE OF IMPROVEMENTS:

Tenant will keep any buildings, fences, farm roads and other improvements on the farm in as good repair and condition as they are when he takes possession, ordinary wear and tear, loss by fire or unavoidable depreciation or destruction excepted.

12. CONSERVATION PRACTICES:

Tenant shall use such conservation farming practices recommended by the Agricultural Extension Service and Soil Conservation Service as they pertain to land use and the culture of the various crops being grown.

Tenant is required to plant a cover crop where land is broken in the fall.

All conservation practices employed on the Co-Op Farm must be approved in advance by the WRC.

RENTAL RATES

The tenant agrees to lease the Co-Op Farm at a rate of \$_____ per acre. Agricultural lands leased and cultivated (See Attached Map) shall not exceed a total of 76 acres at a total lease value of \$_____.

HAZARDOUS MATERIALS

All hazardous spills should be reported to the appropriate regulatory agency and the WRC.

G. TERM OF LEASE:

6. TERM:

The term of this lease shall be for the period: **January 1, 2013 through December 31, 2015**, renewable annually. Annual rent payment will be due January 1 of each year of the lease.

7. CONTINUOUS OCCUPANCY:

The tenant agrees that he shall not sublet the Co-Op Farm during the term of the lease.

8. SURRENDER OF POSSESSION:

The tenant agrees to surrender possession and occupancy of the premises peaceably at the termination of the lease.

9. REVIEW OF LEASE:

A request for general review of the lease may be made at least 30 days prior to the final date for giving notice to terminate this lease. Amendments and alterations to the lease shall be made in writing.

10. TERMINATION OF LEASE:

This lease may be terminated immediately, by prior written notice, by either party, if the conditions outlined within the agreement are violated.

H. MISCELLANEOUS PROVISIONS:

5. NO PARTNERSHIP CREATED:

This lease shall not be deemed to give rise to a partnership relation, and neither party shall have authority to obligate the other without written consent, except as specifically provided in this lease.

6. GOVERNMENT PROGRAMS:

The farm will be operated in compliance with all Government programs, unless otherwise noted.

7. DEBTS AND ACCIDENTS:

The tenant agrees that the WRC shall in no way be responsible for the debts of or liabilities for accidents or damages caused by the tenant.

8. WILLFUL NEGLECT:

Willful neglect, failure, or refusal by the tenant to carry out any substantial provision of this lease shall give the WRC the benefits of any proceeding by law.

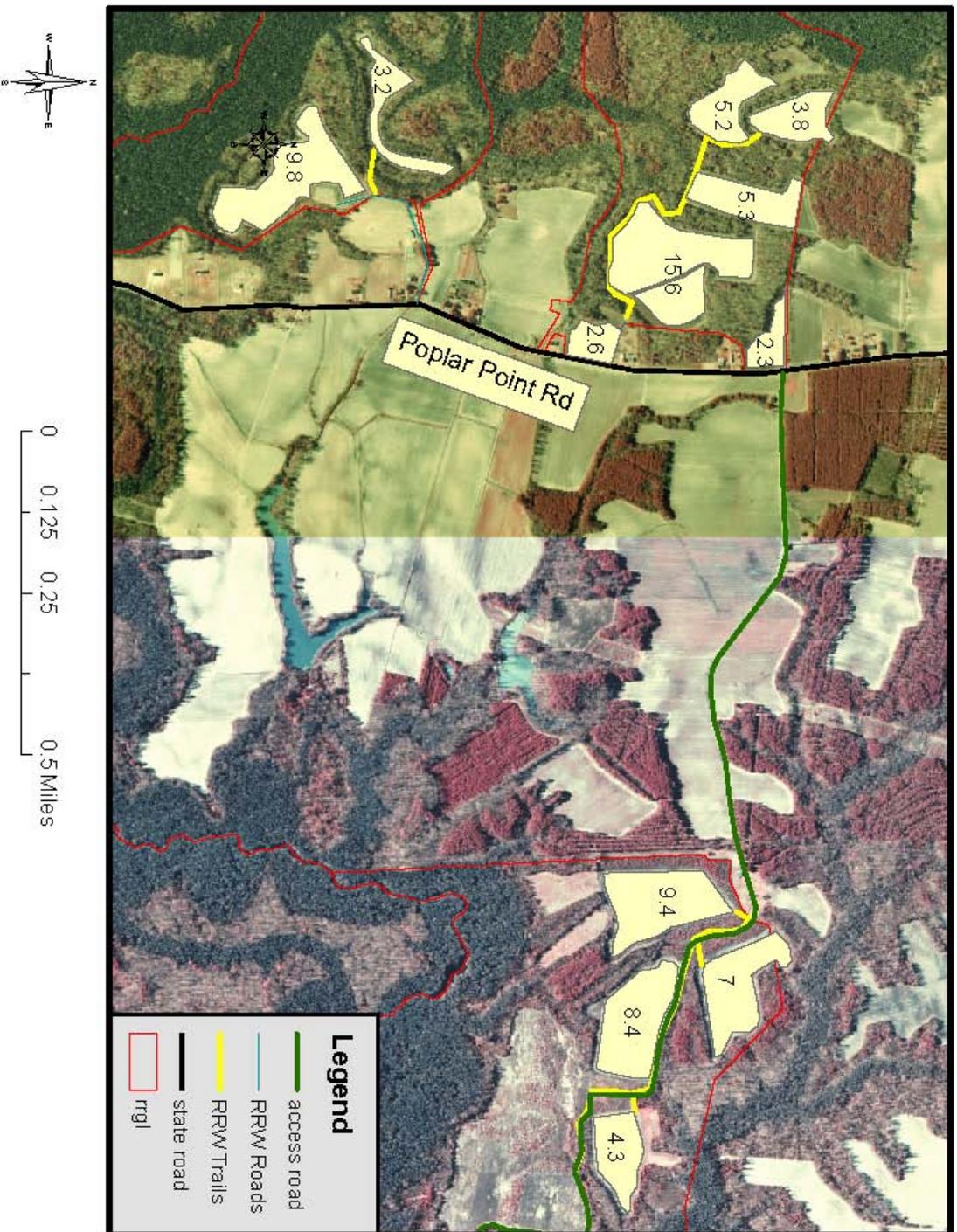
IN WITNESS WHEREOF, the parties have signed this lease on the date first above written.

Witnesses:

(North Carolina Wildlife Resources Commission) (SEAL)

(Tenant) (SEAL)

Roanoke River Wetlands Game Land Deveraux Co-Op Farm



North Carolina Wildlife Resources Commission Co-Op Farm Bid Information

Please review the information contained in this package, if you are interested in bidding on WRC Co-Op Farms located on the Roanoke River Wetlands in Martin County, North Carolina.

Included in this package is a standard farm lease agreement required of all Co-Op farmers. This agreement outlines the terms of Co-Op farming. Carefully review the lease agreement prior to bidding.

A bid form is provided for your use. Please complete this form and return it to the address listed below prior to the bid deadline. A check for the full amount of your bid for one year lease price must accompany the bid form. Checks should be made payable to the North Carolina Wildlife Resources Commission. Checks for unsuccessful bidders will be returned after bid opening.

Craig Wolff
Conservation Technician II
19455 NC HWY 125
Williamston, NC 27892

If you have any questions concerning Co-Op farming, please call:

Craig Wolff
Conservation Technician II
252-792-3868
252-802-0076 cell

**North Carolina Wildlife Resources Commission
Co-Op Farm Bid Form**

BID DEADLINE: 1:00 P.M., Oct. 1, 2013

Roanoke River Wetlands, Martin County, North Carolina

Co-Op Farm	Farm Acreage	Bid/Acre Per Year (\$)	Total Farm Bid Per Year(\$)
Everett Farm	67	\$	\$
		TOTAL	\$

(Bidder Signature)

(Date)

Send Bid Form and Check (Check should be made payable to North Carolina Wildlife Resources Commission) to the following:

Craig Wolff
Conservation Technician II
19455 NC HWY 125
Williamston, NC 27892

CO-OP FARM LEASE

STANDARD FARM LEASE

This Lease is entered into this _____ day of _____ between the North Carolina Wildlife Resources Commission, 1722 Mail Service Center Raleigh, N.C. 27699-1722, (WRC) and (tenant).

A. PROPERTY RIGHTS

The WRC hereby leases to the tenant, to occupy and use for agricultural purposes, the following described property, hereinafter referred to as the Co-Op Farm, located in Martin County, State of North Carolina and commonly known as the Everett Co-Op Farm

(See Attached Map)

and consisting of 67 Acres more or less together with all buildings and improvements there on and all rights thereto except as specified below.

5. RIGHT OF ENTRY:

The WRC reserves the right to enter the Co-Op Farm at any time.

6. ADDITIONAL AGREEMENTS REGARDING PROPERTY RIGHTS:

Access to the Co-Op Farm is restricted to those personnel directly involved in the farming operation.

Only personnel associated with the farming operation are authorized beyond locked gates. Keys to locked gates shall not be duplicated.

Tenant shall abide by all N.C. Wildlife Resources Commission Regulations. (No plants, wildlife, artifacts, etc...shall be removed from the Co-Op Farm unless authorized by the WRC.)

Tenant shall not hinder the public's use of the area as regulated by the N.C. Wildlife Resources Commission.

Tenant shall restore roads damaged in connection with farming activities to original condition.

Tenant shall not have the privilege of regulation NCAC 10-B-0106 (no depredating wildlife can be destroyed on lands owned or controlled by the WRC).

Tenant is not granted permission to hunt or trap on the Co-Op Farm without proper license or permit.

B IMPROVING, CONSERVING AND MAINTAINING THE CO-OP FARM:

13. FIELD BORDERS:

Tenant will maintain a 30-foot field border around all fields, unless otherwise specified by WRC personnel. Lease acres reflect farmable land. Field borders are not counted in acreage totals.

14. PLANTING AND PLANTING AREAS:

Tenant shall plant only grain-type crops, such as corn, milo, soybeans, wheat and oats. Peanuts are permitted to be grown pending that no Restricted Use Pesticides are used. Any crop selection other than those mentioned above must be approved by the WRC prior to planting. Cotton and tobacco are not permitted.

Tenant shall not mow, disk, spray or plant on the Co-Op Farm until execution of the lease and as outlined in the conditions of the lease.

Tenant will not be permitted to mow, disk, spray or plant in areas designated for tree or wildlife plantings.

Double cropping will be permitted, provided that one-tenth of each crop shall be left standing for wildlife food (IE. The area planted to the second crop will be smaller by one-tenth than that planted on the first crop.) These areas will be specified and marked by WRC personnel or their agent.

15. SOIL FERTILITY:

Tenant will purchase at his expense and apply to the land all fertilizer and lime necessary to maintain soil fertility during his tenancy in as good condition as at the beginning of the lease.

16. PESTICIDE USE:

Tenant shall not apply any restricted use pesticides to the Co-Op Farm, unless requested in advance and approved by the WRC. Prior to planting, tenant must file a pesticide use plan with the WRC outlining pesticides to

be used, application rates, methods and times, crop and pest targets. The WRC will review each plant and will authorize, deny or recommend changes in pesticide use.

Tenant shall not apply any pesticide to the Co-Op Farm until authorized by the WRC.

Pesticides shall be applied only by or under the direct supervision of a certified pesticide applicator.

Tenant shall dispose of all pesticide containers, fertilizer bags and other related materials and any other hazardous substance as required by law.

17. MAINTENANCE OF IMPROVEMENTS:

Tenant will keep any buildings, fences, farm roads and other improvements on the farm in as good repair and condition as they are when he takes possession, ordinary wear and tear, loss by fire or unavoidable depreciation or destruction excepted.

18. CONSERVATION PRACTICES:

Tenant shall use such conservation farming practices recommended by the Agricultural Extension Service and Soil Conservation Service as they pertain to land use and the culture of the various crops being grown.

Tenant is required to plant a cover crop where land is broken in the fall.

All conservation practices employed on the Co-Op Farm must be approved in advance by the WRC.

I. RENTAL RATES

The tenant agrees to lease the Co-Op Farm at a rate of \$_____ per acre per year. Agricultural lands leased and cultivated (See Attached Map) shall not exceed a total of 67 acres at a total lease value of \$_____.

J. HAZARDOUS MATERIALS

All hazardous spills should be reported to the appropriate regulatory agency and the WRC.

K. TERM OF LEASE:

11. TERM:

The term of this lease shall be for the period: January 1, 2014 through December 31, 2016, renewable annually. Annual rent payment will be due January 1 of each year of the lease.

12. CONTINUOUS OCCUPANCY:

The tenant agrees that he shall not sublet the Co-Op Farm during the term of the lease.

13. SURRENDER OF POSSESSION:

The tenant agrees to surrender possession and occupancy of the premises peaceably at the termination of the lease.

14. REVIEW OF LEASE:

A request for general review of the lease may be made at least 30 days prior to the final date for giving notice to terminate this lease. Amendments and alterations to the lease shall be made in writing.

15. TERMINATION OF LEASE:

This lease may be terminated immediately, by prior written notice, by either party, if the conditions outlined within the agreement are violated.

L. MISCELLANEOUS PROVISIONS:

9. NO PARTNERSHIP CREATED:

This lease shall not be deemed to give rise to a partnership relation, and neither party shall have authority to obligate the other without written consent, except as specifically provided in this lease.

10. GOVERNMENT PROGRAMS:

The farm will be operated in compliance with all Government programs, unless otherwise noted.

11. DEBTS AND ACCIDENTS:

The tenant agrees that the WRC shall in no way be responsible for the debts of or liabilities for accidents or damages caused by the tenant.

12. WILLFUL NEGLECT:

Willful neglect, failure, or refusal by the tenant to carry out any substantial provision of this lease shall give the WRC the benefits of any proceeding by law.

IN WITNESS WHEREOF, the parties have signed this lease on the date first above written.

Witnesses:

_____(SEAL)
(North Carolina Wildlife Resources Commission)

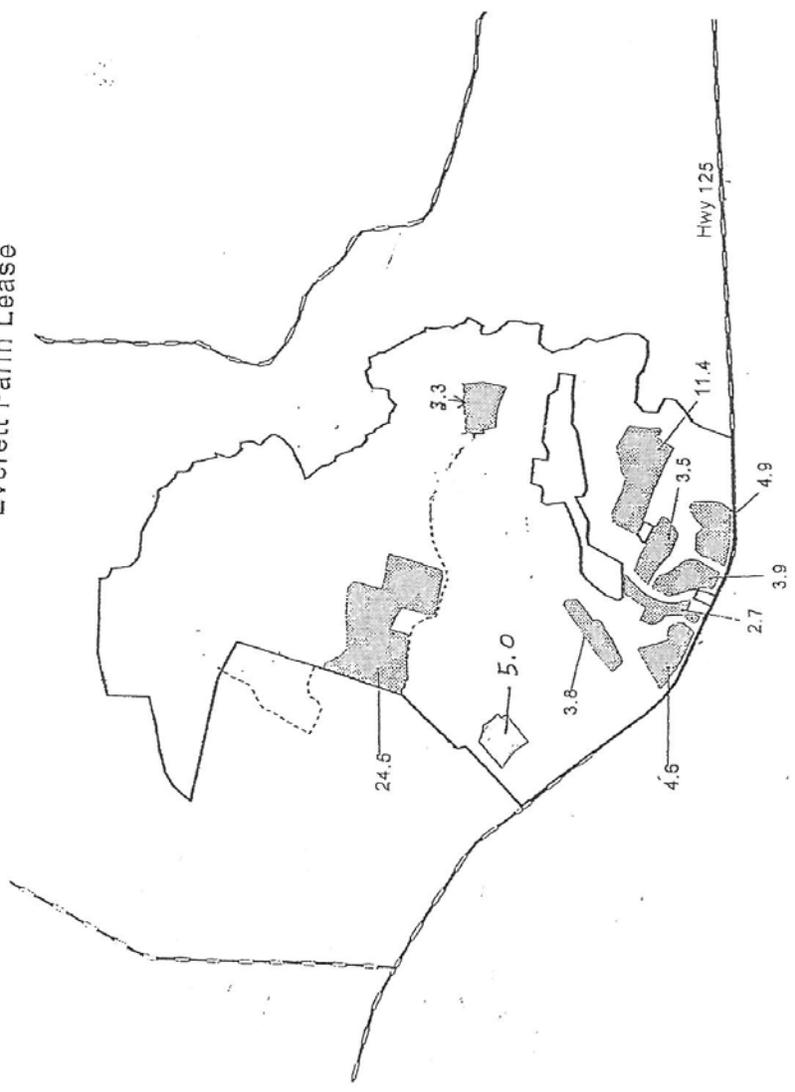
_____(SEAL)
(Tenant)

Roanoke River Game Land
Everett Farm Lease

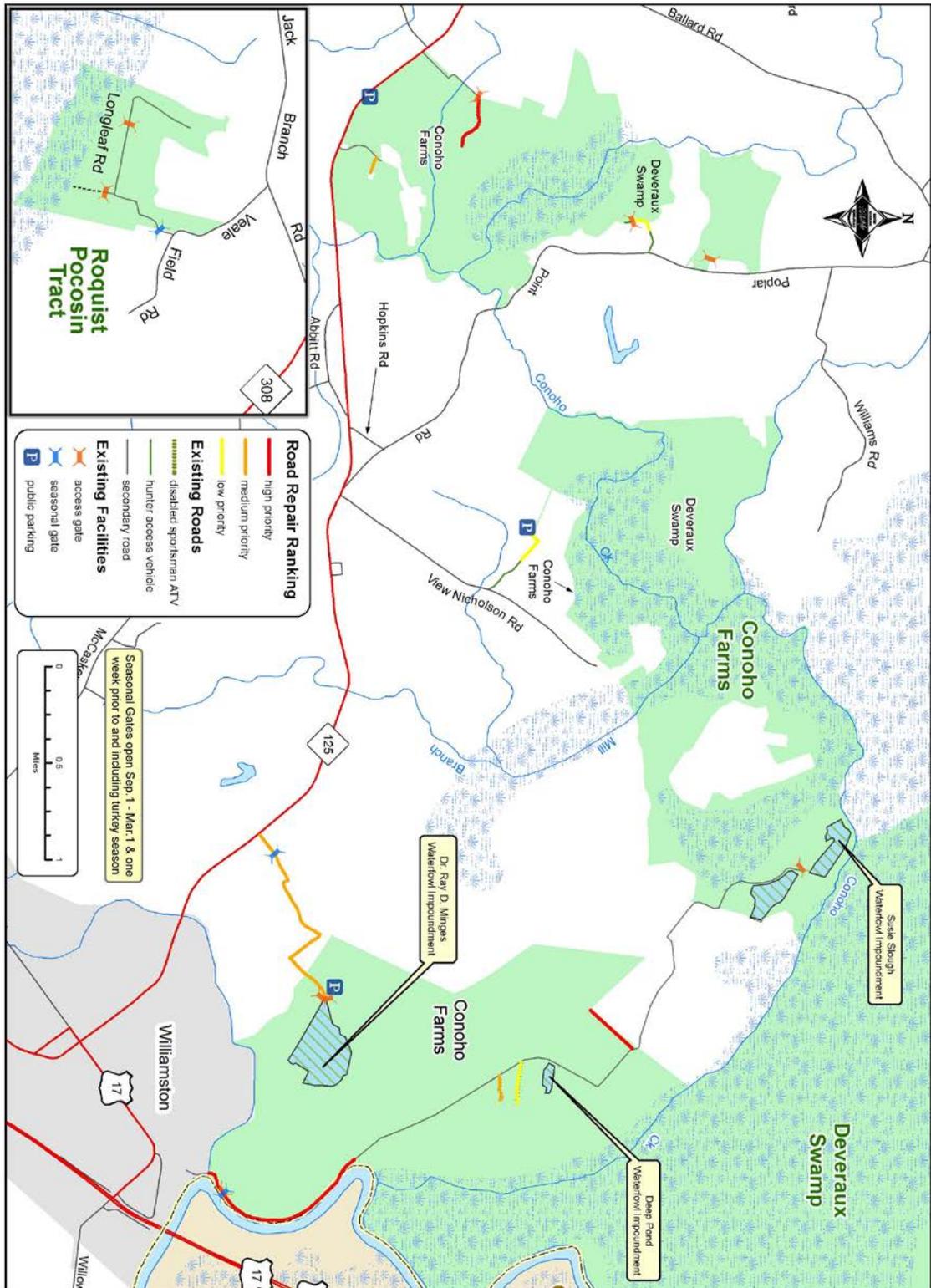


LEGEND

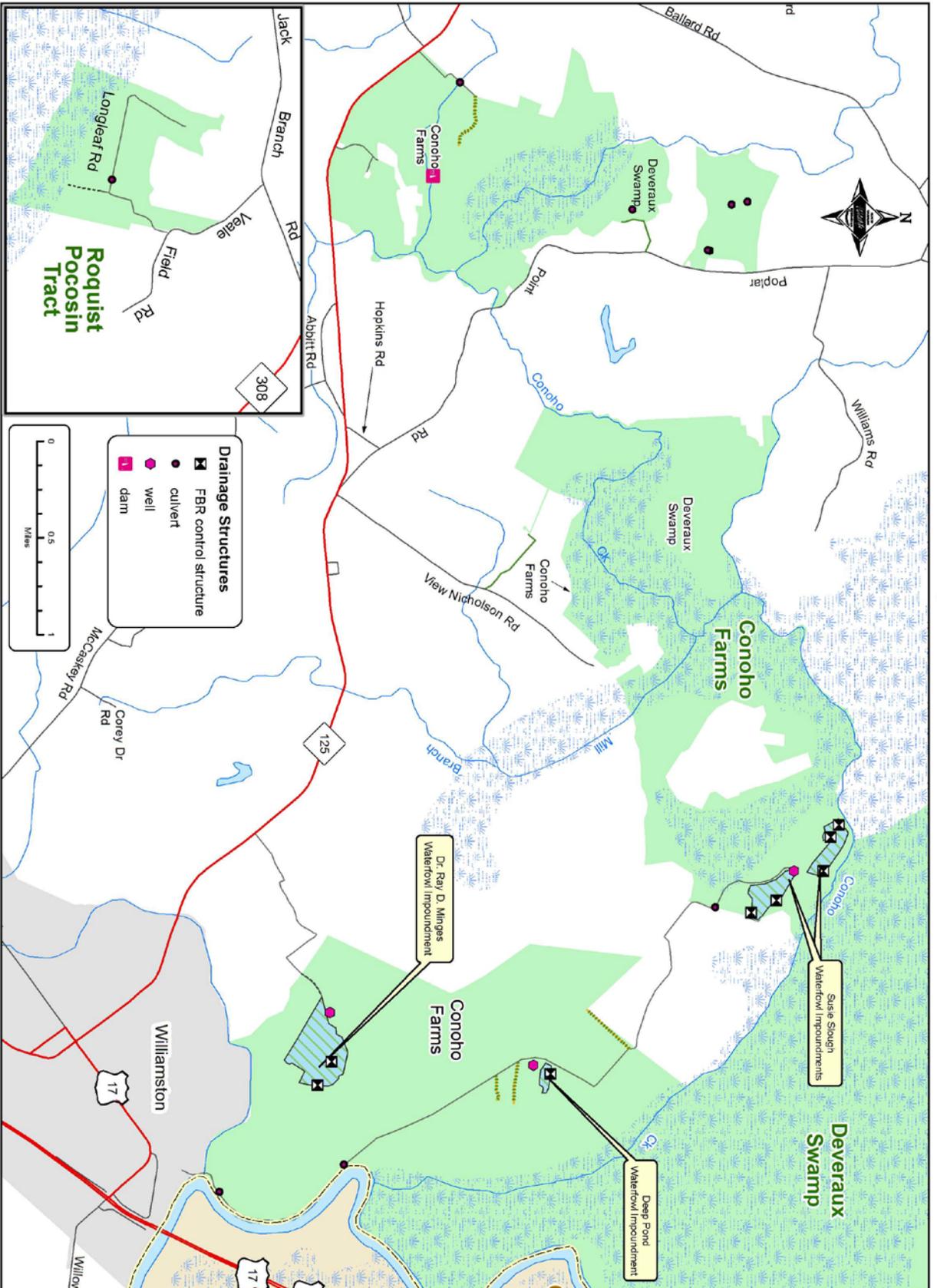
-  Everett farm le
-  Game Land Bc
-  State road
-  Access road



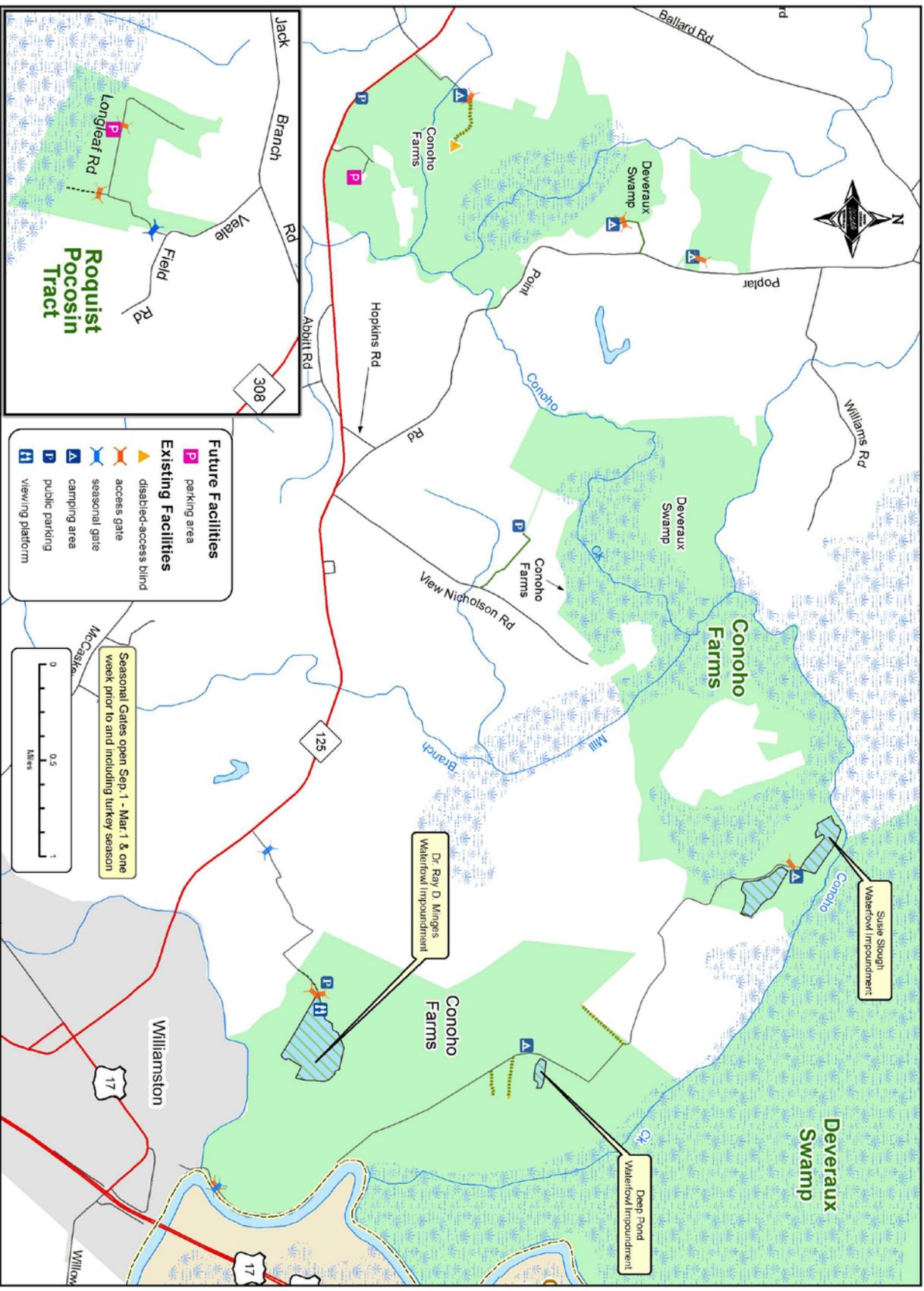
V. Infrastructure Maps, Roads, Drainage, and Recreational Facilities



LOWER ROANOKE RIVER WETLANDS - DRAINAGE SYSTEM
Northern Coast Ecoregion, Martin and Bertie Counties



LOWER ROANOKE RIVER WETLANDS - RECREATIONAL FACILITIES
 Northern Coast Ecoregion, Martin and Bertie Counties



VI. Game Land Use Evaluation Procedure

North Carolina Wildlife Resources Commission Game Lands Use Evaluation Procedure

I. PURPOSE

The North Carolina Wildlife Resources Commission (NCWRC) is the principal advocate for and steward of the wildlife resources of North Carolina and is the primary custodian of numerous tracts of state-owned lands in the Game Lands Program. As the human population of North Carolina continues to grow at a rapid rate, state-owned Game Lands will be subject to increasing pressure to provide public outdoor recreation opportunities. These uses will include traditional activities such as hunting, fishing, trapping, and wildlife viewing, as well as other outdoor recreation pursuits. While hunting, fishing, trapping and wildlife viewing are the primary public uses of state-owned Game Lands, the NCWRC has always allowed and supported other dispersed and non-developed recreational activities. The funding sources of the NCWRC, however, are focused on natural resources management rather than recreational development and there is no on-site staff stationed at each Game Land. Because of this, the NCWRC must exercise care in providing for recreational activities that may not be compatible with the natural resources for which the lands are valued and the primary management objectives of those lands. This document will establish a process to evaluate such activities as they are considered by NCWRC staff, or are requested by the public, on state-owned Game Lands where NCWRC is the primary custodian. These activities will first be evaluated to determine if they are “appropriate” and second to determine whether they are “compatible” with respect to the following management objectives of the Game Lands program:

1. To provide, protect, and actively manage habitats and habitat conditions to benefit aquatic and terrestrial wildlife resources,
2. To provide public opportunities for hunting, fishing, trapping, and wildlife viewing,
3. To provide for other resource-based game land uses to the extent that such uses are compatible with the conservation of natural resources and can be employed without displacing primary users,
4. To provide an optimally sustainable yield of forest products where feasible and appropriate and as directed by wildlife management objectives.

This document provides a statewide framework for determining appropriate uses of NCWRC-owned or controlled Game Land properties (NCWRC Game Lands). In addition, it provides the procedure for determining if appropriate uses are compatible on a particular property.

II. ENABLING LEGISLATION

Statement of Purpose NCGS § 143-239. The purpose of this article is to create a separate State agency to be known as the North Carolina Wildlife Resources Commission, the function, purpose, and duty of which shall be to manage, restore, develop, cultivate, conserve, protect, and regulate the wildlife resources of the State of North Carolina, and to administer the laws relating to game, game and freshwater fishes, and other wildlife enacted by the General Assembly to the end that there may be provided a sound, constructive, comprehensive, continuing, and economical game, game fish, and wildlife program directed by qualified, competent, and representative citizens, who shall have knowledge of or training

in the protection, restoration, proper use and management of wildlife resources. (1947, c. 263, s. 3; 1965, c. 957, s. 13)

III. APPLICATION OF PROCEDURE

This procedure must be considered within the context of the Game Lands Program Mission Statement (GLPMS):

“Consistent with the original establishment legislation for the WRC, the mission of the game lands program is to enhance, facilitate, and augment delivery of comprehensive and sound wildlife conservation programs. Inherent in delivery of a lands program consistent with this mission is the feasibility and desirability of multiple uses on lands owned by the state within the system. In addition to hunting, fishing, trapping, and wildlife viewing as primary uses, we recognize the desirability of providing opportunities for other activities on state-owned game lands that are feasible and consistent with the agency’s mission, and compatible with these traditional uses.” *(From motion made December 5, 2007 by Doug Parsons, Chairman, WRC Use and Lands Committee and unanimously approved).*

This procedure applies to all proposed and existing recreational uses of NCWRC Game Lands. It does not apply to the following circumstances:

- A. **Situations where reserved rights or legal mandates provide that certain uses must, or must not, be allowed.** For example, there may be prescriptive purposes or other uses that are specifically required or not allowed in the deed or grant that conveyed the property to the state.
- B. **Property management activities.** Property management activities are specified in Federal Assistance Work Plans for lands NCWRC purchases or manages with federal assistance, and are updated every five years. These plans specify wildlife, fish, and forest management activities that are not subject to this procedure when conducted by NCWRC staff or an approved cooperator.
- C. **Emergencies.** The Director (or a designee) may temporarily suspend, allow or initiate any use of a property if it is determined necessary to immediately act in order to protect the health and safety of the public or any plant, fish or wildlife population.
- D. **Specialized uses.** There are many uses (most of them non-recreational) that require specific authorization from NCWRC in the form of a special use permit, letter of authorization or other permit document. Some of the specialized uses that may be considered include scientific research or collections, educational pursuits, field trial use, use of buildings or other facilities, rights-of-way and other encroachments, telecommunications facilities, military, national defense uses, and public safety training. Requests for specialized uses are covered by other NCWRC policies, procedures, or rule, and are subject to separate review procedures. *(See NC Administrative Code, Title 15A, Chapter 10, Subchapter 10D - Game Land Regulations, Rule .0102; General Statutes 113-264).*
- E. **Other NCWRC properties.** The NCWRC owns and/or manages lands outside of the Game Land program (e.g., boat ramps and Wildlife Conservation Areas). The use and

management of those properties are covered by other NCWRC policies, procedures, or rule and are subject to separate review procedures. (See NC Administrative Code, Title 15A Chapter 10, Subchapter 10E - Fishing and Boating Access Areas, Rule .0104; NC Administrative Code, Title 15A Chapter 10, Subchapter 10J - Wildlife Conservation Area Regulations, Rule .0102; General Statutes 113-264).

If a proposed use falls under one of the above five circumstances, it is exempt from review under this procedure. Any other Game Land use requests, whether originating from the public or from NCWRC staff, must be reviewed under this procedure and with consideration of the following guidance:

- **Natural resources-dependent recreational uses** (see definitions below), when compatible with each other, should be considered the priority general public uses of Game Land properties.
- **Other general public uses** that are not natural resources-dependent recreational uses as described herein, and do not contribute to the fulfillment of property purposes or goals or objectives, as described in the GLPMS, are lower priorities for consideration. These uses may conflict with priority general public uses, and may divert property management resources away from priority general public uses or from the responsibility of the NCWRC to protect and manage fish, wildlife, plants and their habitats. Therefore, procedure and practice have a general presumption against allowing such uses on Game Land properties. Regardless of how often they occur or how long they last, appropriateness and compatibility determinations for each use request must be made, as defined in Section V and VI of this procedure.

IV. DEFINITIONS

- A. **Natural resources-dependent recreational use** is a use of a property involving: (1) hunting; (2) fishing; (3) trapping; (4) wildlife or other natural resource observation/ education.
- B. **Property managers** are the officials employed by NCWRC who direct the management of a property, or the authorized representatives of such officials.
- C. **Professional judgment** is a finding, determination or decision that is consistent with the principles of fish and wildlife management and administration, and that makes use of all available science and resources.

V. DETERMINING APPROPRIATE USE

A property use is appropriate if it meets Criterion A *or* if it meets all of Criteria B – F (and G, when applicable).

- A. It is a natural resources-dependent recreational use of a property. These are: (1) hunting; (2) fishing; (3) trapping; (4) wildlife or other natural resource observation/education.
- B. The NCWRC has jurisdiction over the use and, therefore, authority to allow or not allow the use.

- C. The use complies with all laws and regulations (federal, state and local).
- D. The use is consistent with NCWRC policies and objectives.
- E. The use is consistent with public safety. *If the use creates an unreasonable level of risk to visitors or NCWRC staff, or if the use requires NCWRC staff to take unusual safety precautions to assure the safety of the public or other NCWRC staff, the use is not appropriate.*
- F. Proceeds of revenue generating uses, by for-profit entities, will be provided to the NCWRC.
- G. The use was evaluated under previous administrative review, was deemed inappropriate, and conditions have changed that would now make the use appropriate.

Property managers and other NCWRC staff shall consider the above criteria and complete Exhibit 1 (appended to this document) for each use subjected to the appropriateness test. The findings shall be forwarded to Regional Supervisors and through the chain of supervision to the Director (or a designee) for concurrence. This will serve to promote consistency in determining appropriate uses of NCWRC Game Lands.

VI. DETERMINING COMPATIBILITY

Uses that are determined to be appropriate for Game Land properties will then be evaluated for compatibility to determine if the use will be allowed, and under what conditions the use will be allowed on a specified property. Property managers are required to exercise professional judgment in making these determinations. Compatibility determinations are inherently complex and require the property manager to use field experience and knowledge of land management and of the property's resources, particularly its biological resources. When a property manager is exercising professional judgment, the property manager will use available information that may include consulting with others inside and/or outside the NCWRC. At a minimum, the property manager should consider the following questions.

- A. Can the use be accommodated without substantially interfering with or detracting from the fulfillment of Game Lands program management objectives (see page 1, section I)?
- B. Is the use compatible with the physical and natural resource characteristics of the property (e.g., topography, soils, plant communities, endangered species concerns)? *The use is generally incompatible if it has a high probability of causing erosion, or sedimentation, or disturbance of plant or animal resources.*
- C. Is the use compatible with Natural Heritage Articles of Dedication, Clean Water Management Trust Fund (CWMTF) designations, and/or any deed restrictions or other legal limitations placed upon the property, including those specified for land purchased with Pittman-Robertson Wildlife Restoration Act funds?
- D. Is there infrastructure present on the property to support the requested use (e.g., graveled

roads, parking areas, facilities)?

- E. Is the requested activity not adequately provided for on other nearby public lands? *If a proposed use is available on other nearby lands, the NCWRC may not feel as strong an obligation to consider that use on Game Lands. Even if a use is not adequately provided for on other nearby public lands, the NCWRC still may not feel such an obligation, but should consider the unique nature of the request.*
- F. Will the use necessitate facility, infrastructure development or maintenance and is this use manageable within available budget and staff? *If a proposed use diverts management efforts away from the proper and reasonable management of a property or natural resources-dependent recreational use, the use is generally incompatible.*
- G. Will the use be manageable in the future within existing resources? *If the use would lead to recurring requests for the same or similar activities that will be difficult to manage in the future, then the use is generally incompatible. If the use can be managed so that impacts to natural and cultural resources are minimal or inconsequential, or if clearly defined limits can be established, then the use may be compatible.*
- H. Is the requesting entity capable of providing any funding, labor, or materials for the development of, and maintenance support for, the activity, if applicable (e.g., trail or road maintenance, rehabilitation to areas that may be damaged by the activity)?
- I. If a use is not compatible as initially proposed, can it be made compatible by implementing stipulations that avoid or minimize potential adverse impacts?

Property managers shall consider the above questions, and any other information or issues deemed necessary to make a determination based on professional judgment, and complete Exhibit 2 (appended to this document) for each property use subjected to a compatibility determination. The findings shall be forwarded to the Regional Supervisor and through the chain of supervision to the Director (or a designee) for concurrence. This will serve to promote consistency in determining compatible uses of NCWRC Game Lands.

VII. EVALUATION

The Director (or a designee) shall consider each request and the derived appropriateness and compatibility, and then make a determination as to whether the request will be approved or denied. The Director will forward use requests deemed significant in scope to the Commission's Use and Lands Committee, such as those involving: a) rule change, b) revenue generation, c) expenditure of NCWRC funds, or d) substantial alteration to infrastructure or natural resources.

All approved uses will be evaluated periodically by NCWRC field staff to determine whether such activities remain appropriate and compatible. All efforts will be made by field staff to inform participants of approved uses that issues of incompatibility will be grounds for immediate termination of the approved activity.

This is a living document that may be modified and updated as needed.

EXHIBIT 1
 APPROPRIATE USE DETERMINATION

Property Name: _____

Requested or Considered Use: _____

DECISION CRITERIA (refer to section V)	YES	NO
A. Is the use a natural resource-dependent recreational use of a property?		
If 'NO' above, then consider the following criteria.		
B. Does the NCWRC have jurisdiction over the use?		
C. Does the use comply with laws and regulations (federal, state or local)?		
D. Is the use consistent with NCWRC policies and objectives?		
E. Is the use consistent with public safety?		
F(i). Is the requesting entity a non-profit? F(ii). If NO to F(i), will any proceeds of the use be provided to the NCWRC? (Describe for-profit entity and supply information on proceeds to be provided to the NCWRC in the Comments section below)		
G. If the use was evaluated under previous administrative review and deemed inappropriate, have circumstances changed that would now make the use appropriate? (leave blank if not applicable)		

To be found appropriate, answers to Criterion A **OR** Criteria B – F (and G, if applicable) must be YES.

Determination (check one below):

_____ Appropriate _____ Not Appropriate

Comments:

Property Manager: _____

Date: _____

Regional Supervisor: _____

Date: _____

EXHIBIT 2
COMPATIBILITY DETERMINATION

(Use as much space as needed)

Property Name: _____

Requested or Considered Use: _____

DECISION CRITERIA <i>(refer to section VI)</i>	YES	NO	Comments
A. Use will not interfere with or detract from fulfillment of Game Land program management objectives?			
B. Use is compatible with the physical and natural resource characteristics of the property?			
C. Use is compatible with Natural Heritage Articles of Dedication, CWMIF designations, and/or any deed restrictions or other legal limitations placed upon the property? OR (in the absence of the above) do acquisition funding partners otherwise agree to the proposed use?			
D. Infrastructure is present on the property to support the requested use?			
E. Requested activity is not adequately provided for on other nearby public lands?			
F. Use is manageable within available budget & staff?			
G. Will the use be manageable in the future within existing resources?			
H. Is the requesting entity capable of providing any maintenance support for the activity, if applicable?			
I. If the use is not compatible as initially proposed, can it be modified with stipulations that avoid or minimize potential adverse impacts and make the use compatible?			
Other <i>(insert)</i> :			

To be found compatible, answers to ALL of the above questions must be YES.

Determination (Check one below):

_____ Compatible

_____ Not Compatible

Stipulations necessary to ensure compatibility (e.g., *Memorandum of Agreement*; *performance bond*; *time, space, or size limitations*):

Justification/Comments:

Property Manager: _____ Date: _____

Regional Supervisor: _____ Date: _____

VII. Deer Hunter Survey



2011-12 «Item_Name» Survey - Respond Immediately

The North Carolina Wildlife Resources Commission requests that you complete this 2-page survey (front/back) and return it using the enclosed postage-paid envelope or submit your response online at www.ncwildlife.org. This survey provides an opportunity for you to let us know about hunting experiences you may or may not have had using the «Item_Name» permit. Your responses are used by the Commission to better manage and improve the quality of permit hunts. **We ask that you respond even if you did not hunt using this permit.**

«CustomerID»
«First_Name» «Middle_Name» «Last_Name» «Suffix»
«Address_1»
«Address_2»
«City», «State» «Zip» «Zip4»

Permit Number: «PermitID»

**Submit your response online at
www.ncwildlife.org**

1. Did you hunt during at least one day using the «Item_Name» (Item # «Item_Number») permit?

Yes

No **Indicate the reason(s) you did not hunt and return the survey in the postage-paid envelope:**

all that apply

Not enough deer or deer sign

Weather was poor for deer hunting

My hunting partner(s) could not go

I had no more deer tags left or was saving my last

deer tag

I hunted somewhere else during the day(s) I had a

permit for

I could not afford to make the trip(s)

Work or family obligations or health problems

Other (please specify): _____

2. What hunting method did you *primarily* use during your hunt(s) using the permit?

Still

Dog

3. Please indicate which hunt(s) listed below you hunted using the permit. List the number of days and total number of hours hunted. (**Check the box if you did not hunt during a particular hunt choice date**)

Hunt Choice and Date	Number of Days Hunted	Total Number of Hours Hunted	Did Not Hunt
«HuntChoice_1»			<input type="checkbox"/>
«HuntChoice_2»			<input type="checkbox"/>
«HuntChoice_3»			<input type="checkbox"/>
«HuntChoice_4»			<input type="checkbox"/>
«HuntChoice_5»			<input type="checkbox"/>

4. Please indicate the number of antlered bucks, does, and button bucks you *personally* harvested using the permit during the hunt(s) listed below. (**Check the box if you did not harvest any deer during a particular hunt choice date**)

Hunt Choice and Date	Number of Deer Harvested			Did Not Harvest Any Deer
	Antlered Bucks	Does	Button Bucks	
«HuntChoice_1»				<input type="checkbox"/>
«HuntChoice_2»				<input type="checkbox"/>
«HuntChoice_3»				<input type="checkbox"/>
«HuntChoice_4»				<input type="checkbox"/>
«HuntChoice_5»				<input type="checkbox"/>

CONTINUE ON REVERSE

SIDE →

Permit Number: «PermitID»

5. Please indicate the number of deer you saw using the permit during the hunt(s) listed below. (**Check the box if you did not hunt during a particular hunt choice date**)

Hunt Choice and Date	Number of Deer Seen	Did Not Hunt
«HuntChoice_1»		<input type="checkbox"/>
«HuntChoice_2»		<input type="checkbox"/>
«HuntChoice_3»		<input type="checkbox"/>
«HuntChoice_4»		<input type="checkbox"/>
«HuntChoice_5»		<input type="checkbox"/>

6. Overall, how dissatisfied or satisfied were you with your hunt(s) using this permit? (**one**)

Very Dissatisfied ←————→ **Very Satisfied**

1 2 3 4 5

7. Which of the following were important in determining how dissatisfied or satisfied you were with your hunts using this permit? (**all that apply**)

- Accessibility of hunting area
- Quality of deer seen
- Number of deer seen
- Whether or not I harvested deer
- Weather
- Behavior or courtesy of other hunters
- Other (please specify): _____

8. Do you think the number of other hunters during your hunt(s) using the permit was.... (**one for each hunt choice date listed**)

<u>Hunt Choice and Date</u>	<u>Number of Other Hunters</u>			
	Too Few	Just Enough	Too Many	Did Not Hunt
«HuntChoice_1»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_2»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_3»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_4»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_5»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. How far did you travel (one way) for a hunt using the permit? (**one**)

- 0 to 60 miles
- 61 to 120 miles
- 121 to 180 miles
- More than 180 miles

If you have any questions regarding this survey, please call us at (888) 248-6834. Thank you for your time and support of our wildlife programs

STAY INFORMED....
 Start receiving e-mails regarding permit hunting opportunities, application and survey reminders, draw status information, and N.C. Wildlife Update.
 Sign up at www.ncwildlife.org/news or give us your e-mail address (print neatly):

VIII. Turkey Hunter Survey



2011-12 «Item_Name» (Item # «Item_Number») Survey

The North Carolina Wildlife Resources Commission requests that you complete this 2-page survey (front/back) and return it using the enclosed postage-paid envelope or submit your response online at www.ncwildlife.org. This survey provides an opportunity for you to let us know about hunting experiences you may or may not have had using the «Item_Name» permit. Your responses are used by the Commission to better manage and improve the quality of permit hunts. **We ask that you respond even if you did not hunt using this permit.**

«CustomerID»
 «First_Name» «Middle_Name» «Last_Name» «Suffix»
 «Address_1»
 «Address_2»
 «City», «State» «Zip» «Zip4»

Permit Number: «PermitID»

Submit your response online at
www.ncwildlife.org

1. Did you hunt during at least one day using the «Item_Name» permit?

Yes

No **Indicate the reason(s) you did not hunt and return the survey in the postage-paid envelope:**

all that apply

- Not enough turkeys or turkey sign
- Weather was poor for turkey hunting
- My hunting partner(s) could not go
- I had no more turkey tags left or was saving my last turkey tag
- I hunted somewhere else during the day(s) I had a permit for
- I could not afford to make the trip(s)
- Work or family obligations or health problems
- Other (please specify): _____

2. Please indicate which hunt(s) listed below you hunted using the permit. List the number of days and total number of hours hunted. **(Check the box if you did not hunt during a particular hunt choice date)**

Hunt Choice and Date	Number of Days Hunted	Total Number of Hours Hunted	Did Not Hunt
«HuntChoice_1»			<input type="checkbox"/>
«HuntChoice_2»			<input type="checkbox"/>

3. Please indicate the number of turkeys you *personally* harvested using the permit during the hunt(s) listed below. **(Check the box if you did not harvest any turkeys during a particular hunt choice date)**

Hunt Choice and Date	Number of Turkeys Harvested		Did Not Harvest any Turkeys
	Beard less than 7 inches	Beard 7 inches or greater	
«HuntChoice_1»			<input type="checkbox"/>
«HuntChoice_2»			<input type="checkbox"/>

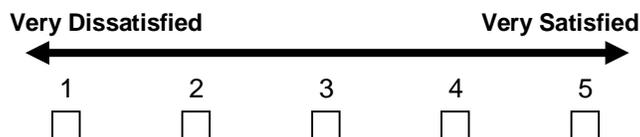
CONTINUE ON REVERSE SIDE →

Permit Number: «PermitID»

4. Please indicate the number of gobblers you heard using the permit during the hunt(s) listed below. **(Check the box if you did not hunt during a particular hunt choice date)**

Hunt Choice and Date	Number of Gobblers Heard	Did Not Hunt
«HuntChoice_1»		<input type="checkbox"/>
«HuntChoice_2»		<input type="checkbox"/>

5. Overall, how dissatisfied or satisfied were you with your hunt(s) using this permit? (**one**)



6. Which of the following were important in determining how dissatisfied or satisfied you were with your hunts using this permit? (**all that apply**)

- Accessibility of hunting area
- Quality of turkey habitat
- Number of turkeys seen or heard
- Whether or not I harvested a turkey(s)
- Weather
- Behavior or courtesy of other hunters
- Other (please specify): _____

7. Do you think the number of other hunters during your hunt(s) using the permit was.... (**one for each hunt choice date listed**)

<u>Hunt Choice and Date</u>	<u>Number of Other Hunters</u>			
	Too Few	Just Enough	Too Many	Did Not Hunt
«HuntChoice_1»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_2»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How far did you travel (one way) for a hunt using the permit? (**one**)

- 0 to 60 miles
- 61 to 120 miles
- 121 to 180 miles
- More than 180 miles

If you have any questions regarding this survey, please call us at (888) 248-6834. Thank you for your time and support of our wildlife programs.

STAY INFORMED....

Start receiving e-mails regarding permit hunting opportunities, application and survey reminders, draw status information, and N.C. Wildlife Update.

Sign up at www.ncwildlife.org/enews or give us your e-mail address (print neatly):

IX. Waterfowl Hunter Survey



2011-12 «Item_Name» (Item # «Item_Number») Survey

The North Carolina Wildlife Resources Commission requests that you complete this 2-page survey (front/back) and return it using the enclosed postage-paid envelope or submit your response online at www.ncwildlife.org. This survey provides an opportunity for you to let us know about hunting experiences you may or may not have had using the «Item_Name» permit. Your responses are used by the Commission to better manage and improve the quality of permit hunts. **We ask that you respond even if you did not hunt using this permit.**

«CustomerID»
 «First_Name» «Middle_Name» «Last_Name» «Suffix»
 «Address_1»
 «City», «State» «Zip» «Zip4»

Permit Number: «PermitID»

Submit your response online at
www.ncwildlife.org

1. Did you hunt during at least one day using the «Item_Name» permit?

Yes

No **Indicate the reason(s) you did not hunt and return the survey in the postage-paid envelope:**

all that apply

- Not enough waterfowl
- Weather was poor for waterfowl hunting
- Not enough water in impoundment
- My hunting partner(s) could not go
- I hunted somewhere else during the day(s) I had a
- I could not afford to make the trip(s)
- Work or family obligations or health problems
- Other (please specify): _____

permit for

2. Please indicate which hunt(s) listed below you hunted using the permit. List the number of days and total number of hours hunted. **(Check the box if you did not hunt during a particular hunt choice date)**

Hunt Choice and Date	Number of Days Hunted	Total Number of Hours Hunted	Did Not Hunt
«HuntChoice_1»			<input type="checkbox"/>
«HuntChoice_2»			<input type="checkbox"/>
«HuntChoice_3»			<input type="checkbox"/>
«HuntChoice_4»			<input type="checkbox"/>
«HuntChoice_5»			<input type="checkbox"/>

3. Please indicate the number of each waterfowl species you *personally* harvested using the permit during the hunt(s) listed below. (**Check the box if you did not harvest any waterfowl during a particular hunt choice date**)

Hunt Choice and Date	Number Harvested						Did Not Harvest Any Waterfowl
	Tundra Swan	Ducks	Mergansers	Coots	Canada Geese	Snow Geese	
«HuntChoice_1»							<input type="checkbox"/>
«HuntChoice_2»							<input type="checkbox"/>
«HuntChoice_3»							<input type="checkbox"/>
«HuntChoice_4»							<input type="checkbox"/>
«HuntChoice_5»							<input type="checkbox"/>

CONTINUE ON REVERSE SIDE →

Permit Number: «PermitID»

4. Did you scout any hunt area(s) listed on the permit prior to the hunt date(s)?

Yes

No

5. Using the rating scale shown below, enter one rating in every box for each hunt listed.

<p style="text-align: center;">Rating Scale</p> <p style="text-align: center;">Very Dissatisfied ← Very Satisfied →</p> <p style="text-align: center;">1 2 3 4 5</p> <p style="text-align: center;">Hunt Choice and Date</p>	Rating						
	Accessibility of hunting area	Satisfaction with number of waterfowl seen	Satisfaction with number of waterfowl harvested	Quality of waterfowl habitat	Weather	Behavior or courtesy of other hunters	Overall hunting experience
Rating Example	1	4	2	4	2	3	2
«HuntChoice_1»							
«HuntChoice_2»							
«HuntChoice_3»							
«HuntChoice_4»							
«HuntChoice_5»							

6. Do you think the number of other hunters during your hunt(s) using the permit was.... (**one for each hunt choice date listed**)

Hunt Choice and Date	Number of Other Hunters			
	Too Few	Just Enough	Too Many	Did Not Hunt
«HuntChoice_1»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_2»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_3»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_4»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
«HuntChoice_5»	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How far did you travel (one way) for a hunt using the permit? (one)

- 0 to 60 miles
- 61 to 120 miles
- 121 to 180 miles
- More than 180 miles

If you have any questions regarding this survey, please call us at (888) 248-6834. Thank you for your time and support of our wildlife programs.

STAY INFORMED....

Start receiving e-mails regarding permit hunting opportunities, application and survey reminders, draw status information, and N.C. Wildlife Update.

Sign up at www.ncwildlife.org/enews or give us your e-mail address (print neatly): _____

X. Geocaching Policy (DRAFT)



GEOCACHING POLICY

November 20, 2013

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INTRODUCTION

Geocaching is a real-world, outdoor treasure hunting game using GPS-enabled devices. Participants navigate to a specific set of GPS coordinates and then attempt to find the geocache (container) hidden at that location (<http://www.geocaching.com/guide>). Individuals who participate are known as geocachers.

OBJECTIVES

- Minimize potential impacts of geocaching on WRC-allocated lands.
- Where appropriate and compatible, support geocaching as a means of providing for additional recreational use of WRC-allocated lands and to increase awareness of WRC and its mission.

APPLICATION

This policy applies to all WRC-allocated lands and those WRC-managed properties where the landowner has ceded authority for the management of recreational uses to WRC. On those lands which WRC manages under cooperative agreements which do not cede authority for management of recreational uses in general, permission to engage in geocaching must be obtained from the landowner of the property in question.

CONSENT

On WRC-allocated lands, and those WRC-managed properties where the landowner has ceded authority for the management of recreational uses to WRC, blanket permission is granted for the placement of geocaches which comply with the provisions of this policy. No special license, permit or fee is required.

DEFINITIONS

Archive - Archiving a cache removes the listing from public view on Geocaching.com.

Cache (Geocache) – A hidden container that includes, at minimum, a logbook for geocachers to sign.

EarthCache - An EarthCache is a special place that people can visit to learn about a unique geoscience feature of our Earth. EarthCache pages include a set of educational notes along with cache coordinates. Visitors to EarthCaches can see how our planet has been shaped by geological processes, how we manage its resources and how scientists gather evidence to learn about the Earth.

Geocachers – Individuals who participate in placing and/or seeking geocaches.

GPS - GPS stands for Global Positioning System. It is a system of satellites that work with a GPS receiver to determine your location on the planet.

Multi-Cache (Offset Cache) - A Multi-Cache ("multiple") involves two or more locations. The final location is a physical container. There are many variations, but most Multi-Caches have a hint to find the second cache, and the second cache has a hint to the third, and so on. An offset cache (where you go to a location and get hints to the actual cache) is considered a Multi-Cache.

Physical Cache – Cache consisting of a sealed container and containing at least a logbook and pen or pencil.

Stash Note - In geocaching, a stash note is a note left in a cache container to explain geocaching to any non-cachers who might stumble across the cache.

Virtual Cache – Cache that exists in the form of a location where no physical object is left.

WRC – Wildlife Resources Commission

GENERAL GUIDELINES

1. WRC will seek to foster a cooperative partnership with the geocaching community to promote the objectives of this policy
2. Geocachers are encouraged to practice principles of Leave no Trace outdoor ethics.
3. The cache owner must assume all responsibility for the accuracy of online content.
4. WRC accepts no responsibility for the security or maintenance of physical caches.
5. Geocachers are encouraged to wear blaze orange in areas where hunting is allowed.
6. All caches must be registered and comply with www.geocaching.com guidelines.

7. Caches may not be used for purposes of advertising, commercial gain, or promotion of political or other social agendas.

8. Acceptable caches include physical caches, virtual caches, multi-caches, and EarthCaches.

CACHE PLACEMENT

8. Caches may not be placed in areas of known archaeological, historical, or ecological significance.

9. Caches may not be placed in locations that present a safety risk to those subsequently attempting to locate the cache. Examples include, but are not limited to caves, rock outcrops, top of ledges, base of overhanging cliffs, elevated positions that require climbing above ground level, blind curves adjacent to roadways, etc.

10. Caches may not be placed within 100 feet of any lake, pond, or waterway.

11. Caches may not be placed in locations where public access is prohibited.

12. Cache placement may not involve alternation of the nature environment, such as digging, cutting, or removal of vegetation from its present location except that dead and down vegetation may be used to help with concealment.

13. Caches may not be placed within or attached to any man-made amenity such as buildings, piers, docks, kiosks, signs, sign posts, or wildlife nest box structures and may not be attached to any other feature by use of nails, screws, bolts, or wire.

14. Caches may not be placed within cavities of any tree.

15. Marks may not be placed on any natural or man-made feature to aid in locating a cache.

16. Caches may not be placed in maintained landscaped areas, wildlife openings, or areas containing agricultural crops, and areas containing blackened tree trunks which indicate frequent application of prescribed fire should be avoided.

CACHE CONTAINERS

17. Containers must be clearly labeled on the exterior as a “geocache”, along with the name of the cache as it appears at: <http://www.geocaching.com/>

18. Containers must include contact information of the cache owner, to include at a minimum a daytime phone number or email address.

19. All cache containers should contain a standard geocache “stash note” explaining the activity to an unintentional finder (see ATTACHMENT).
20. Containers should be waterproof or sealable.
21. Containers may not exceed a volume greater than 1 cubic foot.
22. Clear (see through) containers are preferred.
23. Containers may not consist of PCV or metal pipe.

CACHE CONTENTS

24. Contents must be family friendly and appropriate for all ages.
25. Caches may not contain items that are inappropriate, offensive, dangerous, or illegal. Examples of such items include, but are not limited to firearms, weapons, ammo, alcohol, drugs, explosives, items of an adult nature, etc.
26. Caches may not contain food items.
27. The cache should contain a log book and pen or pencil for finders of the cache to log their visit.
28. Trade items are acceptable, provided such items are in compliance with this policy.

ENFORCEMENT

WRC supports responsible non-traditional use of WRC lands and recognizes the enjoyment and recreational value associated with Geocaching. However, we reserve the right to remove, without prior notice, any cache:

- deemed to be in an inappropriate or potentially unsafe location,
- found to be causing or having the potential to cause undue impact to archaeological, historical, or ecological resources,
- containing inappropriate, offensive, dangerous, or illegal items, or
- determined for any other reason to be in non-compliance with the provisions of this policy.

An immediate attempt will be made to contact the owner of any cache that is removed to provide the owner with an opportunity to retrieve the cache and to alert the owner of the need to archive the cache as quickly as possible.

ATTACHMENT – GEOECACHE STASH NOTE

GEOCACHE SITE – PLEASE READ

Congratulations, you've found it! Intentionally or not!

What is this hidden container sitting here for? What is this thing doing here with all these things in it?

It is part of a worldwide game dedicated to GPS (Global Positioning System) users, called Geocaching. The game basically involves a GPS user hiding “treasure” (this container and its contents) and publishing the exact coordinates so other GPS users can come on a “treasure hunt” to find it. The only rules are: if you take something from the cache, you must leave something for the cache, and you must write about your visit in the logbook. Hopefully, the person that hid this container found a good spot that is not easily found by uninterested parties. Sometimes, a good spot turns out to be a bad spot, though.

IF YOU FOUND THIS CONTAINER BY ACCIDENT:

Great! You are welcome to join us! We ask only that you:

- Please do not move or vandalize the container. The real treasure is just finding the container and sharing your thoughts with everyone else who finds it.
- If you wish, go ahead and take something. But please also leave something of your own for others to find, and write it in the logbook.
- If possible, let us know that you found it, by visiting the web site listed below.

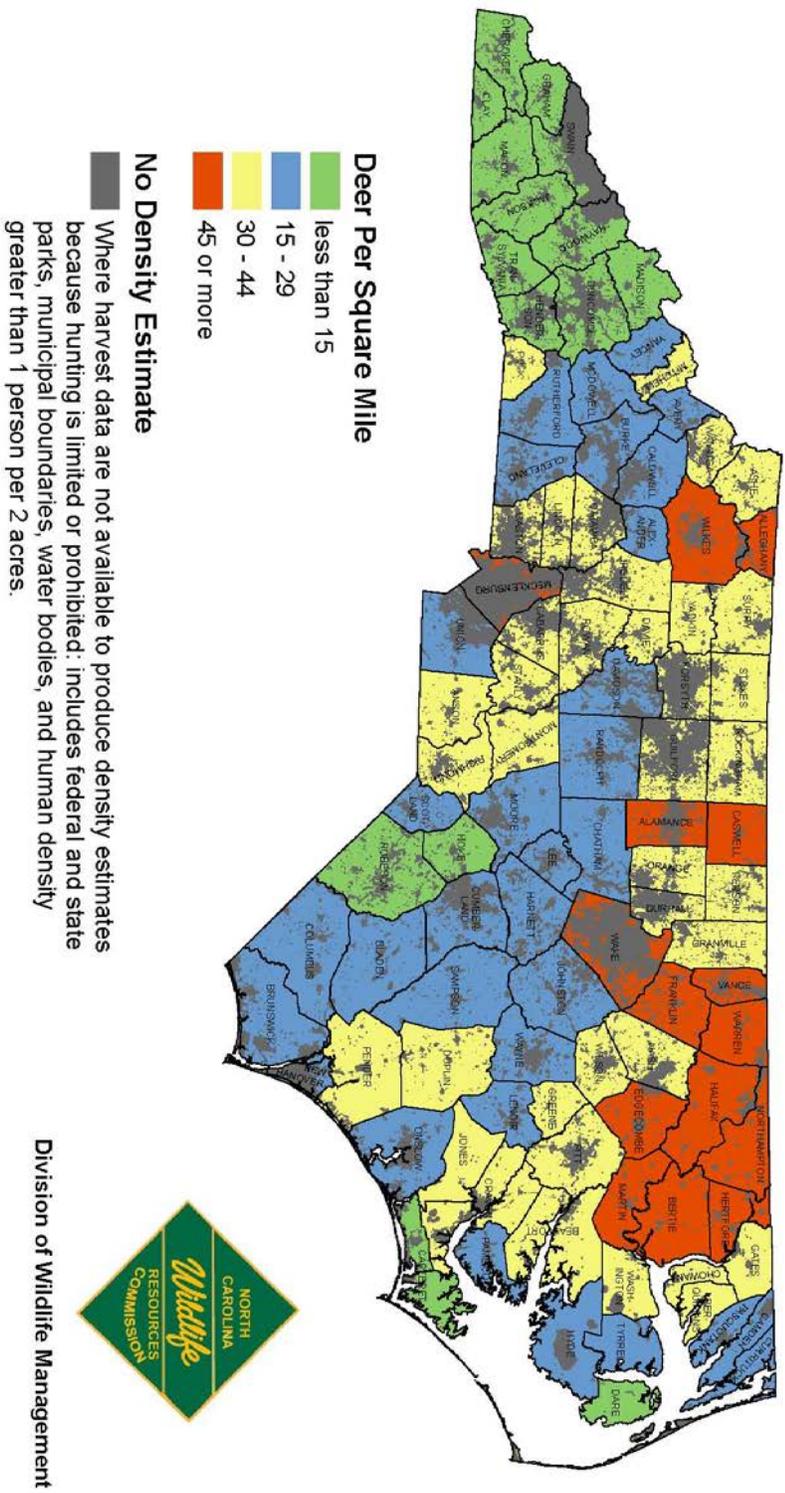
Geocaching is open to everyone with a GPS and a sense of adventure. There are similar sites all over the world. The organization has its home on the Internet. Visit our website if you want to learn more, or have any comments

<http://www.geocaching.com>

If this container needs to be removed for any reason, please let us know. We apologize, and will be happy to move it.

XI. 2010 Deer Density Map

2010 North Carolina White-tailed Deer Density Map



XII. Phase 1 and Phase 2 Land Acquisition Forms

North Carolina Wildlife Resources Commission

Land Acquisition Investigation Form

- INITIAL INVESTIGATION-

WRC Staff Contact:

Date First Presented to WRC:

Tract Name:

Acreage:

County:

Estimated Value: \$

Property Owner or Representative:

Phone: (W) (C)

Address:

Status: High Interest Moderate Interest Low Interest No Interest

Grant Potential: NHTF CWMTF OTHER (explain):

Resources Assessment and Biological Benefits (brief):

Additional Comments:

Program Potential: Game Land-

Waterfowl Blind Area Wildlife Conservation Area Fishing Access Area None

Potential Source(s) of Stewardship Funds (indicate federal:state match rates):

Relative Priority Evaluation Score (attach worksheet):

Recommendation: Pursue Acquisition Defer Do not Pursue Acquisition

Map Attached: Yes No

WORKSHEET
Relative Priority Evaluation for Conservation Lands

Tract Name () _____

Criterion Score (1-5)
5=Excellent 1=Poor

1. Augments existing protected lands by addressing an inholding or adjacent tract, provides key access, buffers or connects existing WRC-managed lands. _____

2. Represents good hunting, fishing, wildlife viewing, and other resource-based recreational opportunities. _____

3. No conflicting surrounding land uses. _____

4. Serves as a wildlife corridor between areas already protected for conservation purposes and provides connectivity to priority Wildlife Action Plan habitats. _____

5. Augments land conservation efforts on a landscape scale by providing nuclei (“anchors”) for regional conservation efforts, corridors, key linkages between conservation areas, or keystone tracts. _____

6. Fills a need identified by the Wildlife Action Plan, such as critical, rare or unique habitats; natural heritage elements; or significant aquatic/terrestrial resources. _____

7. Is this an area in which we would like to establish a new game land, wildlife conservation area, or fishing access? _____

8. Is it large enough to be a new game land, and if not, are there possibilities for expansion (goal 3,000-5,000 minimum)? _____

9. Is area adequate for fishing access development with suitable parking, and if not, are there possibilities for expansion? _____

TOTAL SCORE _____

**North Carolina Wildlife Resources Commission
Land Acquisition Investigation Form**

-PHASE II: FINAL ACQUISITION DETAILS-

WRC Action/Approval to Pursue (Date):

Acquisition Plan (specify total project cost, each source, and amount of OBLIGATED funds):

Based on Appraisal: Yes No

If Yes, Name of Appraiser:

Date of Appraisal:

Appraisal Handled by State Property Office: Yes No

Acquisition Plan Includes Bargain Sale: Yes No

If Yes, Explain Details:

Source(s) of Stewardship Funds (indicate federal:state match rates):

Five Year Stewardship Costs & Revenue Projection Evaluation (attach worksheet)

Five Year Estimate of Total Stewardship Expenditures: \$:

--

Five Year Estimate of Total Projected Revenue: \$:

--

Additional Comments:

XIII. Public Comment Questions

Game Land Management Plan

Public Input Meeting

Your input is important to us, so please participate. You can provide written comments on this form, comment online at @ www.ncwildlife.org then click on “Comment on Game Land Plans”, or provide verbal comments during the breakout session.

Core Questions

1. What habitats do you think are most important to protect and/or improve on this game land?
2. Considering those that live on land and in water, what species do you think are most important to protect and/or improve on this game land?
3. How do you use this game land?
4. Please explain why you think the current level of access is, or is not, satisfactory on this game land?
5. What suggestions, if any, do you have for changing how this game land is managed and maintained?
6. What would encourage you to start using this game land, or to continue using it more actively?
7. What additional comments do you have regarding this game land?

Game Land:

Date:

Affiliation:

XIV. Received Public Input and Comment

1. What habitats do you think are most important to protect and/or improve on this game land?

HABITAT TYPE	NUMBER OF REPOSES	PERCENTAGE OF REPOSES
All Habitats	3	12%
Deer/Turkey	5	20%
Bottomland Hardwood (Forest)	9	36%
Upland/Early Successional	6	24%
Waterfowl	4	16%
River/Water	2	8%

Public Input Meeting/Online	Comment
Public Input Meeting	All - but set aside areas for more public use - ie: horseback riding, bike trails, hiking
Public Input Meeting	Deer, turkey, birds, trees, native vegetation
Public Input Meeting	wildlife, river
Public Input Meeting	pack it in/pack it out
Public Input Meeting	bottomland hardwood forest/ waterfowl impoundments
Public Input Meeting	birding, all wildlife
Public Input Meeting	more flowers that we think the habitat was before we were here (black eye susies).
Public Input Meeting	The swamp/low land habitats like those of the Lower Roanoke. Please save the cypress trees. Do not log.
Public Input Meeting	habitat that encourages birding
Public Input Meeting	Pack it in and take it out when you leave NO LITTER in Wildlife
Public Input Meeting	hardwood
Online	Deer, I haven't seen the numbers that have been in the pass.
Online	Waterfowl and Upland Habitat.
Online	The bottomland hardwoods are great in conjunction with the food plots. Please keep planting the food plots.
Online	Hard woods and edge habitat
Online	Bottomland swamp habitat need the greatest protection which they(WRC) currently are doing. Continue with early successional mgt. where there are opportunities in agricultural lands. Continued dove field mgt. and field borders.

Online	The increased crop plantings in several areas over the last couple of years have been beneficial to deer, turkey, and probably bears. This should be continued, but probably doesn't need to be increased further. Any plantings or openings/timbering in the Federal Refuge would help the Conine area. Mowing walkways and some areas of unplanted fields helps hunters but also opens up feeding areas for turkeys and other game and animals.
Online	running and standing water
Online	I have hunted here for turkey for the past 12 years. I have noticed in the past year or two the number of wild turkeys has diminished considerably. I have also noticed a corresponding increase in feral hogs (we used to never see hogs before). I defer to the Commission experts but I suspect the hogs are destroying the habitat for turkeys and turkey eggs. We need to do everything possible to eliminate feral hogs.
Online	I think the hardwood habitat is the most important to protect.
Online	IMPROVE and/or FIX the duck impoundments that will not hold water and get them where they will hold water! With the money and time spent to build these impoundments, it is such a waste that they are not being used for their intended purpose.
Online	Keep the Lower and Upper Roanoke River tracts as wild as possible. NO LOGGING! and Limit all access...lock gates and minimize numbers of hunters
Online	test
Online	Mature hardwoods for squirrels. It would not bother me a bit if the agricultural fields were converted to a mosaic of early and mid-successional habitat for rabbit and quail.
Online	Leaving peanuts and corn around the woods is great. keep it up.
Online	waterfowl and doves

2. Considering those that live on land and in water, what species do you think are most important to protect and/or improve on this game land?

SPECIES	NUMBER OF REPOSES	PERCENTAGE OF REPOSES
Birds	7	29%
Deer	11	46%
Turkey	13	54%
Waterfowl	10	42%
Herps/Amphipians/Bats(Non game)	5	21%
Small game(Dove, Quail, Rabbits, Squirrels)	10	42%
Fishes	4	17%

PUBLIC INPUT MEETING/ONLINE	COMMENT
Public Input Meeting	attempt to improve quail
Public Input Meeting	All species that take up habitat in the game land are important
Public Input Meeting	Bird species (various) and 4 legged
Public Input Meeting	deer, turkey, birds
Public Input Meeting	native flora and fauna/ try to eliminate invasive species
Public Input Meeting	herps, neotropical interior forest birds, bats
Public Input Meeting	deer turkey, waterfowl
Public Input Meeting	deer, turkey, doves, bird watching, white perch
Public Input Meeting	1. turkey 2. deer 3. waterfowl
Public Input Meeting	birds and game
Public Input Meeting	local and native plants and animals, no invasive species
Public Input Meeting	quail turkey
Online	Wintering waterfowl, nesting wood ducks, and nongame migratory birds - nesting, stopover, and wintering. Also important to protect aquatic species - migratory and resident fishes.
Online	I hunt deer and turkey out there so id like to see the habitat improved.
Online	Deer, turkey, and QUAIL
Online	Deer, Turkey, Dove, Waterfowl, Quail, and other small game species
Online	Deer and turkey are obvious choices, but I enjoy seeing and hearing all the owls, ducks, and large water birds. Cutting some of the dead/undesirable trees along creeks or maybe the river might encourage eagles or similar fish catching/eating predatory birds to feed there.
Online	reptiles and amphibians

Online	Wild turkeys and striped bass.
Online	The game lands should be managed and protected for all wildlife, not just game animals - the amphibians and reptiles in particular are important to me
Online	Whitetail deer
Online	Waterfowl and small game.
Online	Pine barrens treefrog and gopher frog.
Online	Wild Turkey and Waterfowl
Online	Gray squirrel, fox squirrel (yes, they are in there), quail, rabbit, wood duck, large mouth bass.
Online	waterfowl and dove

3. How do you use this game land?

Activity	NUMBER OF REPOSES	PERCENTAGE OF REPOSES
Hunting	18	62%
Fishing	5	17%
Hiking	9	31%
Camping	2	7%
Horseback Riding	6	21%
Wildlife Viewing	2	7%
Eco-Tourism	1	3%
Do Not Use	3	10%

PUBLIC INPUT MEETING/ONLINE	COMMENT
Public Input Meeting	mostly hiking
Public Input Meeting	limited small game hunting
Public Input Meeting	riding horses, trail riding, hiking, getting in touch with nature
Public Input Meeting	tourism
Public Input Meeting	don't
Public Input Meeting	hiking, trail riding, enjoy nature and wildlife
Public Input Meeting	hiking, photography, horseback riding
Public Input Meeting	I don't
Public Input Meeting	none currently in its present form
Public Input Meeting	Turkey hunting but would like a special late winter season for feral hogs
Public Input Meeting	for recreation
Public Input Meeting	photography, wildlife watching, horseback riding
Public Input Meeting	horseback riding, hunting, fishing
Online	I Use It For Hunting. Last year Was The First Time Ive Been. Was There For 4 Days Hunting Squirrels. Didn't Cover Much Ground, But Really Enjoyed It. Look Forward To Going Again This Up Coming Season.

Online	we fish and hunt, camp,and hike
Online	My Sons and Grandsons have used this area for 14-16 years to deer hunt the last several years. But the last 2 years there seems to be less and less deer. Are other hunters finding this? Should cut back on the number of kill and increase the size of Buck to 6 Point or more.
Online	Permit hunt for deer.
Online	hunting and hiking
Online	I dove and turkey hunt on Lower Roanoke Areas.
Online	I have deer hunted there for 7-8 years (muzzle loader and also rifle). I moved to NC 9 years ago and live a 4-5 hour drive from Williamston. It's worth the long drive to hunt that area! I camp, usually in the farm equipment sheds (thanks for repairing those a couple of years ago!) on Conoho Farms and have invited others to hunt with me. There are lots of turkeys, but I don't like to drive that far to hunt them.
Online	trail riding, hiking
Online	Turkey hunting, striped bass fishing, camping, hiking. Great trip every year!
Online	I hunt deer and small game as well as hiking during the off season.
Online	Small game and waterfowl.
Online	Turkey hunting with my son and my friends and I would like to start waterfowl hunting it
Online	I use the gamelands for hunting turkey and deer and also pigs. When I'm not hunting I am fishing.
Online	Small game (squirrel and rabbit) and wood duck hunting when I get drawn. Fishing along the banks of the river.
Online	This is the primary land that I hunt small game of rabbits and squirrels.
Online	dove hunting, waterfowl hunting, deer hunting, small game hunting

4. Please explain why you think the current level of access is or is not, satisfactory on this game land?

CURRENT LEVEL OF ACCESS	NUMBER OF REPOSES	PERCENTAGE OF REPOSES
More Restrictive	2	10%
Keep Access As Is	8	38%
Increase Access	11	52%

PUBLIC INPUT MEETING/ONLINE	COMMENT	PLAN RESPONSE
Public Input Meeting	prefer more access for hiking, camping on game land on Sunday and during periods of no hunting	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season. Camping is allowed in designated and posted campgrounds from Sept. 1 -Feb. 28 and March 31 - May 14. Camping is allowed anytime within 100 yards of the Roanoke River.
Public Input Meeting	More access roads and markers, bridges, better parking for trailers to encourage more riders	Current road access to the game land is adequate. Commission staff would like to develop a horseback riding working group to discuss riding on the game land.
Public Input Meeting	not enough parking for visitors for birding and trails	In most areas, parking is adequate. One new parking will be established on Doug's Gun Shop Road.
Public Input Meeting	limits a natural resources to hunting activities	
Public Input Meeting	needs to be more accessible and to keep it as natural as possible	
Public Input Meeting	not everyone likes to hunt	
Public Input Meeting	I think its ok	
Public Input Meeting	I would like more openness for out-of-the-box ideas that don't impact the land negatively. Horse trails	Will be addressed with a horseback riding working group.
Public Input Meeting	I feel the access by water is satisfactory. Better access would jeopardize the uniqueness of these game lands	
Public Input Meeting	In its current form, access is ok - would like the gate open more often	

Public Input Meeting	I buy sportsman license every year but don't hunt only fish	
Public Input Meeting	a little more access	
Online	I enjoy hunting broadneck and beachhouse but it is getting hard to find a good campsite along the river. I hope more time keeping the fire roads clear would help the hunters and make for a better time.	The fire roads mentioned on the Broadneck Tract are on the Roanoke River National Wildlife Refuge. This comment has been passed on to them.
Online	I think it is very important to protect the natural resources on these game lands and continue to limit non-resource related activities like horse riding, off road vehicles and mountain bikes. Not only are these uses damaging to the roads and trails they are disruptive to the wildlife and other users who appreciate some place natural and restrictive of abusive uses.	
Online	current access is limited at some water levels. good non-boat access could be improved, but not too much.	Current road access to the game land is adequate. Improvements to Conoho Road are addressed in the plan.
Online	I think it is adequate, too much access can inhibit the effectiveness of the lands.	
Online	The current level of access on Lower Roanoke is very adequate and areas do not need increased access or opened gates. Gates and closed areas benefit habitat and wildlife and also the sportsmen by limiting disturbance. I agree with areas being closed to vehicles by WRC biologists when deemed necessary.	
Online	Although the roads are sometimes flooded, there are always some areas accessible by car/truck. The roads/trails are usually well maintained. I enjoy hunting alone, so I don't want easier access/more roads so that other hunters can surround me. I'm 69 years old, but can still walk to remote areas. Access is just fine!	

Online	need more trail access	
Online	With all do respect, the access on Broadneck Swamp tract is unacceptable. Twelve years ago the paths were maintained/mowed/trimmed. The paths do not appear to have been maintained in at least 5-7 years, especially the path that runs along the river. The path along the river is completely inaccessible. It doesn't exist anymore. Trees have fallen over and the growth is just too much. This severely limits hunting on the Broadneck Swamp tract.	The paths mentioned on the Broadneck Tract are on the Roanoke River National Wildlife Refuge. This comment has been passed on to them.
Online	I think it's pretty good as is. I do frown on the gate to Town Swamp being locked during early bow season, as I've found in the past. If the season is open and the road dry, the gate should be open.	Town Swamp is part of the Roanoke River National Wildlife Refuge. This comment has been passed on to them.
Online	More vehicular access to certain lands would be good. A lot of this land is only accessable by boat.	

Online	I have been going to the Broadneck Track since 1992 and I've seen the level of access go from open fire brake roads to only one left. After a bad storm in the mid 1990's that laid down a lot of trees that has made it impossible to walk from the pipe gate going up stream to the long road. I remember walking these roads that made a hunters choice (do I want to follow the river or go inland to the swamp. With the current conditions as of last year there are only a few places you can walk and make a camping site. I would like to see the roads opened back up and places opened up along the rivers edge to pitch a camp site. I have noticed more hunters and camping over the past years and is making it harder to find a spot without having conflicts with other hunters. This has happened to me twice. And I have to drive 300 miles and when arriving, hope I can find a spot to camp.	The fire breaks mentioned on the Broadneck Tract are on the Roanoke River National Wildlife Refuge. This comment has been passed on to them.
Online	I think the existing access should be more restrictive close gates and lock them the less amount of human activity the better!	
Online	I put the boat in at Hamilton and have had no problems. Hamilton is a very good access area.	

Online	For many years, I went to the LRRGL to hunt squirrel on the opening 2 days of the season. Now, this is not allowed because the NCWRC thinks that handicapped deer hunting and small game hunting are incompatible. Now, there is handicapped deer hunting throughout the fall on days that were originally set aside for small game hunters. In my opinion, small game hunting during deer season will be eliminated from the LRRGL. I would use this gameland more if I were allowed to hunt the opening 2 days of squirrel season.	The Disabled Sportsman Tier III hunt typically takes place the first Monday and Tuesday of the gun deer season. Past conflicts between small game hunters and the Tier III hunters required the WRC to remove 3 days from the calendar for small game hunting on the Lower Roanoke. The Disabled Sportsman Tier II deer hunts are held on Mondays and Tuesdays on the Everett Tract of Conoho Farms. The hunters are limited to hunt only the handicapped lift. Conflicts between small game hunters and the Disabled Sportsman Tier II hunters continue on this area. Only 3 days have been removed from the small game calendar on the Lower Roanoke. Bertie Game Land and Van Swamp Game Land offer small game hunting the entire season.
Online	I feel that access to Broadneck through Town Swamp and vice versa should be allowed after Nov 18-Feb 28 since there is only small game hunting allowed then. My father is physically unable to travel by boat. I would also like to see the parking area on the Harold Everett track on 125 put further back. I have never been past the pond because of the distance. I don't feel like the back is hunted.	Broadneck and Town Swamp are part of the Roanoke River National Wildlife Refuge. This comment has been passed on to them. Moving the parking area on the Everett Tract of Conoho farms further back will have a negative impact on the wildlife in the area. A new parking area will be built at the end of Doug's Gun Shop Road. Adequate road access with shorter walks exists on the main tract of Conoho Farms at the river.
Online	I would dearly love to bring horses and use the trails for horseback riding. We are good stewards of the land and always willing to help the park rangers with their work. Thank you.	Will be addressed with a horseback riding working group.
Online	Would love to use the trails for horseback riding. Thank you	Will be addressed with a horseback riding working group.

5. What suggestions, if any, do you have for changing how this game land is managed and maintained?

CHANGES TO HOW THE GAME LAND IS MANAGED	NUMBER OF REPOSES	PERCENTAGE OF REPOSES
Deer Management	2	10%
Increase Horseback Riding Opportunities	5	24%
Increase Camping Opportunities	1	5%
Increase Hiking Opportunities	4	19%
Create More Access	3	14%
Habitat Protection	3	14%
Signage	1	5%
Control Invasive Species	3	14%
Increase Wildlife Viewing	1	5%
Increase Biking Opportunities	1	5%
Allow ATV's	1	5%
Use Volunteers	1	5%
Limit Access of Non-Traditional Users	2	10%
Impoundment Management	1	5%
Increase Small Game Hunting	2	10%

PUBLIC INPUT MEETING/ONLINE/EMAIL	COMMENT	PLAN RESPONSE
Public Input Meeting	more access for camping and hiking	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season. Camping is allowed in designated and posted campgrounds from Sept. 1 -Feb. 28 and March 31 - May 14. Camping is allowed anytime within 100 yards of the Roanoke River.
Public Input Meeting	Better access, markers to mark species that are nesting, i.e. birds, snakes	Access is adequate over most of th game land. Marking all species that are nesting on the game land is impractical.
Public Input Meeting	eliminate wild hog population	Hunters can harvest feral swine at any time while engaging in a permit hunt.

Public Input Meeting	create access points along river	Articles of Dedication restrictions on the game land prohibit the construction of river access points.
Public Input Meeting	open game lands to hiking, bird watchers	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season.
Public Input Meeting	have well maintained trails and bridges to keep off areas that need to be protected	
Public Input Meeting	allow and encourage hiking and horseback trail riding	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season. Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	manage hardwood timber to promote mast bearing trees, encourage river cane habitat by thinning, remove fish passage barriers like culverts and replace with low water crossings	Articles of Dedication restrictions limit the ability of manage large parts of the game land forest. Fish passage is addressed in plan.
Public Input Meeting	open activities to horseback riding, biking, and some ATV access lands.	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land. ATV use is restricted to only disable sportsman in certain areas with a permit on the LRRWGL.
Public Input Meeting	Have more opportunities for horseback riders, offer trails, weekends (during hunting season) can also sell permits if needed for more revenue.	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	Offer a special season for feral hogs that does not coincide with the other seasons	Hunters can harvest feral swine at any time while engaging in a permit hunt.
Public Input Meeting	be friendlier to non-boaters, non-hunters, non-fisherman	
Public Input Meeting	make it available to horseback riding any time when not hunted on	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	overall good, more volunteer work time	

Online	On previous comment noted that cut back on no of kill and increase bucks to 6 point or more. Let them grow some.	
Online	I am in favor of limiting use by interest groups other than sportsmen. Horseback riders, mountain bikes, and 4 wheeler riders can cause damage and increase disturbance to properties. This is North Carolina WILDLIFE property and not areas intended for other uses. If you are going to say "taxpayer funds help buy property" ie: Clean Water and Heritage Funds, then it also helped buy state park property and you don't see them allowing these activities. When these funds are expended to purchase the property for NCWRC is should be known that these areas with be managed for sportsmen with Federal Aid dollars which are provided by sportsmen. Activities like bird watching and hiking should be allowed due to little to no impact on the resource. Let the professional biologists and staff determine what uses are acceptable to best provide for the Wildlife Resources	Conservation of the natural resources is a priority of the WRC. We also recognize the desirability of multiple uses on the game land. One purpose of this plan is to identify the "non-traditional users" and evaluate the impacts to the natural resources and potential conflicts to traditional users. Based on those evaluations, staff can recommend whether or not a use should be allowed. Currently, regulations do not exist in many areas to limit activities.
Online	none	
Online	The paths absolutely have to be maintained better. This would be simple, just drive a bush-hog along the paths once a year and cut tree limbs that have fallen. Otherwise the Broadneck Swamp tract is unusable. Also, consider allowing hunting of feral hogs year-round.	Broadneck Swamp is part of the Roanoke River National Wildlife Refuge. This comment has been passed on to them.
Online	the game lands should be managed and protected for all wildlife, not just game animals - the amphibians and reptiles in particular are important to me	Addressed in plan.

Online	I see some of these tracts greatly under utilized. I'm not sure if the permit system is the best way to promote use.	
Online	As Americans move more and more to passive recreations like hiking and horseback riding we should make sure that public lands provide opportunities for those non-consumptive sports. The Lower Roanoke River area offers excellent opportunities for construction of hiking and horseback trails. The NCWRC should encourage these uses . We are in a battle for the soul of America. To the greatest extent possible we should make opportunities available for the public to engage with nature, especially on our public lands.	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season. Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Online	Impoundments look good just make sure they get flooded. Last time I got a draw hunt there was a great corn crop but no water	Addressed in plan.
Online	The Lower Roanoke should be kept as wild as possible restrict all access and mark boundaries very clearly	
Online	The only thing is that some of the fire lanes are not kept up (Broadneck) The lanes along the river have grown up with trees and thick under brush. It would be great to have better access to walk on.	Broadneck Swamp is part of the Roanoke River National Wildlife Refuge. This comment has been passed on to them.

Online	<p>Allow small game hunting on the opening 2 days of squirrel and rabbit season and the Monday-Wednesday of Christmas week. Instead of penalizing only small game hunters for the sake of handicapped deer hunters, how about holding the handicapped hunts on Wed and Thurs of each week. This way, the small game hunters and the deer hunters each give up a day per week. I have nothing against handicapped hunters, but to reduce ONLY small game hunting days for the sake of these handicapped hunts is patently unfair to small game hunters. Small game hunting is struggling to survive as it is. Don't do anything more to erode it.</p>	<p>The Disabled Sportsman Tier III hunt typically takes place the first Monday and Tuesday of the gun deer season. Past conflicts between small game hunters and the Tier III hunters required the WRC to remove 3 days from the calendar for small game hunting on the Lower Roanoke. The Disabled Sportsman Tier II deer hunts are held on Mondays and Tuesdays on the Everett Tract of Conoho Farms. The hunters are limited to hunt only the handicapped lift. Conflicts between small game hunters and the Disabled Sportsman Tier II hunters continue on this area. Only 3 days have been removed from the small game calendar on the Lower Roanoke. Bertie Game Land and Van Swamp Game Land offer small game hunting the entire season.</p>
Online	<p>Some season the land is not accessible due to flooding. I would like to see better control of the dam.</p>	<p>Although the WRC is a member of the 216 Study with the US Corps of Engineers, there are no river flow models that will completely eliminate the risk of flooding. The Roanoke River floodplain has developed into a rich and diverse ecosystem because of flooding. Road improvements to River Road are addressed in the plan.</p>
Online	<p>I would suggest that when the farmer leaves crops in the fields, that he leave those crops further out in the field. Also I would suggest provided dove hunting fields behind the depot.</p>	<p>The 10% of crops the Co-Op farmer is required to leave will remain around the edges. The placement of the crops in the center of the fields may expose wildlife to higher predation. There are about 20 acres of dove fields behind the depot.</p>

6. What would encourage you to start using Lower Roanoke River Wetlands Game Land, or to continue using it more actively?

SUBJECT	NUMBER OF REPOSES	PERCENTAGE OF REPOSES
More Horseback Riding Opportunities	6	30%
Safe Access	2	10%
Hiking Trails	3	15%
Biking	1	5%
Wildlife Viewing Opportunities	1	5%
Preference Point System for Permits	1	5%
Tourism Opportunities	1	5%
Input on Management	1	5%
Better Access	1	5%
More Deer	1	5%
Hunting	4	20%
Signage	1	5%

PUBLIC INPUT MEETING/ONLINE	COMMENT	RESPONSE
Public Input Meeting	I do use it actively, I don't leave any trash when riding so no one knows we have been there other than hoof prints	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	safe access for visitor for birding and trails	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season.
Public Input Meeting	open for hiking, biking, observation	
Public Input Meeting	horseback riding trails and I use it now and I am very careful to leave it clean and as protected as it was when I went in.	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	horseback trail rides	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	I'm just lazy	
Public Input Meeting	open the rules for more activities	

Public Input Meeting	more horse riding trails	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	A preference point system for limited drawings	
Public Input Meeting	Development of tourism oriented activities	
Public Input Meeting	trail rides	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	input on some management	
Online	better access and keeping the fire roads clear	
Online	Right now I am disappointed with the deer that I am seeing in this managed area. This may be my last year if I do not see more deer.	
Online	I will continue to use the area for hunting as long as user group issues do not arise. Manage areas for sportsmen first and other activities that don't impact hunters or habitat management. Sportsmen dollars have made the greatest contribution to the area and I agree with keeping it that way.	Hunting, fishing, trapping, and wildlife viewing are primary uses. Other uses will be evaluated for compatibility.
Online	more trails for hiking and riding	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Online	More accessibility along the paths on Broadneck tract.	
Online	natural surface pedestrian trails, open during times that are closed to hunters (for the safety of the recreational users)	Hiking is not restricted on the game land. However, hiking is encouraged outside of a designated hunting season.
Online	A good number of days during the gun seasons I find my party are the only ones hunting. While I don't mind at all, I wonder why the permit limits have been bought yet so few actually use them. Overall I like the current system though.	

Online	I have enjoyed the Roanoke River gamelands for over a decade my son killed his first turkey there, my best friend got his first turkey there...keep the number of hunters as low as possible and keep the roanoke restricted access	Hunting, fishing, trapping, and wildlife viewing are primary uses. Other uses will be evaluated for compatibility.
Online	Post signs with tract name to help identify your location.	Addressed in plan.
Online	Allow squirrel hunting on the opening 2 days of squirrel season.	Small game hunting opportunities exist on other local game lands for the entire season.
Online	I would like to see an access put on the west side of 17 on the Conine Island track.	Conine Island is part of the Roanoke River National Wildlife Refuge. Comment was forwarded to them.

7. What additional comments do you have about Lower Roanoke River Wetlands Game Land?

Public Input Meeting/Online	Comment	Response
Public Input Meeting	Keep Conoho gate at Herring Gut open year round to allow vehicle access to Whitley Ditch	Will consider this comment. Littering from fishermen has been an issue.
Public Input Meeting	no hunting on Saturday or Sunday	
Public Input Meeting	keep public informed about changes	
Public Input Meeting	work with local governments and organizations in area to enhance and promote game lands	
Public Input Meeting	it needs to be enjoyed and protected by all and should be used. We all should be able to enjoy it and protect it as it was meant to be. It's not being used and it could also be used to bring more to Martin County.	Conservation of the natural resources is a priority of the WRC. We also recognize the desirability of multiple uses on the game land and will evaluate for compatibility those activities.
Public Input Meeting	I don't have all the numbers but it seems tht it is underutilized and should be available for more uses other than hunting	Conservation of the natural resources is a priority of the WRC. We also recognize the desirability of multiple uses on the game land and will evaluate for compatibility those activities.

Public Input Meeting	would love to see county/state to offer more trail rides, offer trail ride events	Commission staff would like to develop a horseback riding working group to evaluate riding on the game land.
Public Input Meeting	Please maintain or "grow" the NC Game Land system	Addressed in plan.
Public Input Meeting	land is not used as much as could be	Conservation of the natural resources is a priority of the WRC. We also recognize the desirability of multiple uses on the game land and will evaluate for compatibility of those activities.
Online	we drive over 200 miles to hunt and fish and hope more access for better campsite along the river.	
Online	would like to see all game lands along rivers,streams,and lakes open to camping.	
Online	It is a Family tradition to hunt there but it is getting to the place for us to travel 5-hrs it is not worth what we are seeing in game.	
Online	Almost every trip I've made to hunt down there, we had problems with dogs. Dogs from nearby hunt clubs were all over the Game Lands. Then their owners drove through the Game Lands looking for their dogs, calling and making a racket. Entry to the GL is supposed to be limited to hunters. That didn't stop them, and they and their dogs were a MAJOR disruption to our hunts. Please control access better.	Hunting with dogs is a traditional use of the land. Dogs are not prohibited from the game land. Any individual can hunt the game land provided they were drawn for a permit.
Online	Let the professional staff of the NCWRC do what is best for the Wildlife Resources of this area and allow them the ability to make decisions that will keep this area a wonderful place to protect property and provide a great place for the Sportsmen of North Carolina and the U.S.	

Online	I like that the area is Permit Only - I almost never see other hunters in the swamps, which pleases me. Would be nice if you could control the mosquito populations some years (ha ha). I enjoy stopping in to talk with the State employees at the facility on Rt. 127.	
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Emails received and response.

Comment	Response
<p>One of the things my Wife and I were talking about last year is camping on Game lands. What I am submitting is that we build and maintain designated campsites that are semi improved. (parking area, Picnic table, fire pit with ring ,planted grass, toilet facility and trash can)Similar to what is in some of our State parks. The commission can let individuals reserve and charge a fee for the sites. Keep the sites away from the hunt able areas. Maintain them as no alcohol, no loud music areas. Not every game land is suitable for this but it has the potential to give more opportunity's to people to enjoy the out of doors. I have worked with the Wounded Warriors Project for a few years now. I would like to see more in the way of handicap access. Maybe Built Blinds of a permanent type out there for these Soldiers, Sailors, Marines & Airmen that have lost so much. Areas can be improved on and reserved in advance for use. Set a VA or Dr. disability limit of say 50% to be able to use these areas. Wildlife food plots can be planted and maintained and the lower hunting pressure of areas set aside may give more of an opportunity for them to see wildlife. I have taken 2 different individuals out over the last couple of years and it can be tough to get them into and out of the woods. If you contact the Wounded Warriors Project they can give you further Guidance as to what some of the needs would be. Also , More handicap fishing access at our boat ramps. Advertise and set Game lands Work Days for the general public. Litter Cleanup, Downed tree removal from access roads, and other things can be taken on by volunteers. Other projects like the food plot planting and maintenance of the Handicap access areas, I spoke of before, can be done with these people. If something like a walking bridge needs building, they can assist those W/I the commission that do these projects. A way for folks become active in improving our Game lands system, and a PR tool to defuse the negativity the antis spew out to the media. Youth learning days at the various game land sites. These can be set up in the Hunter Ed. Program. Individuals from an area can sign up in their hunter education class and go afield to learn what the animals are eating, what their tracks & sign looks like, what the bedding areas look like, travel corridors etc. This can happen on the same locations they might go afield to hunt. I have been finding more and more that</p>	<p>Medoc Mountain State Park in Halifax County, Pettigrew State Park in Washington County, Merchant's Millpond State Park in Gates County, and Goose Creek State Park in Beaufort County offer the amenities that you mentioned. The Roanoke River Partners also offer paddle trail camping platforms that can be reserved. Disabled sportsman opportunities exist on the Lower Roanoke River Wetlands Game Land. Through the Special Hunt Opportunities Permit system, Tier II and Tier III hunts are available for the Lower Roanoke. Permanent ADA hunting houses exist at Bertie County Game Land and Lantern Acres Game Land with no special permit required. These areas are first come first serve and have been somewhat underutilized. The areas with these hunting opportunities have typically been planted in oats or clover. Although not covered under this plan, most boat ramps are ADA compliant. Numerous Public Fishing Areas are located in northeastern North Carolina. The WRC have used volunteers before with mixed success.</p>

<p>those I am mentoring have no clue as to what they are seeing in the woods. I have pointed out deer runways, rubs , scrapes, beds, scat etc. Showed them Bear marked trees and more. The more they learn (hands On) the more they retain, and maybe they will pass it on to others. Over my 20 or so years of being involved in Hunter education I have mentored 33, of which 31 have taken their first deer with me. Including my wife. A way of bringing the mentoring process to the forefront. Not sure if this has made any sense to you I hope it does. Thank You all for the wonderful legacy you are helping us leave to the future.</p>	
<p>I have enjoyed hunting the Lower Roanoke area for several years. I think the current program works well and I would suggest retaining status quo.</p>	
<p>This comment is delivered late in the public review and comment process regarding NC Game Lands Management Plans. Moreover, my concerns may be addressed elsewhere. If so, I apologize for wasting the time of NCWRC staff. In developing these comments, I presume that the purpose of plans in a generic sense is to offer direction. However, plans may warrant revision as additional information comes to the forefront. My main comment is for the NCWRC to provide some history or context to facilitate receipt of on target information from those providing comments. This can save NCWRC and those providing comments time and energy. For example, if you identified the acreages of game lands in each of the sections of the state, it may help avoid comments like “there aren’t any NC game lands in the piedmont.” What additional history or context or background information to go along with the request for public comment might prove helpful? For starters, I believe letting the public know who pays for the purchase, lease, and maintenance of the NC Wildlife Resources Commission’s Game Lands. Let the prospective commentators know the sources of those funds? Also, tell them what if any restrictions exist on activities next door to the game lands, as appropriate (e.g. hunter harassment). What’s the problem(s) if any with the current wildlife management program on the NC Game Lands? To me it would help via links to Inform the public regarding the extent of illicit drug use and production, hunter and angler harassment, hunting and fishing violations, erosion, wildlife destruction, littering, wild fires started by carelessness or arson, wild fires by consumptive and non-consumptive users, robbery and</p>	<p>Many of the comments mentioned are addressed in the plan.</p>

<p>other attacks on consumptive and non-consumptive users on NC Game Lands. Identify voluntary steps that may be taken to reduce the risk of such events or ways to avoid making a bad situation worse. What's the goal of the NC WRC? Is it to broaden the NC Game Lands constituency? Is it bolster use by having plans which include ways to better inform potential participants? Where are there non-problems? For example, what are the complementary aspects of forest planting and harvesting, wildlife watching, hiking and traditional hunting and fishing practices on NC game lands. What is the extent of conflicts in use amongst anglers, hunters, boaters, hikers, bird watchers, horseback, trail bike, ATV and other NC game lands users? What are the conflicts between those uses and wildlife populations on NC Game Lands. What does the current NCWRC plan and practice require to avoid or mitigate such trade-offs or conflicts. Finally, thanks to NCWRC for using a variety of mechanisms to inform and listen to those outside the Agency. Keep up the good work.</p>	
<p>Okay about game lands First, these comments are my own and do not represent those of any agency. I am an upland bird hunter. I have gotten back into quail hunting recently. INcluding getting a German Shorthaired Pointer, joining a local preserve and buying a new shotgun and a bunch of other stuff. I have probably spent about 10 k this year on hunting. So you can see that this is important to me and the States economy. As I got to know the quail situation in NC I was appalled by stories of how the quail populations have crashed. My comments for WRC game lands is to try and restore appropriate habitat on these game lands and if the biologists think appropriate, help out natural reproduction. This October I will be going to Vermont to hunt grouse, where I originally got into hunting. I would much prefer to hunt quail in NC, but the wild birds are pretty scarce.</p>	<p>There are birds on the Conoho Farms sections of the Lower Roanoke River Wetlands. Numerous native warm season grass fields and field borders are excellent areas to find these birds. Early successional habitats are addressed in the plan.</p>

XV. Game Land Management Plan comment from the North Carolina Natural Heritage Program



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

August 30, 2013

Mr. David Turner, Management Biologist
Lower Roanoke River Wetlands Game Land
Williamston Depot
19455 Hwy 125 N
Williamston NC 27892

RE: Lower Roanoke River Wetlands Game Land Management Plan

Dear Mr. Turner:

The North Carolina Natural Heritage Program appreciates the opportunity to provide input as the North Carolina Wildlife Resources Commission (WRC) develops a management plan for the Lower Roanoke River Wetlands Game Land. We also appreciate the ecosystem management approach that the WRC has historically applied to managing the Game Lands, and would encourage WRC to continue with this management philosophy, especially as natural habitats across North Carolina are degraded, and habitat fragmentation increases. Maintaining high-quality examples of North Carolina's natural ecosystems is important for native wildlife - including rare species - and for the citizens of our state.

The Natural Heritage Program (NHP) welcomes a continued partnership in conservation, and offers to provide information on natural resources that we have compiled over the years - often with the help of WRC biologists. We propose that WRC incorporate into the management plan consideration of rare species, special animal habitats, and exemplary and rare natural communities, and particularly, the Significant Natural Heritage Areas that have been identified by the NHP as priorities for conservation. Information on these resources is available from NHP as GIS data layers and natural area site reports. In addition, NHP biologists are available to provide additional specific information as needed.

We suggest that existing commitments associated with Dedicated Nature Preserves and Registered Heritage Areas be recognized in the management plan. The information on Dedicated Nature Preserves was recently provided to Isaac Harold for all game lands; if we need to provide information specific to Lower Roanoke River Wetlands directly to you, please let us know. There are some specific issues we recommend addressing in the Lower Roanoke River Wetlands Game Lands management plan. These recommendations would include maintaining the integrity of the hardwood forest, and minimizing fragmentation to the extent possible. Disturbances to bottomlands can easily bring in exotic plants, such as privet and *Microstegium*; thus, it is very important to avoid creating new roads or tracks in these sensitive wetlands, especially in areas identified by the NHP as Significant Natural Heritage Areas, and even more so in those portions that are Registered Heritage Areas or Dedicated Nature Preserves. In some areas, it is preferable to allow some old tracks to re-vegetate back to a natural forested condition. Also, we recommend monitoring for and removal of invasive exotic species, treating any gypsy moth outbreaks using the most target-specific means available.

The Lower Roanoke River Wetlands Game Land management plan is intended to guide management and user activities for the next ten years. During that time, North Carolina will most likely continue to be one of the fastest-growing states in the U.S. Maintaining the integrity of natural areas and

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connectivity for wildlife within the Game Lands will provide a much greater opportunity for North Carolina's native diversity to remain viable. Thank you for your contribution to the conservation of our natural resources in North Carolina. Please contact me or my staff if you have any questions, or would like additional information.

Sincerely,



LP
Linda Pearsall

XVI. Species Ranking Sheet

Descriptions and definitions are gathered from LeGrand et al. (2013) and Gadd and Finnegan (2013).

North Carolina Status Designations for Animals

Status Code	Status	Definition
T	Threatened	"Any native or once-native species of wild animal which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, or one that is designated as a threatened species pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).
SC	Special Concern	"Any species of wild animal native or once-native to North Carolina which is determined by the Wildlife Resources Commission to require monitoring but which may be taken under regulations adopted under the provisions of this Article." (Article 25 of Chapter 113 of the General Statutes; 1987).
SR	Significantly Rare	Any species which has not been listed by the N.C. Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state (or recently occurred in the state) in small numbers and has been determined by the N.C. Natural Heritage Program to need monitoring. This is a NC Natural Heritage Program designation.) Significantly Rare species include "peripheral" species, whereby North Carolina lies at the periphery of the species' range as well as species of historical occurrence with some likelihood of re-discovery in the state. Species considered extirpated in the state, with little likelihood of re-discovery, are given no N.C. Status (unless already listed by the N.C. Wildlife Resources Commission as E, T, or SC).

North Carolina Rank Designations of Animals by the North Carolina Natural Heritage Program

Rank	Number of Extant Occurrences	Description
S1	1-5	Critically imperiled - Critically imperiled in North Carolina due to extreme rarity or some factor(s) making it especially vulnerable to extirpation (local extinction) from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1000).

S2	6-20	Imperiled - Imperiled in North Carolina due to rarity or some factor(s) making it very vulnerable to extirpation from the state. Typically 6-20 occurrences or few remaining individuals (1,000-3,000).
S3	21-100	Vulnerable - Vulnerable to extinction in North Carolina either because rare or uncommon, or found only in restricted range (even if abundant at some locations), or due to other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
S4	100-1000	Apparently secure - Apparently secure and widespread in North Carolina, usually with more than 100 occurrences and more than 10,000 individuals.
_B	1-?	Rank of the breeding population in the state. Used for migratory species only.
_N	1-?	Rank of the non-breeding population in the state. Used for migratory species only.
_?	---	Uncertain - Denotes inexact or uncertain numeric rank.

Federal Status Designations for Animals

Status Code	Status	Definition
SC	Species of Concern	"The Service remains concerned about these species, but further biological research and field study are needed to resolve the conservation status of these taxa. Many species of concern will be found not to warrant listing, either because they do not qualify as species under the definition in the [Endangered Species] Act. Others may be found to be in greater danger of extinction than some present candidate taxa. The Service is working with the States and other private and public interests to assess their need for protection under the Act. Such species are the pool from which future candidates for listing will be drawn." (Federal Register, Feb 28, 1996). The Service suggests that such taxa be considered as "Species of Concern" which as no official status.

Global Rank Designations of Animals by NatureServe

Rank	Number of Extant Occurrences	Description
G3	21-100	Vulnerable - Vulnerable globally either because very rare throughout its range, found only in restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.

G4	100-1000	Apparently secure - Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery) and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically with more than 100 occurrences and more than 10,000 individuals.
G5	1000+	Secure - Common, widespread, and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
T_	-	The rank of a subspecies or variety. As an example, G4T1 would apply to a subspecies of a species with an overall rank of G4, but the subspecies warranting a rank of G1.
Q	-	Questionable taxonomy that may reduce conservation priority. Distinctiveness of this entity as a taxon at the current level is questionable. Resolution of this uncertainty may result in change from a species to a subspecies or inclusion of this taxon in another taxon, with the resulting Element having a lower-priority conservation status rank.

North Carolina Status Designations for Plants

Status Code	Status	Definition
T	Threatened	"Any resident species of plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (GS 19B 106:202.12).
SR	Significantly Rare	Any species not listed by the N.C. Plant Conservation Program as Endangered, Threatened, or Candidate, which is rare in North Carolina, generally with 1-100 populations in the state, frequently substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease).
SR-D	Disjunct	The species is disjunct to North Carolina from a main range in a different part of the country or world.
SR-P	Peripheral	The species is at the periphery of its range in North Carolina. These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina.

North Carolina Rank Designations of Plants by the North Carolina Natural Heritage Program

Rank	Number of Extant Populations	Description
S1	1-5	Critically imperiled - Critically imperiled in North Carolina due to extreme rarity or some factor(s) making it especially vulnerable to extirpation (local extinction) from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1000).
S2	6-20	Imperiled - Imperiled in North Carolina due to rarity or some factor(s) making it very vulnerable to extirpation from the state. Typically 6-20 occurrences or few remaining individuals (1,000-3,000).
_?	---	Uncertain - Denotes inexact or uncertain numeric rank.

Global Rank Designations of Plants

Rank	Number of Extant Populations	Description
G3	21-100	Vulnerable - Vulnerable globally either because very rare throughout its range, found only in restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
G4	100-1000	Apparently secure - Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery) and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically with more than 100 occurrences and more than 10,000 individuals.
G5	1000+	Secure - Common, widespread, and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.

XVII. Deeds

Doug Abernathy Property

Sep 12 05 11:31a

Robert Beach

52 792 4672

p. 4

08-00292

BOOK K-15 PAGE 72

Prepared By: Teresa L. White, Assistant Attorney General
P. O. Box 629, Raleigh, N. C. 27602

STATE OF NORTH CAROLINA

DEED OF GIFT

COUNTY OF MARTIN

THIS DEED, made and entered into this the 26th day of January, 1996, by and between CLAUDE DOUGLAS ABERNATHY (Divorced), Grantor, and the STATE OF NORTH CAROLINA, C/O State Property Office, 116 W. Jones Street, Raleigh, North Carolina 27603, Grantee;

W I T N E S S E T H :

THAT the said Grantor, in consideration of the sum of ONE AND NO/100 (\$1.00) DOLLAR, and other good and valuable consideration to him paid by the Grantee, receipt of which is hereby acknowledged, but subject to the life estate herein reserved, has bargained and sold and by these presents does bargain, sell and convey, unto the said Grantee, its successors and assigns, all of that certain tract or parcel of land situate, lying and being in the Poplar Point Township, Martin County, North Carolina, and being more particularly described as follows:

Beginning at a pk nail at the intersection of NCSR 1411 and Highway 125, thence with said NC Highway 125 S 28° 34' 39" E 128.99 feet, S 28° 22' 46" E 1,837.62 feet, S 29° 17' 55" E 107.70 feet, S 31° 56' 46" E 112.37 feet, S 36° 42' 48" E 113.65 feet, S 40° 52' 49" E 107.56 feet, S 45° 28' 41" E 107.90 feet, S 49° 30' 15" E 107.75 feet, S 53° 45' 37" E 108.68 feet, S 57° 35' 57" E 110.71 feet, S 59° 52' 45" E 909.01 feet to an existing pk nail in said center line, thence leaving center line north 32° 43' 09" E 182.25 feet along the center line of a 30 feet ingress

RECORDED AND INDEXED

MARTIN COUNTY TAX OFFICE

Taxes paid thru 1995

TRANSFERRED ASSESSOR

BGOK K-15 PAGE 73

- 2 -

and egress, thence N 12° 26' 21" W 282.54 feet, thence N 01° 08' 21" W 125.28 feet, thence N 20° 46' 03" E 132.86 feet, thence N 37° 24' 33" E 135.89 feet, thence N 48° 31' 42" E 220.44 feet, thence N 59° 17' 51" E 139.04 feet, thence S 41° 26' 52" E 100.74 feet, thence S 58° 46' 48" E 63.74 feet, thence S 63° 59' 04" E 195.56 feet to the POINT OF BEGINNING, thence N 46° 28' 18" E 108.05 feet to an iron rod set, thence S 57° 29' 58" E 232.57 feet to an iron rod set, thence S 32° 32' 18" W 149.71 feet to an iron rod set, thence N 56° 14' 56" W 268.32 feet to an iron rod set, thence N 46° 28' 18" E 40.19 feet to the POINT OF BEGINNING, containing 36,808.7 square feet or 0.8 acre more or less and more accurately shown on map by Roanoke Land Surveying entitled "State of North Carolina, Everett Tract," dated October 19, 1995 by Randolph P. Nicholson, RLS L-2740.

Together with a perpetual easement for the purpose of ingress and egress extending 15 feet each side of a center line more particularly described as follows: Beginning at the Point of Beginning of the aforementioned description of the 0.8 acre more or less tract, thence N 63° 59' 04" W 195.56 feet, thence N 58° 46' 48" W 63.74 feet, thence N 41° 26' 52" W 100.74 feet to a point in the center line of an existing easement described and recorded in Plat Cabinet B, Slide 363-H, Martin County Registry.

Grantor recognizes that the adjoining State game land will be utilized as a hunting area. Grantor, his successors and assigns, hereby agree they will not seek to have any portion of said State game lands declared by the North Carolina Wildlife Resources Commission a "safety zone" or "restricted zone" as outlined under 10D N.C. Administrative Code .0002(a), in accordance with the terms of the deed conveying the lands conveyed herein to the Grantor recorded in Deed Book K-15, page 68, Martin County Registry.

BGGK K-15 PAGE 74

- 3 -

BUT THIS CONVEYANCE is made subject to a life estate in said lands which is hereby expressly excepted and reserved by Grantor for and during his natural life.

TO HAVE AND TO HOLD the aforesaid tract or parcel of land and all privileges and appurtenances thereunto belonging, subject to the life estate in Claude D. Abernathy, unto the State of North Carolina, its successors and assigns, forever.

AND the said Grantor does covenant that he is seized of the said premises in fee simple and has the right to convey the same in fee simple; that the same is free from any encumbrances except the life estate hereinabove reserved; and that he will warrant and defend the said title to the same against the claims of all persons whomsoever.

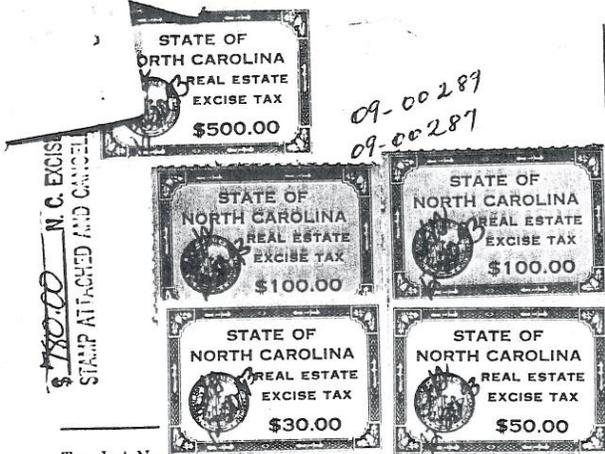
IN TESTIMONY WHEREOF, the said Grantor has hereunto set his hand and seal, all on the day and year first above written.

Claude Douglas Abernathy (SEAL)
CLAUDE DOUGLAS ABERNATHY (Divorced)

Beach House Swamp

File 58-178

BOOK 1-14 PAGE 809



INDEXED
FILED AND RECORDED IN OFFICE OF
REGISTER OF DEEDS, MARTIN COUNTY,
WILLIAMSTON, N. C. AT 4:25 O'CLOCK
P. M. December 17, 1993
IN BOOK M-14 PAGE 809
Jina P. Mannings
REGISTER OF DEEDS
by Jim Duffin, Deputy
Recording Time, Book and Page

Tax Lot No. _____ Parcel Identifier No. _____
Verified by _____ County on the _____ day of _____, 19 _____
by _____ FEB 1 1994

SECRETARY OF STATE
Mail after recording to State of North Carolina, State Property Office, 116 West Jones Street,
Raleigh, North Carolina 27603-8003 (ATTN: Alton Phillips)

This instrument was prepared by Paul F. Hurt

Brief description for the Index Beechhouse Tract & Devereaux Timber

NORTH CAROLINA SPECIAL WARRANTY DEED

THIS DEED made this 13th day of December, 19 93, by and between

GRANTOR
THE NATURE CONSERVANCY, a non-profit corporation of the District of Columbia
1815 North Lynn Street
Arlington, Virginia 22209

GRANTEE
STATE OF NORTH CAROLINA
North Carolina Department of Administration
State Property Office
116 West Jones Street
Raleigh, North Carolina 27603-8003

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the City of _____ Township,

Martin County, North Carolina and more particularly described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.

TRANSFERRED ASSESSOR

The property hereinabove described was acquired by Grantor by instrument recorded in Book J-13, Page 675, Martin County Registry.

A map showing the above described property is recorded in Plat Book page TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor has done nothing to impair such title as Grantor received, and Grantor will warrant and defend the title against the lawful claims of all persons claiming by, under or through Grantor, except for the exceptions hereinafter stated. Title to the property hereinabove described is subject to the following exceptions:

- 1. Ad valorem taxes for 1994 and subsequent years.
2. All reservations, restrictions, easements and other matters of records or in existence.

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

THE NATURE CONSERVANCY (Corporate Name) By: CHARLES R. BASSETT Vice President

ATTEST: PAUL F. HURT Assistant Secretary (Corporate Seal)



USE BLACK INK ONLY

NORTH CAROLINA, I, a Notary Public of the County and State aforesaid, certify that personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this day of 19 My commission expires: Notary Public



NORTH CAROLINA, Orange County. I, a Notary Public of the County and State aforesaid, certify that Paul F. Hurt Assistant Secretary of The Nature Conservancy, a non-profit corporation of the District of Columbia, personally came before me this day and acknowledged that he is Assistant Secretary of The Nature Conservancy, a non-profit corporation of the District of Columbia, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Vice President, sealed with its corporate seal and attested by him as its Assistant Secretary. Witness my hand and official stamp or seal, this 13th day of December, 1993. My commission expires: Oct 5, 1998 (Paul F. Hurt) Notary Public



COMMONWEALTH LAND
TITLE INSURANCE COMPANY
A Reliance Group Holdings Company

Beechouse Tract

File No. DO46271

Policy No.

BOOK M-14 PAGE 812

TRACT 1: - That identical tract or parcel of land conveyed from R. J. Sydenstricker to Riverside Manufacturing Company, Inc., by deed dated March 19, 1946, of record in Book P-4, page 337, in the Office of the Register of Deeds of Martin County, and being more particularly described, according to said deed, as follows:

That certain tract or parcel of land lying and being in Hamilton Township, Martin County, North Carolina, and which is bounded on the North by lands of W. C. House; bounded on the East by the Roanoke River; bounded on the South by lands of Clara Everette; and bounded on the West by other lands of Annie A. Beach, know as part of Tract No. 2 or the Southern tract in the division the Anthony land, said lands being more definitely set out and described as follows:

BEGINNING at a Sycamore tree on th West side of Roanoke River, corner for this and lands of W. C. House; thence with the said House line South 49 degrees 0 minutes West 4,454 feet. to a Beech tree, corner; thence leaving the said House line and going South 12 degrees 0 minutes East 294 feet, South 6 degrees 0 minutes East 150 feet, South 19 degrees 0 minutes East 230 feet, South 11 degrees 0 minutes East 102 feet, South 1 degree 30 minutes East 262 feet, South 27 degrees 45 minutes East 175 feet South 09 degrees 15 minutes East 360 feet, South 15 degrees 45 minutes East 180 feet, south 12 degrees 0 minutes East 295 feet, South 7 degrees 45 minutes East 247 feet, South 7 degrees 0 minutes West 70 feet, South 4 degrees 0 minutes West 105 feet, South 2 degrees 0 minutes East 175 feet, South 2 degrees 0 minutes West 170 feet, South 7 degrees 30 minutes East 155 feet, South 0 degrees 30 minutes West 260 feet, South 2 degrees 45 minutes West 165 feet, South 0 degrees 45 minutes West 135 feet, South 60 degrees 0 minutes East 70 feet to an eight (8) inch Hackberry tree at the intersection of Price Gut with Mill Run, corner for this and lands of Clara Everette; thence with Price Gut as the dividing line between this and lands of Clara Everette, North 19 degrees 0 minutes East 250 feet, North 3 degrees 10 minutes East 180 feet;



COMMONWEALTH LAND
TITLE INSURANCE COMPANY
A Reliance Group Holdings Company

File No. DO46271

Policy No.

BOOK M-11 PAGE 812

BOOK J-13 PAGE 682

thence crossing Price Gut and continuing with the line of Clara Everett North 49 degrees 20 minutes East 1,939 feet to a Persimmon tree at Roanoke River; thence with the said Roanoke River in a general northerly direction to the point of beginning at lands of W. C. House, containing 282.6 acres, more or less, according to map of Charles H. Hale, dated March 18, 1946.



COMMONWEALTH ND
 TITLE INSURANCE COMPANY
 A Reliance Group Holdings Company

File No. DO46271
 Tract 2

Policy No.

BOOK M-14 PAGE

813

TRACT 2: - That identical tract of parcel of land conveyed from W. C. House, et ux. to Riverside Manufacturing Company, Inc., by deed dated November 12, 1952, of record in Book J-5, page 367, in the Office of the Register of Deeds of Martin County, and being more particularly described, according to said deed, as follows:

That certain tract or parcel of land lying and being in Hamilton Township, Martin County, North Carolina, which is bounded on the North by lands of H. M. Peele; bounded on the East by Roanoke River; bounded on the South by lands of Riverside Manufacturing Company, Inc.; and bounded on the West by other lands of W. C. House and lands of H. M. Peele, said lands being more definitely set out and described as follows:

BEGINNING at a Hickory tree at edge of highland at mean of high water mark, being a new corner for this in line of Riverside Manufacturing Company, Inc., and running thence with the edge of the highland at the mean high water mark in a Northerly direction to line of H. M. Peele; thence with the line of H. M. Peele at edge of highland at mean of high water mark in a northerly direction to a marked Black Gum at edge of swamp, corner; thence continuing with the said Peele line along a marked line North 47 degrees 30 minutes East 50.7 chains to a gum; thence still with the said Peele line North 60 degrees East 10 chains, North 53 degrees 20 minutes East 24 chains, North 83 degrees East 21 chains to Roanoke River; thence with said Roanoke River in a Southerly direction to line of Riverside Manufacturing Company, Inc.; thence with line of said Riverside Manufacturing Company, Inc., in a westerly direction to the point of beginning, containing 328 acres, more or less. Said lands are further described as a portion of that certain



COMMONWEALTH LAND
TITLE INSURANCE COMPANY
A Reliance Group Holdings Company

File No. DO46271

Policy No.

BOOK M-14 PAGE 814

BOOK J-13 PAGE 683

tract of land which was conveyed to W. C. House, et ux., Mary W. House, by Elbert S. Peele, Commissioner, by deed bearing date of December 14, 1943, and which is duly recorded in Book G-4, page 454, in the Office of the Register of Deeds of Martin County, to which said deed reference is hereby made.

EASEMENT:

And the parties of the first part herein hereby further bargain, sell, give, grant, and convey unto the said Riverside Manufacturing Company, Inc., its successors and assigns, a perpetual right to cross lands now owned by the parties of the first part herein and which are located on the western side of the lands herein conveyed, along any now existing paths, and further convey to the said party of the second part herein a right of way from said pint to main road along any right-of-way shall be deemed covenants to run with the land herein conveyed.

(PARTIES OF THE FIRST PART ARE W. C. HOUSE AND WIFE, MARY W.HOUSE)

58-J
58-F 58-17.7

09-00287
05-04708

FILED

AUG 12 1993

SECRETARY OF STATE

BOOK G-14 PAGE 132

FILED AND RECORDED IN OFFICE OF
REGISTER OF DEEDS, MARTIN COUNTY,
WILLIAMSTON, N. C. AT 12:03 O'CLOCK

P. M. June 2 1993
IN BOOK G-14 PAGE 132

Jana P. Manning
REGISTER OF DEEDS
By Patricia B. Huffin, Coot.

Excise Tax

Recording Time, Book and Page

Tax Lot No. Parcel Identifier No.
Verified by County on the day of, 19
by

0 Mail after recording to State of North Carolina, State Property Office, 116 West Jones Street,
Raleigh, North Carolina 27603-8003 (Attn: Alton Phillips)

This instrument was prepared by Paul F. Hurt, Esquire

Brief description for the Index

Deveraux, ~~XXXXXX~~ L.P. Lindsley

NORTH CAROLINA SPECIAL WARRANTY DEED

THIS DEED made this 27th day of May, 19 93, by and between

GRANTOR

GRANTEE

THE NATURE CONSERVANCY, a non-profit
corporation of the District of Columbia,
1815 North Lynn Street
Arlington, Virginia 22209

STATE OF NORTH CAROLINA
North Carolina Department of Administration
State Property Office
116 West Jones Street
Raleigh, North Carolina 27603-8003

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the City of Township, Martin County, North Carolina and more particularly described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.

Grantor hereby reserves to itself, its successors and assigns all right, title and interest in and to all standing timber located on the Deveraux Tract, Parcel 1 of Exhibit A.

The property hereinabove described was acquired by Grantor by instrument recorded in Book J-13,

Page 675, Martin County Registry and Book T-13, Page 567, Martin County Registry.

A map showing the above described property is recorded in Plat Book page

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor has done nothing to impair such title as Grantor received, and Grantor will warrant and defend the title against the lawful claims of all persons claiming by, under or through Grantor, except for the exceptions hereinafter stated.

Title to the property hereinabove described is subject to the following exceptions:

1. Ad valorem taxes for 1993 and subsequent years.
2. All reservations, restrictions, easements and other matters of records or in existence.

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

THE NATURE CONSERVANCY

(Corporate Name)

By: *Charles R. Bassett*
CHARLES R. BASSETT
Vice President

USE BLACK INK ONLY

.....(SEAL)
.....(SEAL)
.....(SEAL)
.....(SEAL)

ATTEST:

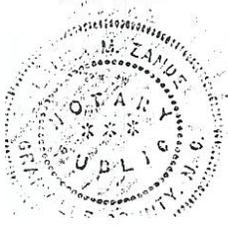
Paul F. Hurt
PAUL F. HURT
Assistant Secretary (Corporate Seal)



USE BLACK INK ONLY

NORTH CAROLINA,County.
I, a Notary Public of the County and State aforesaid, certify that Grantor,
personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this day of, 19.....
My commission expires: Notary Public

SEAL - STAMP



USE Black Ink

NORTH CAROLINA, OrangeCounty.
I, a Notary Public of the County and State aforesaid, certify that Paul E. Hurt
personally came before me this day and acknowledged that he is Assistant Secretary of
The Nature Conservancy, a nonprofit corporation of the District of Colum
and that by authority duly
given and as the act of the corporation, the foregoing instrument was signed in its name by its Vice
President, sealed with its corporate seal and attested by him as its Assistant Secretary.
Witness my hand and official stamp or seal, this 26 day of May, 1993.
My commission expires: 12-26-93 Laura M. Zande Notary Public



COMMONWEALTH LAND
 TITLE INSURANCE COMPANY
 A Reliance Group Holdings Company

EXHIBIT A

File No. DO46271

Policy No.

GEORGIA-PACIFIC
Devereaux Tract

That identical tract or parcel of land shown as the Fourth Tract in deed from Atlas Plywood Corporation to Georgia-Pacific Corporation dated June 29, 1959, recorded in Book Q-6, page 401, in the Office of the Register of Deeds of Martin County, and being more particularly described, according to said deed, as follows:

Known as the Devereaux Tract bounded on the North by Roanoke River and the lands of True Temper Corporation; East by Roanoke River; South by Roanoke River and Conohoe (Cenoke) Creek; West by Conohoe (Cenoke) Creek, the Slade lands and Ash Gut, and being more particularly described as follows:

BEGINNING at a railroad iron, southeast corner of the Slade lands on Conohoe (Cenoke) Creek; runs thence slightly northwest with the eastern line of the Slade lands approximately seven-tenths of a mile to Ash Gut; thence northwesterly with the line of Ash Gut approximately seven-tenths of a mile to a point near Roanoke River; thence down the run of Roanoke River northeasterly approximately one mile and easterly approximately one and one-fourth miles to the northwest corner of True Temper Corporation on Roanoke River; thence with the western line of the True Temper Corporation southerly approximately one-half mile to a stake; thence approximately South 80 degrees East with the southern line of the True Temper Corporation approximately one and one-eighth miles to a marble post, a corner of the True Temper Corporation; thence northeasterly approximately one-fourth of a mile to the bank of Roanoke River; thence with the run of Roanoke River easterly approximately seven-tenths of a mile; thence continuing with the meanders of the run of the Roanoke River in a generally southerly direction approximately six miles to the mouth of Conohoe (Cenoke) Creek; thence up the run of Conohoe Creek in a generally northwesterly direction approximately three and three-fourths miles to the point of beginning, containing 4702 acres, more or less, and being composed of the First, Second, Third & Seventh Tracts described in deed from Marvil Package Company to Atlas Plywood Corporation dated March 1, 1947, of record in Book Q-4, Page 379, Martin County Registry.

FORM 2002 (Continuation)

EXHIBIT A CONTINUED...

Tract No. 2: That farm or tract of land formerly owned by W. H. Roberson, called and known as the Conoho Farm, adjoining the lands of Hubert Ward, C.D. Carstarphen and others containing 110 acres, more or less. This is the Roberson land owned one-half by Louise V. James and one-half by the remaining parties of the first part. This description is subject to a line agreement between the parties of the first part and the Lucy Ward heirs being recorded contemporaneously with this deed.

And being the same two tracts of land conveyed to L. P. Lindsley by B. A. Critcher and Z. V. Bunting, Commissioners by deed dated November 24, 1942 and recorded in Book G-4, at page 574 in the Martin County Public Registry.

Tract No. 4: Lying and being in Williamston Township, beginning in N.S. Peel's line on Conoho Creek, it being a forked cypress, thence a straight line along said Peel's line to a dam, thence south along the run of the swamp to two gums, thence along said Peel's line to the dividing line between Peel & Mizell, thence to a cypress standing in Conoho Creek, thence West along said Creek to the beginning and being the same land conveyed by deed to A. L. Roy by A. J. Mizell and of record in the Public Registry of Martin County in Book RR, at page 44, more or less, and being the same premises conveyed to C. D. Carstarphen by B. Duke Critcher, Trustee, said deed being of record in the Public Registry of Martin County in Book O-2, page 233. Same being the land deeded to F. U. Barnes by Wheeler Martin, Trustee by deed dated 22nd of March 1930 and of record in Martin County Registry in Book F-3, page 1.

And being the same tract of land conveyed to Lawrence Lindsley by F. U. Barnes and wife, Mamie Barnes by deed dated February 14, 1946 and recorded in Book P-4, at page 274 in the Martin County Public Registry.

This description is subject to a Line Agreement between L. P. Lindsley and wife, Margaret G. Lindsley and View Nicholson and wife, Aletha Nicholson recorded in the Public Registry of Martin County in Book D-7, page 141 and dated September 30, 1961.

This Chesson tract is made subject to a 10 foot wide right of way from the old Conoho Road to Conoho Creek running near the old John Chesson house for the purpose of maintaining a cartway for the use of F. U. Barnes and wife, their heirs and assigns, employees and licensees. This right of way is reserved in Deed Book P-4, page 274 of the Martin County Public Registry and is dated February 14, 1946.

It is intended herein to convey to the party of the second part all of the interests of the parties of the first part in those lands known as the L. P. Lindsley Conoho Farm; and also conveyed herein are any and all rights of the parties of the first part of ingress to and egress from the above lands over all roads and paths leading to said lands.

Remainder of L.P. Lindsley/James tract.

08-00292

58-17-11

FILED

BOOK *K-15* PAGE 76

SEP 16 1996

DEED PREPARED BY: Teresa L. White
Assistant Attorney General
P.O. Box 629
Raleigh, N. C. 27602-0629

STATE OF NORTH CAROLINA

DEED

COUNTY OF MARTIN

THIS DEED, made and entered into this the 27th day of December, 1995, by and between W. HARRELL EVERETT, JR., and wife LILA S. EVERETT, FRANCES E. CHESSON and husband LARRY W. CHESSON, JAMES A. EVERETT and wife, GAIL PERRY EVERETT, Grantors, and the STATE OF NORTH CAROLINA, C/O State Property Office, 116 W. Jones Street, Raleigh, North Carolina 27603, Grantee;

W I T N E S S E T H :

THAT the said Grantors, in consideration of the sum of SEVEN HUNDRED THOUSAND THREE HUNDRED EIGHTY-FOUR AND NO/100 (\$700,384.00) DOLLARS to them paid by the Grantee, receipt of which is hereby acknowledged, have bargained and sold and by these presents do bargain, sell and convey, unto the said Grantee, its successors and assigns, all of that certain tract or parcel of land situate, lying and being in Poplar Point Township, Martin County, North Carolina, and being more particularly described as follows:

Being a tract of land in Martin County, North Carolina, Poplar Point Township, adjoining and being on the north side of Highway 125, bounded on the northwest by the Grantor Everett, bounded on the north by Conoho Creek and on the south by Abbitt Mills and being

\$ 1,401.00

MARTIN COUNTY TAX OFFICE

Taxes paid thru 1995

TRANSFERRED ASSESSOR



more accurately described by a map by Roanoke Land Surveying entitled "State of N.C. Everett Tract" dated October 19, 1995, by Randolph P. Nicholson, RLS L-2740. Starting at an existing pk nail where Mill Branch crosses N.C. Highway 125; thence with the center line of said N.C. Highway 125; N 85° 24' 31" W 783.19 feet to an existing pk nail the POINT OF BEGINNING; thence from said point of beginning continuing with the center line of said N.C. Highway 125; N 85° 43' 58" W 57.62 feet, N 85° 28' 09" W 943.73 feet, N 84° 26' 22" W 139.73 feet, N 81° 20' 02" W 106.97 feet, N 77° 13' 54" W 106.76 feet, N 74° 18' 48" W 107.51 feet, N 67° 05' 30" W 108.01 feet, N 64° 39' 57" W 109.13 feet, N 61° 00' 11" W 108.69 feet, N 59° 55' 28" W 235.99 feet, N 59° 52' 45" W 909.01 feet, N 57° 35' 57" W 110.71 feet, N 53° 45' 37" W 108.68 feet, N 49° 30' 15" W 107.75 feet, N 45° 28' 41" W 107.90 feet, N 40° 52' 49" W 107.56 feet, N 36° 42' 48" W 113.65 feet, N 31° 56' 46" W 112.37 feet, N 29° 17' 55" W 107.70 feet, N 28° 22' 46" W 1837.62 feet, to a pk nail set, thence leaving said center line of N. C. Highway 125 north, thence N 55° 15' 22" E 970.03 feet, thence N 18° 50' 55" W 172.73 feet to an iron rod set, thence N 50° 27' 43" E 903.95 feet, to an iron rod set, thence N 24° 41' 15" E 2186.02 feet to an iron rod set, thence N 52° 41' 39" W 361.80 feet to an iron rod set in the center line of a path and where a culvert crosses, thence N 66° 31' 06" W 1199.88 feet to the center line of a Branch, thence with said center line of Branch N 43° 29' 07" E 99.69 feet, N 41° 59' 07" E 110.20 feet, N 80° 44' 07" E 122.76 feet, N 79° 44' 07" E 112.20 feet, N 55° 29' 07" E 226.38 feet, N 74° 44' 07" E 184.14 feet, N 51° 44' 07" E 198.00 feet, and Branch ending, thence N 10° 49' 07" E 660.00 feet to an existing concrete monument, thence N 80° 49' 07" E 400.00 feet, thence S 79° 10' 53" E 898.00 feet to an existing concrete monument at said Conoho Creek, thence with said center line of said Conoho Creek, S 11° 35' 53" E 153.33 feet, S 50° 25' 53" E 147.67 feet, S 02° 40' 53" E 300.00 feet, S 74° 25' 53" E 450.00 feet, S 52° 10' 53" E 150.00 feet, S 29° 55' 53" E 80.00 feet, S 67° 40' 53" E

310.00 feet, S 06° 40' 53" E 100.00 feet, S
 45° 25' 53" E 150.00 feet, S 19° 25' 53" E
 160.00 feet, S 32° 55' 53" E 160.00 feet, S
 20° 55' 53" E 150.00 feet, S 09° 08' 01" W
 1174.66 feet, S 32° 07' 06" E 320.00 feet, S
 53° 07' 06" E 150.00 feet, S 17° 52' 54" W
 160.00 feet, S 18° 37' 06" E 350.00 feet, S
 56° 07' 06" E 170.00 feet, S 07° 07' 06" E
 240.00 feet, S 58° 07' 06" E 150.00 feet, S
 54° 37' 06" E 239.00 feet, S 73° 22' 06" E
 150.00 feet, N 77° 22' 54" E 240.00 feet, N
 59° 22' 54" E 160.00 feet, S 28° 07' 06" E
 170.00 feet, S 15° 07' 06" E 230.00 feet, S
 03° 52' 06" E 120.00 feet, S 05° 07' 06" E
 210.00 feet to an existing concrete monument,
 thence continuing with said Creek S 01° 37'
 06" E 140.00 feet, S 33° 17' 06" E 153.50
 feet, S 45° 07' 54" W 100.00 feet, S 37° 52'
 54" W 100.00 feet, S 49° 22' 54" W 100.00
 feet, S 39° 32' 19" W 37.79 feet, to an
 existing concrete monument, thence continuing
 along said Creek S 20° 31' 14" W 79.54 feet,
 S 01° 58' 43" W 98.45 feet, S 03° 27' 52" W
 69.50 feet, S 55° 51' 03" W 162.89 feet, S
 03° 00' 30" E 183.32 feet, S 27° 26' 00" W
 188.74 feet, S 28° 01' 21" W 124.36 feet, S
 13° 10' 43" E 200.29 feet, S 19° 30' 14" E
 192.77 feet, S 13° 37' 49" W 132.59 feet, S
 00° 05' 34" W 218.26 feet, S 35° 52' 40" W
 373.85 feet, N 88° 31' 31" W 110.18 feet, S
 37° 28' 58" W 76.88 feet, S 69° 46' 38" W
 60.49 feet, N 61° 39' 39" W 155.25 feet, N
 75° 12' 03" W 139.58 feet, N 86° 57' 04" W
 77.54 feet, S 63° 36' 08" W 196.65 feet, S
 03° 17' 03" E 157.77 feet, S 48° 59' 19" E
 85.76 feet, S 15° 22' 36" W 23.22 feet to an
 existing concrete monument, thence leaving
 said Creek and running thence the Manning
 property line S 15° 22' 36" W 170.16 feet to
 an existing iron pipe, thence S 62° 40' 28" W
 119.69 feet to an existing iron pipe, thence
 S 77° 29' 33" W 185.26 feet to an existing
 iron pipe, thence S 02° 48' 30" W 269.83 feet
 to an existing iron pipe S 36° 18' 54" W
 158.38 feet to an existing iron pipe, thence
 S 31° 48' 54" W 82.63 feet to an existing
 concrete monument on the northern right of
 way of said Highway 125 north, thence S 06°
 42' 32" W 50 feet to the said existing pk
 nail in the center line of said N.C. Highway

- 4 -

125 and being the place and POINT OF BEGINNING containing 659.57 acres.

SAVE AND EXCEPTING from said tract of land 3 parcels.

PARCEL 1 beginning at a pk nail at the intersection of NCSR 1411 and N.C. Highway 125, thence with said N.C. Highway 125 S 28° 34' 39" E 128.99 feet, thence with said center line S 28° 22' 46" E 1837.62 feet, thence S 29° 17' 55" E 107.70 feet, S 31° 56' 46" E 112.37 feet, S 36° 42' 48" E 113.65 feet, S 40° 52' 49" E 107.56 feet, S 45° 28' 41" E 107.90 feet, S 49° 30' 15" E 107.75 feet, S 53° 45' 37" E 108.68 feet, S 57° 35' 57" E 110.71 feet, S 59° 52' 45" E 909.01 feet to an existing pk nail in said center line, thence leaving center line N 32° 43' 09" E 182.25 feet along the center line of a 30-foot ingress and egress, thence N 12° 26' 21" W 282.54 feet, thence N 01° 08' 21" W 125.28 feet, thence N 20° 46' 03" E 132.86 feet, thence N 37° 24' 33" E 135.89 feet, thence N 48° 31' 42" E 220.44 feet, thence N 59° 17' 51" E 139.04 feet, thence N 45° 32' 37" E 93.54 feet, the POINT OF BEGINNING, thence from said point of beginning N 55° 43' 07" W 59.31 feet to an existing iron pipe, thence N 84° 28' 59" W 343.52 feet, N 26° 22' 03" W 91.70 feet, N 26° 51' 41" E 148.29 feet, N 47° 07' 37" E 130.67 feet, thence N 48° 18' 33" E 184.86 feet, thence N 61° 34' 17" E 131.66 feet, N 81° 54' 13" E 136.38 feet, S 61° 55' 51" E 76.95 feet, N 84° 08' 05" E 76.00 feet, N 84° 28' 13" E 149.26 feet, N 65° 59' 51" E 135.79 feet, N 74° 00' 29" E 168.21 feet, N 61° 52' 07" E 164.50 feet, N 05° 47' 15" E 205.72 feet, N 61° 13' 23" E 80.51 feet, S 75° 49' 29" E 121.86 feet, N 68° 12' 09" E 49.11 feet, N 23° 20' 29" E 120.82 feet, S 78° 43' 35" E 316.16 feet, S 13° 04' 51" W 164.41 feet, S 60° 48' 13" E 56.64 feet, N 84° 35' 49" E 53.66 feet, N 75° 14' 09" E 64.40 feet, N 63° 15' 23" E 71.08 feet, S 75° 32' 03" E 600.44 feet, S 05° 12' 21" E 64.47 feet, S 31° 57' 25" E 42.55 feet, S 72° 55' 53" E 223.99 feet, S 15° 30' 27" W 231.54 feet, N 72° 21' 31" W 272.10 feet, S 76° 38' 49" W 80.11 feet, N 77° 43' 21" W 92.99 feet, N 77° 54' 07" W

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130.94 feet, S 83° 12' 37" W 51.50 feet, S 62° 27' 21" W 90.15 feet, S 83° 18' 05" W 225.95 feet, S 88° 35' 17" W 222.84 feet, S 86° 24' 25" W 242.19 feet, N 63° 00' 00" W 178.25 feet, N 16° 15' 44" E 110.22 feet, S 61° 29' 28" W 362.43 feet, N 79° 11' 36" W 229.83 feet, S 63° 29' 20" W 87.93 feet, S 34° 41' 36" W 473.92 feet, N 55° 43' 07" W 15.12 feet to the center line of said ingress and egress and the place and POINT OF BEGINNING, containing 25.5 acres as per map by Roanoke Land Surveying dated October 19, 1995 entitled "State of NC Everett Tract" and being a 25.5-acre out parcel. Together with a perpetual easement for the purpose of ingress and egress extending 15 feet each side of a center line more particularly described as follows: Beginning at the Point of Beginning of the aforementioned description of the 25.5-acre tract, thence S 45° 32' 37" W 93.54 feet, S 59° 17' 51" W 139.04 feet, thence S 48° 31' 42" W 220.44 feet, thence S 37° 24' 33" W 135.89 feet, thence S 20° 46' 03" W 132.86 feet, thence S 01° 08' 21" E 125.28 feet, thence S 12° 26' 21" E 282.54 feet, thence S 32° 43' 09" W 182.25 feet to an existing pk nail in the center line of N.C. Highway 125.

PARCEL 2 - Beginning at a pk nail in the center lines of N.C. Highway 125 and NCSR 1411, thence with the center line of N.C. Highway 125 S 28° 34' 39" E 128.99 feet, thence S 28° 22' 46" E 1837.62 feet, thence S 29° 17' 55" E 107.70 feet, thence S 31° 56' 46" E 112.37 feet, thence S 36° 42' 48" E 113.65 feet, thence S 40° 52' 49" E 107.56 feet, thence S 45° 28' 41" E 107.90 feet, thence S 49° 30' 15" E 107.75 feet, thence S 53° 45' 37" E 108.68 feet, thence S 57° 35' 57" E 110.71 feet, thence S 59° 52' 45" E 909.01 feet to an existing pk nail in the center line of said N.C. Highway 125, thence leaving said center line of N.C. Highway 125 N 32° 43' 09" E 50.05 feet, to the right of way of said N.C. Highway 125 the place and Point of Beginning, thence leaving the point of beginning and with the said right of way of N.C. Highway 125 N 59° 52' 45" W 273.61 feet, thence leaving said Highway right of way N

32° 43' 09" E 155.94 feet, thence S 59° 52' 45" E 156.86 feet, thence N 37° 13' 54" E 11.59 feet, thence S 63° 25' 34" E 77.64 feet to the center line of a dirt path, thence with dirt path S 12° 26' 21" E 54.33 feet, thence S 32° 43' 09" W 132.20 feet to the right of way of said N.C. Highway 125 and the place and the POINT OF BEGINNING, containing 1 acre and being more accurately shown on map by Roanoke Land Surveying entitled "State of NC Everett Tract," dated revised January 6, 1996, by Randolph P. Nicholson, RLS L-2740.

PARCEL 3 - Beginning at a pk nail at the intersection of NCSR 1411 and Highway 125, thence with said NC Highway 125 S 28° 34' 39" E 128.99 feet, S 28° 22' 46" E 1,837.62 feet, S 29° 17' 55" E 107.70 feet, S 31° 56' 46" E 112.37 feet, S 36° 42' 48" E 113.65 feet, S 40° 52' 49" E 107.56 feet, S 45° 28' 41" E 107.90 feet, S 49° 30' 15" E 107.75 feet, S 53° 45' 37" E 108.68 feet, S 57° 35' 57" E 110.71 feet, S 59° 52' 45" E 909.01 feet to an existing pk nail in said center line, thence leaving center line north 32° 43' 09" E 182.25 feet along the center line of a 30 feet ingress and egress, thence N 12° 26' 21" W 282.54 feet, thence N 01° 08' 21" W 125.28 feet, thence N 20° 46' 03" E 132.86 feet, thence N 37° 24' 33" E 135.89 feet, thence N 48° 31' 42" E 220.44 feet, thence N 59° 17' 51" E 139.04 feet, thence S 41° 26' 52" E 100.74 feet, thence S 58° 46' 48" E 63.74 feet, thence S 63° 59' 04" E 195.56 feet to the POINT OF BEGINNING, thence N 46° 28' 18" E 108.05 feet to an iron rod set, thence S 57° 29' 58" E 232.57 feet to an iron rod set, thence S 32° 32' 18" W 149.71 feet to an iron rod set, thence N 56° 14' 56" W 268.32 feet to an iron rod set, thence N 46° 28' 18" E 40.19 feet to the POINT OF BEGINNING, containing 36,808.7 square feet or 0.8 acre more or less and more accurately shown on map by Roanoke Land Surveying entitled "State of North Carolina, Everett Tract," dated October 19, 1995 by Randolph P. Nicholson, RLS L-2740. Together with a perpetual easement for the purpose of ingress and egress extending 15 feet each side of a center line more particularly described as

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follows: Beginning at the Point of Beginning of the aforementioned description of the 0.8 acre more or less tract, thence N 63° 59' 04" W 195.56 feet, thence N 58° 46' 48" W 63.74 feet, thence N 41° 26' 52" W 100.74 feet to a point in the center line of an existing easement described and recorded in Plat Cabinet B, Slide 363-H, Martin County Registry.

This conveyance is made subject to an ingress and egress easement from the Grantee to the Grantor described as follows: Beginning at a pk nail at the intersection of centerlines of N.C. Highway 125 and SR 1411, thence with the center line of said N.C. Highway 125 S 28° 34' 39" E 128.99 feet to a pk nail, thence turning and running along the new property line between the Grantor and Grantee N 55° 15' 22" E 970.03 feet to point B on the aforementioned map, THE POINT OF BEGINNING. Thence N 18° 50' 55" W 172.73 feet to point K, said point being marked by an iron rod, thence N 50° 27' 43" E 903.95 feet to point J, said point being marked by an iron rod, thence N 24° 41' 15" E 1200.00 feet to point I, thence turning and leaving said property line S 65° 18' 45" E 30.00 feet to point H, thence S 24° 41' 15" W 1206.87 feet to point G, thence S 50° 27' 43" W 890.06 feet to point F, thence S 18° 50' 55" E 143.45 feet to point E, said point being marked by an iron rod, thence S 55° 15' 22" W 31.19 feet to point B, the POINT OF BEGINNING.

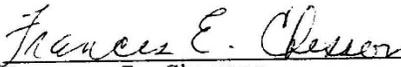
TO HAVE AND TO HOLD the aforesaid tract or parcel of land and all privileges and appurtenances thereunto belonging to the State of North Carolina, its successors and assigns, forever.

AND the said Grantors do covenant that they are seized of the said premises in fee simple and have the right to convey the same in fee simple; that the same are free from any encumbrances; and that they will warrant and defend the said title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the said Grantors have hereunto set their hands and seals, all on the day and year first above written.

 (SEAL)
W. Harrell Everett, Jr.

 (SEAL)
Lila S. Everett

 (SEAL)
Frances E. Chesson

 (SEAL)
Larry W. Chesson

 (SEAL)
James A. Everett

 (SEAL)
Gail Perry Everett

STATE OF NORTH CAROLINA

COUNTY OF Wayne

I, Olivia B. Brannon, a Notary

Public in and for the aforesaid County and State do hereby certify that W. HARRELL EVERETT, JR., and wife, LILA S. EVERETT, personally appeared before me this date and acknowledged the due execution of the foregoing instrument for the purpose therein expressed.

WITNESS my hand and Notarial Seal, this the 15th day of

December, 1995.

Olivia B. Brannon
Notary Public

My Commission Expires:

1-17-96

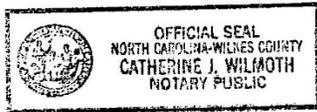


STATE OF NORTH CAROLINA

COUNTY OF WILKES

I, Catherine J. Wilmoth, a Notary Public in and for the aforesaid County and State do hereby certify that FRANCES E. CHESSON and husband, LARRY W. CHESSON, personally appeared before me this date and acknowledged the due execution of the foregoing instrument for the purpose therein expressed.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this the 27th day of December, 1995.



Catherine J. Wilmoth
Notary Public

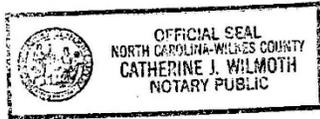
My Commission Expires:

2/10/98

STATE OF NORTH CAROLINA
COUNTY OF WILKES

I, Catherine J. Wilmoth, a Notary Public in and for the aforesaid County and State do hereby certify that JAMES A. EVERETT and wife, GAIL PERRY EVERETT, personally appeared before me this date and acknowledged the due execution of the foregoing instrument for the purpose therein expressed.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this the 22nd day of December, 1995.



Catherine J. Wilmoth
Notary Public

My Commission Expires:
2/10/98

PC:580.1b

STATE OF NORTH CAROLINA, MARTIN COUNTY.

The foregoing certificate(s) of Olivia B. Brannon, and Catherine J. Wilmoth is (are) certified to be correct.

This instrument was presented for registration this day and hour and duly recorded in the office of the Register of Deeds of Martin County, N.C., in Book K-15, Page 76.
This 26 day of January, A.D., 19 96 at 11:31 o'clock A. M. \$ 28.00 Rec. Fees
\$ 1401.00 Stamps
Tina P. Manning, Register of Deeds By Tina P. Manning \$ 1429.00 Total pd.
Deputy/Assistant Register of Deeds

Return To: Jim Batchelor

Drafted by and Return to:
State Property Office, 1321 Mail Service Center, Raleigh, NC 27699-1321

STATE OF NORTH CAROLINA

COUNTY OF MARTIN

NOTICE OF FUNDING DISCLOSURE

THIS NOTICE is given by the STATE OF NORTH CAROLINA, C/O State Property Office, 1321 Mail Service Center, Raleigh, NC 27699-1321, owner of the real property in that certain instrument recorded in Deed Book K-15, Page 76, Martin County Registry.

WITNESSETH:

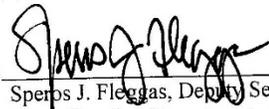
That the property described herein was purchased with the financial participation of the United States Department of the Interior. The following funding disclosure is required to be recorded in the public records in conjunction with the purchase of the property.

This property was purchased with the financial participation of the United States Department of the Interior, U. S. Fish and Wildlife Service – Pittman Robertson Wildlife Restoration Grant Funds. The purpose of this Notice of Funding Disclosure is to ensure the long-term conservation of the Property in accordance with the terms of the funding agreement by obtaining the consent of the U.S. Fish and Wildlife Service prior to any assignment or encumbrance of an interest in the Property. Their address is: U.S. Fish and Wildlife Service, Federal Assistance Division, 1875 Century Boulevard, Atlanta, Georgia 30345

IN WITNESS THEREOF, the State of North Carolina has caused this notice to be executed in its name on the date set forth in the notary acknowledgements of this instrument.

State of North Carolina

BY:



Speros J. Fleggas, Deputy Secretary
North Carolina Department of Administration

SPO file #58-17.11

STATE OF NORTH CAROLINA

COUNTY OF WAKE

JOHNSTON

I, JOE G. CREECH JR., a Notary Public in and for the County and State aforesaid, do here by certify that Speros J. Fleggas, personally appeared before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein expressed.

WITNESS my hand and Notarial Seal this 1ST day of MARCH, 2012.

Notary Public: Joe G Creech Jr

My Commission Expires: September 8, 2012



Lindsley, Lindsley, and Nicholson Tracts

05-04017
05-03483
09-00289
09-00287

BOOK 1 14 PAGE 60
FILED AND RECORDED IN OFFICE OF
REGISTER OF DEEDS, MARTIN COUNTY,
WILLIAMSTON, N. C. AT 3:15 O'CLOCK

INDEXED
GRANTOR (✓)
GRANTEE

FILED

P. M. September 29 1992
IN BOOK A-14 PAGE 60

\$ None N. C. EXCISE TAX
STAMP ATTACHED AND CANCELLED

DEC 18 1992

Dina P. Manning
REGISTER OF DEEDS
By: Patricia B. Kuffin, Assisit

SECRETARY OF STATE

Excise Tax

Recording Time, Book and Page

Tax Lot No. Parcel Identifier No.
Verified by County on the 58-1715 day of 19
by

Mail after recording to To: State of North Carolina, State Property Office, 116 West Jones Street,
Raleigh, North Carolina 27603-8003 (Attn: Alton Phillips)

This instrument was prepared by Paul F. Hurt, Esquire

Brief description for the Index K.P. Lindsley, L.P. Lindsley, Nicholson

NORTH CAROLINA SPECIAL WARRANTY DEED

THIS DEED made this 24th day of September, 19. 92., by and between

GRANTOR

GRANTEE

THE NATURE CONSERVANCY, a Non-Profit
Corporation of the District of Columbia
1815 North Lynn Street
Arlington, Virginia 22209

STATE OF NORTH CAROLINA
North Carolina Department of Administration
State Property Office
116 West Jones Street
Raleigh, North Carolina 27603-8003



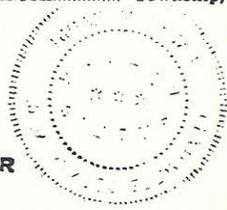
Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the City of Williamston Township, Martin County, North Carolina and more particularly described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN
BY REFERENCE.

TRANSFERRED ASSESSOR



The property hereinabove described was acquired by Grantor by instrument recorded in ...Book X-13, Page 811 -

..... Book T-13, Page 567 - Book Y-13, Page 616, Martin County Registry,

A map showing the above described property is recorded in Plat Book page

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor has done nothing to impair such title as Grantor received, and Grantor will warrant and defend the title against the lawful claims of all persons claiming by, under or through Grantor, except for the exceptions hereinafter stated.

Title to the property hereinabove described is subject to the following exceptions:

1. Ad Valorem taxes for 1992 and subsequent years.
2. All reservations, restrictions, easements and other matters of record or in existence.

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

THE NATURE CONSERVANCY

(Corporate Name)

By: Charles R. Bassett
Charles R. Bassett
VICE President

Paul E. Hurt
Paul E. Hurt
Assistant Secretary (Corporate Seal)



USE BLACK INK ONLY

..... (SEAL)
..... (SEAL)
..... (SEAL)
..... (SEAL)

USE BLACK INK ONLY
NORTH CAROLINA, County.
I, a Notary Public of the County and State aforesaid, certify that
..... Grantor,
personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my
hand and official stamp or seal, this day of, 19.....
My commission expires: Notary Public



NORTH CAROLINA, Orange County.
I, a Notary Public of the County and State aforesaid, certify that Paul E. Hurt
personally came before me this day and acknowledged that he is Assistant Secretary of
The Nature Conservancy a ~~MEMBER~~ corporation, and that by authority duly
given and as the act of the corporation, the foregoing instrument was signed in its name by its Vice
President, sealed with its corporate seal and attested by himself as its Assistant Secretary.
Witness my hand and official stamp or seal, this 24th day of September, 1992.
My commission expires: 2-26-93 Laura M. Zande Notary Public

EXHIBIT A
Page 1 of 4

PARCEL I

Those lands in Williamston Township, Martin County, known as the K.P. Lindsley (or Murcell Lindsley) Conoho Farm and described as follows:

Bounded now or formerly on the North by the W. J. Whitaker land, the lands of Harrison Brothers and Company and the lands of L..B. Harrison, on the East by Conoho Creek, on the South by Roanoke River and the lands of Jesse Whitley, and on the West by Herring Gut, Conoho Float Road and the lands of Jesse Whitley and J. B. Cherry, containing 1000 acres, more or less and being the same and identical lands deeded to W. S. Hadley and Sallie Hadley Bunting by five deeds of record in the Public Registry of Martin County in Book E-2, at page 380, Z-2, at page 39, Z-2, at page 40, Z-2, at page 41 and L-3, at page 305, and being all of what is known and designated as the S. S. Hadley Conoho Farm, with the exception of lot No. 3, containing 17½ acres, more or less, which was deeded to Ula Lee Roberson.

These are the same lands conveyed to Murceil P. Lindsley in deed recorded in Book W-3, page 414, Martin County Registry. See also deeds recorded in Book F-7, page 429, Book U-11, page 780, Book E-13, page 303, and Book L-13, page 918.

It is intended herein to convey to the party of the second part all of the interests of the parties of the first part in those lands known as the K. P. Lindsley (or Murceil Lindsley) Conoho Farm; and also conveyed herein are any and all rights of the parties of the first part of ingress to and egress from the above lands over all roads and paths leading to said lands.

Being all of the real property conveyed to The Nature Conservancy by Hugh R. Lindsley, et al. by deed recorded in Book X-13, Page 811, Martin County Registry.

EXHIBIT A
Page 2 of 4

PARCEL II

Tract No. 1: Being Lot No. 3 of the Conoho Farm subdivision and for a more perfect description reference is hereby made to a map made by N.R. Kenney, Civil Engineer, in Book 1, Page 488 in the Office of the Register of Deeds, Martin County, said tract containing 17½ acres, more or less.

Tract No. 3: Adjoining the lands of L.P. Lindsley and K.P. Lindsley in Williamston Township, State and County aforesaid in Conoho Island, beginning at two cypress standing near the mouth of Conoho Creek on Roanoke River, and on the south side of said Creek, thence running a southwesterly course to a mulberry post on Conoho Ridge, thence a southeasterly course down said Ridge to another mulberry post, thence an easterly course to an Elm tree, thence a direct line to Roanoke River, thence up said river to the beginning, containing three acres, more or less, and being the same premises conveyed by Dennis Simmons and wife to John D. Biggs by deed of record in Book QQ at pages 288 and 289 of the Martin County Public Registry.

And being the same tract of land conveyed to L.P. Lindsley by C.B. Hassell, Trustee, by deed dated August 7, 1944, and recorded in Book K-4, page 133 in the Martin County Registry.

Being all of Tract No. 1 and Tract No. 3 conveyed by Helen Lindsley Hoskins, et al. to The Nature Conservancy by deed recorded in Book T-13, Page 567, Martin County Registry.

[LPHEIRTR.NC]

EXHIBIT A
Page 3 of 4

That identical tract or parcel of land conveyed to Georgia-Pacific Corporation by deed of View V. Nicholson, et ux., dated December 31, 1969, of record in Book R-8, Page 159, in the Office of the Register of Deeds of Martin County, and being more particularly described, according to said deed, as follows:

All that certain tract or parcel of land lying and being in Williamston Township, Martin County, North Carolina, bounded now or formerly as follows:

Bounded on the South by the old Conoho Road and the lands of Redden Tyre; on the North by Conoho Creek; on the Northwest by Conoho creek; on the Northeast by Lindsley land; and being more particularly described according to a plat prepared by Julian W. Traylor, Surveyor, December 31, 1969, and attached hereto and incorporated herein and made a part of this description as described on said map, recorded in Book 7, Page 34, of the Martin County Public Registry.

The tract of land is composed of two separate tracts (now joined together on said attached map), one being commonly known and designated as the "Whitley Place" and the other one being commonly known and designated as the "Cowan or Thompson Pasture Neck Place".

The "Whitley Place" was conveyed to V.V. Nicholson and wife, Aletha Nicholson by deed from W.L. Lassiter and wife, Clara Lassiter, dated January 25, 1954, recorded in Martin County Public Registry in Book M-5, Page 352.

The "Cowan or Thompson Pasture Neck Place" was conveyed to V.V. Nicholson and wife, Aletha Nicholson by two deeds, first one from Charles H. Manning and wife, Annie B. Manning, dated January 2, 1954, and recorded in Book M-5, Page 308 of the Martin County Registry, and second one from Charles H. Manning and wife, Annie B. Manning, dated February 18, 1955, recorded in Book U-5, Page 206, of the Martin County Public Registry.

The land conveyed herein contains 657 acres as shown on the above referred to map after excluding Tract 1 and Tract 2 hereinafter excepted. The map also shows the open land which is excepted from the overall description shown herein and not included in or a part of the 657 acres as described above and conveyed herein. The open land which is excepted included about 3 acres called the sand pit as well as all of the farm land reserved to the Grantors. (See exceptions and referenced plat set forth hereinbelow.)

SAVE AND EXCEPT from the foregoing those two certain out-parcels shown as "Tract 1" contained 22.4 acres, more or less and "Tract 2" containing 137.6 acres, more or less, together with a right-of-way over and across a dirt road running from the end of

EXHIBIT A
Page 4 of 4

NCSR 1421, across the Southeastern end of Tract 1, and continuing, a Northeasterly direction, to Tract 2, said "Tract 1" and "Tract 2" and said right-of-way being more particularly shown on plat entitled "Survey for Nature Conservancy, exceptions to View Nicholson tract dated June 10, 1992, revised July 13, 1992 and prepared by Roanoke Land Surveying, Randolph T. Nicholson, Registered Land Surveyor with license no. L-2740, and recorded in Map Cabinet B, Page 368-G, in the Office of the Register of Deeds of Martin County.

SUBJECT TO A PERPETUAL RIGHT TO USE EXISTING ROADS THROUGH LANDS RESERVED TO VIEW V. NICHOLSON, ET UX., SUBJECT TO THE OBLIGATION TO REPAIR ANY DAMAGES TO SAID ROAD AS MORE PARTICULARLY SET FORTH IN DEED TO GEORGIA-PACIFIC CORPORATION FROM VIEW V. NICHOLSON, ET UX. AS ABOVE-REFERENCED.

Being all of the real property conveyed to The Nature Conservancy by Georgia-Pacific Corporation by deed recorded in Book Y-13, Page 616, Martin County Registry.

[RRXANICH.NC]

Roberson Tract

05-05274

BOOK 1-15 PAGE 532

Prepared By: T. Buie Costen, Special Deputy Attorney General
P. O. Box 629, Raleigh, N. C. 27602

\$ 224.00 N. C. EXCISE TAX
STAMP ATTACHED AND CANCELLED



STATE OF NORTH CAROLINA

WARRANTY DEED

COUNTY OF MARTIN

THIS DEED, made this the 2nd day of May, 1997, by **THE NATURE CONSERVANCY**, a North Carolina corporation, GRANTOR, to the **STATE OF NORTH CAROLINA**, % State Property Office, North Carolina Department of Administration, 116 West Jones Street, Raleigh, North Carolina 27603, GRANTEE;

WITNESSETH:

THAT the said Grantor, in consideration of the sum of ONE HUNDRED ELEVEN THOUSAND SEVEN HUNDRED FORTY-FIVE AND NO/100 (\$111,745.00) DOLLARS, to it paid by the Grantee, the receipt of which is hereby acknowledged, has bargained and sold and by these presents does hereby bargain, sell and convey unto the said Grantee, its successors and assigns, all of that certain tract or parcel of land situate, lying and being in Martin County, North Carolina, and more particularly described as follows:

Those certain tracts or parcels of land located in Williamston Township, Martin County, North Carolina, and being designated as Tract No. 1, containing 146.88 acres, and Tract No. 2, containing .10 acre, on that certain plat entitled "Survey For The Nature Conservancy (Roberson Tract)", surveyed and drawn by Hersey A. Kight, R.L.S., dated December 9, 1996, copy of said plat being

MARTIN COUNTY TAX OFFICE
Tax paid thru 1996

TRANSFERRED ASSESSOR

recorded in Plat Cabinet C, Slide 401-D, in the Office of the Register of Deeds of Martin County, reference to said plat being hereto made for a more complete and accurate description.

THIS CONVEYANCE SHALL INCLUDE the right of ingress and egress to and from the above-described tracts or parcels of land running from State Road No. 1421 and beginning at Point A as shown on plat hereinafter referred to, Point A being an existing PK nail & cap in the center line of State Road No. 1421, and running from said Point A to Point B to Point C to Point D to Point E to Point F to Point G to Point H to Point I to Point J to Point K to Point L to Point M to Point N to Point O to Point P to Point Q to Point R to Point S to Point T to Point U to Point V to Point W to Point X to Point Y to Point Z to Point AA to Point BB to Point CC to Point DD to Point EE, this being a right of way approximately 30 feet in width running from State Road No. 1421 to Tract No. 2 as shown on plat entitled "Survey For The Nature Conservancy (Roberson Tract)", surveyed and drawn by Hersey A. Kight, R.L.S., dated December 9, 1996, copy of said plat being recorded in Plat Cabinet C, Slide 401-D, in the Office of the Register of Deeds of Martin County; and that certain 10-foot right of way running from Tract No. 2 to Tract No. 1 and shown as "10' Ingress-Egress" on the above-described plat, reference to said plat being hereto made for a more complete and accurate description.

TO HAVE AND TO HOLD the aforesaid tract or parcel of land and all privileges and appurtenances thereunto belonging to the State of North Carolina, its successors and assigns, forever.

AND the said Grantor, does covenant that it is seized of the said premises in fee simple and has the right to convey the same in fee simple; that, except as set forth above, the same is free from any encumbrances; and that it will warrant and defend the said title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the Grantor has caused this instrument to be executed in its name by its President and attested by its Secretary, and its Corporate Seal affixed thereto by authority duly given.

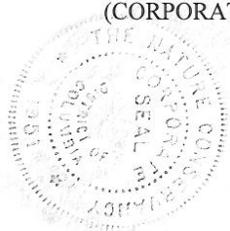
THE NATURE CONSERVANCY

By *William L. Anderson*
Vice-President

ATTEST:

REHT
Asst Secretary

(CORPORATE SEAL)



STATE OF NORTH CAROLINA

COUNTY OF Orange

I, Dorothy Gerard, a Notary Public in and for the County and State aforesaid, do hereby certify that Paul F. Hurt personally came before me this day and acknowledged that he is ^{Asst.} Secretary of THE NATURE CONSERVANCY, and that by authority duly given and as an act of THE NATURE CONSERVANCY, the foregoing instrument was signed by Michael L. Andrews, its ^{Vice-} President, attested by himself as ^{Asst.} Secretary, and sealed with the common seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal this the 2nd day of May, 1997.

Dorothy Gerard
Notary Public

My Commission expires:
02/10/2002

Profile 1673
File No. 58-1

INDEXED
GRANTOR () GRANTEE



STATE OF NORTH CAROLINA, MARTIN COUNTY.

The foregoing certificate(s) of Dorothy Gerard

is (are) certified to be correct.
This instrument was presented for registration this day and hour and duly recorded in the office of the Register of Deeds of

Martin County, N.C., in Book 4-15, Page 532.

This 15 day of May, A.D., 19 97 at 10:25 o'clock A M. \$ 14.00 Rec. Fees
\$ 224.00 Stamps
\$ 938.00 Total

Tina P. Manning, Register of Deeds

By Jim Duffie, Deputy
Deputy/Assistant Register of Deeds

mailto: Bowen + Batchelor

BOOK K - 24 PAGE 566

FILED AND RECORDED IN OFFICE OF
REGISTER OF DEEDS, MARTIN COUNTY,
WILLIAMSTON, N.C. AT 8:55 O'CLOCK

a. M. December 21, 2011
IN BOOK K-24 PAGE 566

TINA P. MANNING BY: L.W. Beck
REGISTER OF DEEDS Deputy

INDEXED
() GRANTOR () GRANTEE

* Drafted by and Return to:
State Property Office, 1321 Mail Service Center, Raleigh, NC 27699-1321

STATE OF NORTH CAROLINA

COUNTY OF MARTIN NOTICE OF FUNDING DISCLOSURE

THIS NOTICE is given by the STATE OF NORTH CAROLINA, C/O State Property Office, 1321 Mail Service Center, Raleigh, NC 27699-1321, owner of the real property in that certain instrument recorded in Deed Book Y-15, Page 81, Martin County Registry.

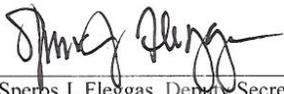
WITNESSETH:

That the property described herein was purchased with the financial participation of the United States Department of the Interior. The following funding disclosure is required to be recorded in the public records in conjunction with the purchase of the property.

This property was purchased with the financial participation of the United States Department of the Interior, U. S. Fish and Wildlife Service – Pittman Robertson Wildlife Restoration Grant Funds. The purpose of this Notice of Funding Disclosure is to ensure the long-term conservation of the Property in accordance with the terms of the funding agreement by obtaining the consent of the U.S. Fish and Wildlife Service prior to any assignment or encumbrance of an interest in the Property. Their address is: U.S. Fish and Wildlife Service, Federal Assistance Division, 1875 Century Boulevard, Atlanta, Georgia 30345

IN WITNESS THEREOF, the State of North Carolina has caused this notice to be executed in its name on the date set forth in the notary acknowledgements of this instrument.

State of North Carolina

BY: 
Speros J. Fleggas, Deputy Secretary
North Carolina Department of Administration

SPO file #58-17.13

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, JOE G CREECH JR, a Notary Public in and for ^{JOHNSTON} the County and State aforesaid, do here by certify that Speros J. Fleggas, personally appeared before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein expressed.

WITNESS my hand and Notarial Seal this 2nd day of December, 2011.

Notary Public: Joe G Creech Jr

My Commission Expires: September 8, 2012



mail to: * on foot

\$ 26.00 rec.

Rodgerson Tract



BOOK X-13 PAGE 426



Prepared by and return to: Roy A. Giles, Jr., Assistant Attorney General, P. O. Box 629, Raleigh, N.C. 27602

STATE OF NORTH CAROLINA

FILED

58-19.2

DEED

OCT 15 1992

COUNTY OF MARTIN

SECRETARY OF STATE

THIS DEED, made and entered into this the 12th day of June, 1992, by and between L. DAIL RODGERSON and wife NINA H. RODGERSON, Grantors, and the STATE OF NORTH CAROLINA, C/O State Property Office, 116 W. Jones Street, Raleigh, North Carolina 27603, Grantee;

W I T N E S S E T H :

THAT the said Grantors, in consideration of the sum of ONE HUNDRED FORTY-EIGHT THOUSAND ONE HUNDRED NINETEEN AND NO/100 (\$148,119.00) DOLLARS to them paid by the Grantee, receipt of which is hereby acknowledged, have bargained and sold and by these presents do bargain, sell and convey, unto the said Grantee, its successors and assigns, all of those certain tracts or parcels of land situate, lying and being in Hamilton Township, Martin County, North Carolina, and being more particularly described as follows:

Tracts I and II as set forth in the attached descriptions.

TO HAVE AND TO HOLD the aforesaid tracts or parcels of land and all privileges and appurtenances thereunto belonging to the State of North Carolina, its successors and assigns, forever.

AND the said Grantors do covenant that they are seized of the said premises in fee simple and have the right to convey the same in fee simple; that the same are free from any encumbrances;

\$297.00 N. C. EXCISE TAX STAMP ATTACHED AND CANCELLED

MARTIN COUNTY TAX OFFICE

Taxes paid thru 1991

TRANSFERRED ASSESSOR

and that they will warrant and defend the said title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the said Grantors have hereunto set their hands and seals, all on the day and year first above written.

L. Dail Rodgerson (SEAL)
L. DAIL RODGERSON

Nina H. Rodgerson (SEAL)
NINA H. RODGERSON

STATE OF NORTH CAROLINA
COUNTY OF MARTIN

I, Susan Leggett, a Notary Public in and for the aforesaid County and State do hereby certify that L. DAIL RODGERSON and wife, NINA H. RODGERSON, personally appeared before me this date and acknowledged the due execution of the foregoing instrument for the purpose therein expressed.

WITNESS my hand and Notarial Seal, this the 12th day of _____, 1992.



Susan Leggett
Notary Public

My Commission Expires:
October 4, 1994

L. DAIL RODGERSON
PROPERTY DESCRIPTION

TRACT I

All that portion of land lying on the West side of State Road No. 1417 in Hamilton Township, Martin County, North Carolina.

Beginning at an existing iron pipe located on the Western edge of the right of way of State Road No. 1417, said existing iron pipe located North 45° 34' 34" West 32.96 feet from an existing P-K nail set in the centerline of State Road No. 1417, said existing P-K nail set in the centerline of State Road No. 1417 located South 19° 07' 43" West 21.70 feet from a P-K nail set in the intersection of the center of a culvert and the centerline of State Road No. 1417, said P-K nail located approximate 0.90 miles Southwest of centerline of State Road No. 1419, and running thence along the Western right of way of State Road No. 1417 South 17° 08' 37" West 33.65 feet to a new iron pipe set; thence North 45° 54' 29" West 310.58 feet to a new iron pipe set; thence South 88° 40' 18" West 88.01 feet to a new iron pipe set; thence South 86° 55' 17" West 81.00 feet; thence South 86° 13' 20" West 274.23 feet; thence South 76° 10' 26" West 98.88 feet; thence South 32° 26' 23" West 256.82 feet to a new iron pipe set, said new iron pipe being located North 05° 00' 23" West 251.69 feet from a new iron pipe set; thence North 00° 15' 42" East 28.17 feet to a new iron pipe set in the centerline of an existing farm path; thence North 00° 15' 42" East 28.17 feet to a new iron pipe set, said new iron pipe set located South 00° 15' 42" West 223.28 feet from an existing iron axle in the center of a stump; thence North 32° 26' 23" East 221.18 feet to a new iron pipe set; thence North 76° 10' 26" East 113.55 feet to an 18" gum tree; thence North 86° 13' 20" East 277.01 feet to a 36" pine tree; thence North 86° 55' 17" East 31.67 feet to an existing iron pipe; thence North 88° 40' 18" East 101.03 feet to an existing iron pipe; thence South 45° 54' 29" East 307.88 feet to an existing iron pipe, the point of beginning, said property containing 0.76 acre, said property being a portion of the land conveyed to L. Dail Rodgeron by deed recorded in Deed Book E-10, Page 446 and Page 449, Martin County Registry, surveyed by W. Ward Leggett, R.L.S. on March 16, 1992, revised April 6 and April 24, 1992.

L. DAIL RODGERSON
PROPERTY DESCRIPTION

TRACT II

A certain tract of land containing 209.18 acres, lying and being in Hamilton Township, Martin County, North Carolina, bounded on the North by Virgil C. Manning, on the East by State Road No. 1417, on the South by Conoho Creek, on the West by Conoho Creek, and being more particularly described as follows:

Beginning at a P-K nail set in the intersection of the center of a bridge and the center of State Road No. 1417 and the center of Conoho Creek and running thence with the centerline of Conoho Creek North 62° 03' 11" West 94.08 feet; thence North 41° 43' 36" West 431.74 feet; South 43° 31' 22" West 182.48 feet; South 10° 21' 24" East 390.40 feet; South 82° 32' 46" West 116.18 feet; South 34° 33' 43" West 402.69 feet; South 77° 53' 42" West 99.65 feet; South 51° 57' 00" West 163.85 feet; North 76° 52' 00" West 211.95 feet; North 25° 02' 27" West 212.94 feet; North 58° 42' 42" West 95.74 feet; North 00° 10' 48" West 322.01 feet; North 14° 16' 31" West 405.50 feet; North 71° 14' 52" West 102.22 feet; North 45° 14' 40" West 125.56 feet; South 89° 34' 56" West 123.32 feet; North 56° 11' 46" West 65.19 feet; North 75° 34' 32" West 76.22 feet; South 57° 56' 14" West 106.99 feet; North 89° 20' 34" West 186.68 feet; North 39° 19' 43" West 130.55 feet; South 87° 37' 46" West 69.82 feet; North 18° 01' 31" West 288.37 feet; North 78° 15' 49" West 85.79 feet; North 13° 45' 52" West 330.30 feet; North 01° 58' 34" West 91.15 feet; North 30° 06' 32" East 63.98 feet; North 85° 15' 42" East 45.69 feet; North 05° 03' 41" West 56.55 feet; North 37° 44' 33" West 128.20 feet; North 84° 35' 06" West 76.83 feet; North 24° 08' 03" West 282.79 feet; North 25° 37' 20" East 287.88 feet; North 52° 17' 15" East 85.53 feet; North 03° 37' 02" West 43.81 feet; North 52° 31' 43" East 104.91 feet; North 21° 04' 04" East 91.05 feet; North 62° 56' 14" East 64.05 feet; North 38° 31' 06" East 142.25 feet; North 04° 21' 50" East 152.88 feet; North 30° 21' 09" East 170.28 feet; North 36° 06' 07" West 57.07 feet; North 18° 13' 07" East 210.42 feet; North 17° 02' 41" West 205.35 feet; North 37° 35' 22" West 71.69 feet; North 04° 44' 25" West 127.48 feet; North 34° 13' 40" West 193.27 feet; North 05° 02' 10" West 119.87 feet; North 71° 39' 36" West 94.36 feet; North 60° 36' 50" West 205.77 feet; North 21° 38' 45" West 92.10 feet; North 43° 19' 26" West 157.52 feet; North 67° 20' 55" West 423.56 feet; North 06° 21' 26" West 132.62 feet; North 10° 56' 50" East 163.33 feet; North 38° 13' 38" West 150.10 feet; North 16° 22' 09" East 546.05 feet; North 00° 17' 08" East 396.27 feet to the intersection of Conoho Creek and the intersection of a branch; thence with the branch the following courses and distances North 49° 04' 00" East 169.67 feet; thence South 78° 01' 04" East 99.92 feet; thence North 19° 48' 29" East 226.46 feet; thence North 59° 24' 48" seconds East 90.11 feet; thence South 67° 28' 04" East 52.26 feet; thence

North 74° 31' 08" East 99.28 feet; thence South 82° 01' 39" East 213.93 feet; South 73° 11' 33" East 245.16 feet; South 60° 10' 19" East 290.82 feet; thence South 81° 38' 21" East 152.25 feet; thence North 58° 51' 56" East 209.40 feet to the intersection of a branch; thence with the branch the following courses and distances South 58° 56' 07" East 145.53 feet; thence South 56° 24' 06" East 93.89 feet; thence South 14° 10' 12" West 105.54 feet; thence South 12° 27' 59" West 124.40 feet; thence South 01° 22' 36" East 162.73 feet; thence North 81° 27' 08" East 89.82 feet; thence North 70° 00' 58" East 85.77 feet; thence South 82° 07' 57" East 100.74 feet; thence South 21° 29' 57" East 97.23 feet; South 03° 38' 28" West 159.20 feet; thence South 18° 15' 51" West 128.67 feet; thence South 05° 48' 38" West 102.17 feet to an existing iron axle in the center of a stump, a corner of Virgil G. Manning, thence South 00° 15' 42" West 279.62 feet to a new iron pipe set; thence South 05° 00' 23" East 251.69 feet to a new iron pipe set; thence South 32° 05' 37" West 87.83 feet to a fence post; thence South 29° 37' 11" West 167.43 feet to a fence post; thence South 18° 10' 23" West 91.32 feet to a fence post; thence South 38° 01' 07" East 111.04 feet to a fence post; thence South 26° 57' 13" East 52.88 feet to a gum tree; thence South 20° 55' 29" East 332.10 feet to a fence post; thence South 18° 42' 17" East 168.12 feet to a new iron pipe set; thence South 35° 20' 52" West 95.53 feet to a new iron pipe set; South 32° 49' 44" West 215.22 feet to a new iron pipe set; thence South 68° 49' 25" West 248.59 feet to a new iron pipe set; thence South 04° 15' 13" West 94.13 feet to a new iron pipe set; thence South 37° 24' 08" East 226.85 feet to a new iron pipe set; thence South 15° 31' 51" East 125.19 feet to a new iron pipe set; thence South 19° 32' 34" West 311.38 feet to a new iron pipe set; thence South 08° 20' 15" West 159.83 feet to a new iron pipe; South 09° 24' 25" East 115.61 feet to an existing iron pipe; South 17° 52' 03" East 192.31 feet to an existing iron pipe; South 32° 37' 49" East 79.72 feet to an existing iron pipe; thence South 32° 31' 51" East 67.43 feet to an existing iron pipe; thence South 20° 31' 12" East 125.02 feet to an existing iron pipe; thence South 44° 55' 36" West 40.91 feet to an existing iron pipe; thence South 07° 14' 36" East 253.28 feet to an existing iron pipe; thence North 44° 55' 36" East 199.26 feet to an existing iron pipe; thence South 49° 12' 25" East 199.87 feet to an existing iron pipe; thence North 45° 00' 19" East 200.00 feet to an existing iron pipe located on the right of way of State Road No. 1417; thence North 44° 58' 51" East 30.01 feet to an existing P-K nail set in the center of State Road No. 1417; thence with the center of State Road No. 1417 South 50° 55' 27" East 49.97 feet to a P-K nail set; thence South 54° 12' 23" East 100.00 feet to a P-K nail set; thence South 55° 40' 55" East 100.00 feet to a P-K nail set; thence South 49° 17' 43" East 100.04 feet to a P-K nail set; thence South 41° 15' 19" East 100.00 feet to a P-K nail set; thence South 30° 53' 39" East 99.97 feet to a P-K nail set; thence South 23° 44' 00" East 163.90 feet to a P-K nail set; thence South 24° 38' 39" East 100.00 feet to an existing P-K nail; thence South 64° 56' 01" West 29.95 feet to an existing

iron pipe on the right of way of State Road No. 1417; thence South 65° 01' 12" West 200.10 feet to an existing iron pipe; thence South 29° 01' 10" East 201.16 feet to an existing iron pipe; thence South 52° 01' 50" East 130.52 feet to an existing iron pipe; thence North 13° 16' 24" East 77.52 feet to an existing iron pipe; thence North 33° 08' 12" East 107.64 feet to an existing iron pipe on the right of way of State Road No. 1417; thence North 33° 09' 11" East 31.98 feet to an existing P-K nail located in the center of State Road No. 1417; thence with the center of State Road No. 1417 South 40° 24' 27" East 100.00 feet to a P-K nail set; thence South 45° 26' 04" East 150.00 feet to a P-K nail set; thence South 41° 12' 42" East 50.00 feet to a P-K nail set; thence South 30° 40' 00" East 50.00 feet to a P-K nail set; thence South 16° 03' 12" East 50.00 feet to a P-K nail set; thence South 02° 43' 18" East 50.00 feet to a P-K nail set; thence South 04° 42' 43" West 58.24 feet to a P-K nail set; thence South 07° 37' 52" West 232.84 feet to a P-K nail set in the intersection of a bridge over Conoho Creek and the center of State Road No. 1417, the point of beginning, containing 209.18 acres as surveyed by W. Ward Leggett, R.L.S. on March 16, 1992, revised April 6 and April 24, 1992, and being a portion of the lands conveyed to L. Dail Rodgerson by deed recorded in Deed Book E-10, Page 446 and Page 449, Martin County Registry.

NORTH CAROLINA, MARTIN COUNTY
The foregoing certificate(s) of

Susan Leggett

Notary Public,

is (are) certified to be correct. This instrument was presented for registration and recorded in the office of Register of Deeds, Martin County, N. C., in Book *X-13*, Page *426*

This *12* day of *June*, 19*93*, at *4:59* o'clock *P*. M.

Lisa P. Manning Register of Deeds
Ass't - Deputy

INDEXED
GRANTOR GRANTEE

Return To: (on front)

16.00 rec.
297.00 stamps
313.00 pd.

09-0022

BOOK G 6 PAGE

FILED

58-17.14

Prepared By: Daniel A. Manning, Attorney at Law
Williamston, North Carolina

SEP 17 1998

SECRETARY OF STATE

WARRANTY DEED



STATE OF NORTH CAROLINA
COUNTY OF MARTIN



THIS DEED, made this the 26th day of January, 1998 by THE NATURE CONSERVANCY, a non-profit corporation of the District of Columbia, GRANTOR, to the STATE OF NORTH CAROLINA, c/o State Property Office, Administration Building, 6 West Jones St., Raleigh, NC 27603, GRANTEE;

WITNESSES:



THAT the said Grantor, in consideration of the sum of NINETY-FIVE THOUSAND DOLLARS (\$95,000.00), to be paid by the Grantee, the receipt of which is hereby acknowledged, has bargained and sold and by these presents does hereby bargain, sell and convey unto the said Grantee, its successors and assigns, all of that certain tract or parcel of land situated, lying and being in Martin County, North Carolina, and more particularly described as follows:



A parcel of land in Hamilton Township, Martin County, North Carolina consisting of 117.295 acres, more or less, bounded on the north by Richard Taylor Slade and Tom Purvis lands, on the west by the town of Conohoe Creek and Snodie T. Cullipher on the South by Virgil Manning and William Best and bounded on the East by SR 1417 (Poplar Point Road) and Audrey M. Ward and others. This tract of land is shown on a map entitled "Survey for the Nature Conservancy" (Bowen and Rogers Tract) by Sweetwater Land Surveys (Robert Stalls, RLS) date June 19, 1997 (field work completed May 11, 1997), which map is recorded in Plat Cabinet C Slide 5-H of the Martin County Registry and which map is referred to herein for a more definite description. This is the same parcel conveyed to The Nature Conservancy by deed dated July 16, 1997 from Bowen and Rogers, Inc. and recorded in Book A-16 Page 331 of the Martin County Registry.

TO HAVE AND TO HOLD the above said tract or parcel of land and all privileges and appurtenances thereunto belonging to the State of North Carolina, its successors and assigns, forever.

And the said Grantor, does covenant that it is seized of the said premises in fee simple and has the right to convey the same in fee simple; that, except as

\$ 190.00 N. C. EXCISE TAX
STAMP ATTACHED AND CANCELLED

TRANSFERRED ASSESSOR

MARTIN COUNTY TAX OFFICE

thru 1997 on

set forth below, the same is free from any encumbrances; and that it will warrant and defend the said title to the same against the claims of all persons whomsoever.

The premises are sold subject to all matters of record.

IN TESTIMONY WHEREOF, the Grantor has caused this instrument to be executed in its name by its Vice President and attested by its Assistant Secretary, and its Corporate Seal affixed thereto by authority duly given.

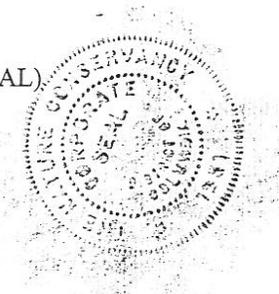
THE NATURE CONSERVANCY

BY Charles R. Bassett
VICE PRESIDENT

ATTEST:

David Bland
ASSISTANT SECRETARY

(CORPORATE SEAL)



NORTH CAROLINA

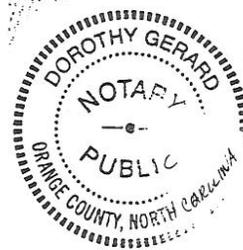
ORANGE COUNTY

I, Dorothy Gerard, a Notary Public in and for the County and State aforesaid, do hereby certify that DAVID BLAND personally came before me this day and acknowledged that he is Assistant Secretary of THE NATURE CONSERVANCY, and that by authority duly given and as an act of The Nature Conservancy, the foregoing instrument was signed by CHARLES R. BASSETT its Vice President, attested by himself as Assistant Secretary, and sealed with he common seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this the 27th day of January, 1998.

Dorothy Gerard
Notary Public

My Commission Expires:
02/10/2002



Roquist Pocosin Tract

Bertie County--Register of Deeds
Belinda S. White, Register of Deeds
Inst# 22853 Book 889 Page 87
Pgs: 7 12/22/2008 02:30:19pm
Excise Tax Paid \$ 894.00

WEYERHAEUSER
ROQUIST
DEED

This certifies that there are no ad valorem real estate taxes, which the Bertie County Tax Collector is charged with collecting that are a lien on: Pin # 5846-51-2513, 5846-60-4775, 5846-63-4669 Bertie County Office of Land Records. This and 5845-79-7081 is not a Certification that the Pin # matches the deed description

On Stally 12-22-08
Tax Collector Date

DEED

PREPARED BY A. TRAVIS ELLIS, ELLIS & SKINNER, PLLC, 214 SOUTH BROAD STREET, POST OFFICE BOX 275, EDENTON, NORTH CAROLINA 27932

MAIL AFTER RECORDING TO: DAN MANNING
ATTORNEY AT LAW
POST OFFICE BOX 892
WILLIAMSTON, NC 27892

PIN: _____

NO TITLE SEARCH PERFORMED

STATE OF NORTH CAROLINA
COUNTY OF Bertie

THIS DEED, made this the 12th day of December, 2008, by and between **WEYERHAEUSER COMPANY**, a Washington State corporation organized by law with offices in Vanceboro, North Carolina, whose mailing address is Post Office Box 1391, New Bern, North Carolina 28563, party of the first part to the **STATE OF NORTH CAROLINA**, whose mailing address is C/O State Property Office, 1321 Mail Service Center, Raleigh, North Carolina 27699-1321, party of the second part:

WITNESSETH: That for and in consideration of the sum of Ten Dollars and other considerations in hand paid by the party of the second part to the party of the first part, receipt of which is hereby acknowledged, the said party of the first part has bargained, sold, and conveyed and by these presents does bargain, sell, and convey unto the said party of the second part and its successors and assigns, the following described land, to-wit:

All those certain tracts or parcels of land located in Woodville Township, Bertie County and more particularly described as follows:

TRACT ONE: Lying and being in Woodville Township, Bertie County, North Carolina and beginning at a point in the middle of rural road 1118, this point being 1531.00 feet in a southeasterly direction from the center line of rural road 1119, this point .8 of a mile in a westerly direction from the center line of N.C. Highway 308. This locating the point of beginning. Thence from said beginning North 22 deg. 05 min. East 469.20 feet; thence North 21 deg. 45 min. East 755.00 feet to the center of a railroad bed in the line of Lujannin Veale and a corner for this property; thence down the railroad bed South 52 deg. 25 min. East 362.20 feet to a corner for Lujannin Veale and this property; thence South 21 deg. 45 min. West 931.10 feet, South 42 deg. East 341.80 feet, South 20 deg. 55 min. West 533.60 feet, South 21 deg. 50 min. West 2125.50 feet, South 26 deg. West 107.60 feet, South 21 deg. 40 min. West 1073.60 feet, South 21 deg. 35 min. West 1500.00 feet, South 21 deg. 20 min. West 421.10 feet to a point in Georgia-Pacific line; thence down Georgia-Pacific line North 61 deg. 55 min. West 259.80 feet, North 21 deg. 10 min. West 419.20 feet, North 67 deg. West 56.0 feet to a corner of Mrs. J.A. Lassiter and this property; thence down Mrs. J.A. Lassiter and this property North 21 deg. 05 min. East 650.00 feet, North 22 deg. 05 min. East 1166.70 feet, North 22 deg. East 340.50 feet, North 21 deg. 10 min. East 265 feet, North 21 deg. East 800.00 feet, North 20 deg. East 1161.70 feet to a point in the center of rural road 1118, the point of beginning containing 87.86 acres by survey of L.T. Livermon, Jr., Reg. Land Surveyor, dated December 19-20, 1967.

LESS AND EXCEPT that portion of the above referenced tract lying North of SR 1118 containing approximately 54 acres.

The said map recorded in Book 552, page 65, Bertie County Registry, is identified by the following legend: "Property of Weyerhaeuser Company Herndon Lumber Co. – Ward Tract Located in Woodville Tws. Bertie County-North Carolina L.T. Livermon Jr. Reg. Land Surveyor L-921 Surveyed Dec. 19 & 20, 1967."

The aforesaid parcel was deeded to Weyerhaeuser Company by deed dated January 22, 1968, recorded in Book 552, page 65, Bertie County Public Registry, and is identified as Tract Two in said deed.

TRACT TWO: That certain parcel of land containing 154.79 acres, shown on map of Weyerhaeuser Company's Cleo and Basil Harden Tract No. 2, drawn by John E. Ray, Surveyor, dated March 17, 1976 and described thereon as follows: Beginning at an iron pipe in Cleo and Basil Harden line, said beginning being located from the intersection of centerline of State Road No. 1118 with centerline of State Road No. 1119, running thence with centerline of State Road 1119, South 76 deg. 45 min. 42 sec. West 176.00 feet; thence leaving said State Road and running with center of Farm Road South 05 deg. 56 min. 24 sec. West 1173.96 feet; South 01 deg. 50 min. 24 sec. West 208.99 feet; South 04 deg. 38 min. 48 sec. East 378.13 feet to end of existing road; thence South 06 deg. 13 min. 42 sec. West 378.20 feet; thence South 05 deg. 43 min. 30 sec. West 811.02 feet; thence South 16 deg. 20 min. 36 sec. East 76.85 feet to the beginning, running thence from said beginning along the Harden line, South 64 deg. 54 min. 18 sec. West 201.63 feet; North 82 deg. 04 min. 36 sec. West 252.46 feet; North 67 deg. 05 min. 30 sec. West 377.08 feet; North 71 deg. 21 min. 42 sec. West 265.19 feet; North 59 deg. 55 min. 00 sec. West 490.23 feet to a corner in Weyerhaeuser Company's Minton Heirs Tract No. 2; thence with said company's lines South 38 deg. 57 min. 48 sec. West 345.09 feet; South 34 deg. 15 min. 24 sec. West 202.85 feet; South 36 deg. 17 min. 30 sec. West 353.75 feet; South 39 deg. 09 min. 00 sec. West 491.12 feet; South 37 deg. 27 min. 42 sec. West 530.55 feet; South 39 deg. 46 min. 18 sec. West 115.38 feet; South 36 deg. 41 min. 12 sec. West 687.95 feet to an iron pipe in Georgia Pacific's line; thence with said company's lines, South 71 deg. 32 min. 48 sec. East 237.61 feet; South 32 deg. 40 min. 06 sec. East 473.24 feet; South 55 deg. 26 min. 36 sec. East 256.64 feet; South 58 deg. 23 min. 30 sec. East 404.82 feet; South 56 deg. 03 min. 18 sec. East 207.72 feet; South 57 deg. 58 min. 24 sec. East 355.76 feet; South 59 deg. 55 min. 12 sec. East 180.42 feet; South 54 deg. 38 min. 30 sec. East 334.48 feet; South 56 deg. 33 min. 06 sec. East 152.97 feet to a corner of Weyerhaeuser Company's Herndon Lumber Company-Ward Tract; thence with Weyerhaeuser Company's lines, North 25 deg. 29 min. 12 sec. East 461.59 feet; North 29 deg. 05 min. 48 sec. East 178.83 feet; North 25

deg. 28 min. 42 sec. East 920.79 feet; North 23 deg. 33 min. 00 sec. East 228.69 feet; North 25 deg. 54 min. 30 sec. East 180.72 feet; North 24 deg. 28 min. 24 sec. East 192.94 feet; North 23 deg. 48 min. 06 sec. East 671.99 feet; North 23 deg. 57 min. 00 sec. East 504.59 feet to a corner of Cleo and Basil Harden; thence along said Harden's line, North 59 deg. 29 min. 06 sec. West 419.94 feet to the beginning, containing 154.79 acres, together with a right of way of 30 feet in width leading from State Road 1119 to a point near the Northeast corner of the above-described tract of land, which right of way is more particularly described as follows: BEGINNING at a point located from the intersection of centerline of State Road No. 1118 with centerline of State Road No. 1119, running thence with centerline of State Road No. 1119, South 76 deg. 45 min. 42 sec. West 176.00 feet to the beginning, running thence from said beginning along center of farm road, South 05 deg. 56 min. 24 sec. West 1173.96 feet; South 1 deg. 50 min. 24 sec. West 208.99 feet; South 04 deg. 38 min. 48 sec. East 378.13 feet to end of existing road; thence South 06 deg. 13 min. 42 sec. West 378.20 feet; thence South 05 deg. 43 min. 30 sec. West 811.02 feet; thence South 16 deg. 20 min. 36 sec. East 76.85 feet to Weyerhaeuser Company line.

The aforesaid tract being the same tract designated "Tract 2" in deed dated March 22, 1976 to Weyerhaeuser Company recorded in Book 596, page 146, Bertie County Registry.

TRACT THREE: Beginning at a corner in David Paul Minton line and T.L. Minton Heirs line, identified on map recorded in Book 561, page 68, Bertie County Registry by Letter "A", running thence from said beginning with T.L. Minton Heirs line the following courses and distances South 64 deg. 30 min. East 4.41 chains; thence South 27 deg. 30 min. West 2.06 chains; thence South 13 deg. 15 min. West 2.23 chains; thence South 31 deg. East 2.13 chains; thence South 84 deg. 45 min. East 2.86 chains; thence North 44 deg. 15 min. East 0.91 chains; thence North 87 deg. 20 min. East 0.98 chains; thence North 72 deg. 30 min. East 0.96 chains; thence North 42 deg. East 1.65 chains; thence North 88 deg. East 0.68 chains; thence South 50 deg. 30 min. East 0.54 chains; thence South 35 deg. 15 min. East 0.82 chains; thence South 70 deg. 15 min. East 1.24 chains; thence North 45 deg. East 0.77 chains; thence South 83 deg. 45 min. East 1.44 chains to a corner in Clara Lassiter line; thence with said Lassiter's lines the following courses and distances South 29 deg. West 10.00 chains; South 38 deg. 40 min. West 2.18 chains; thence South 36 deg. 15 min. West 13.84 chains; thence South 30 deg. 45 min. West 7.52 chains; thence South 35 deg. 30 min. West 6.02 chains; thence South 33 deg. 30 min. West 6.57 chains; thence South 33 deg. 45 min. West 1.43 chains; thence South 33 deg. 15 min. West 15.14 chains to a corner in a

blazed line; thence with blazed line North 74 deg. 45 min. West 11.25 chains to David Paul Minton corner; thence with said Minton's line North 29 deg. 15 min. East 45.50 chains to a corner; thence with said Minton's line North 41 deg. 15 min. East 4.32 chains to a corner; thence with said Minton's line North 24 deg. 15 min. East 15.92 chains to the beginning, containing 81.6 acres.

The foregoing described land is the same as shown on a map which is recorded in Book 561, page 68 and is identified by the following legend: "Map of Weyerhaeuser Company's T.L. Minton Heirs Tract No. 1 Woodville Ts. - Bertie Co. N.C. Scale: 1 in - 10 ch Surveyed May 1969 By John E. Rea Reg. Surv. Area: 81.6 Acres."

For reference and chain of title, see deed dated July 14, 1969 to Weyerhaeuser Company recorded in Book 561, page 68, Bertie County Public Registry.

TRACT FOUR: Begin at the intersection of N.C. Secondary Road 1118 and N.C. Secondary Road 1119 from a nail found in the center line of N.C. Secondary Road 1119; thence along the center line of said N.C. Secondary Road 1119 North 76 deg. 49 min. 24 sec. East 1562.21 feet to a nail in the center line; thence South 13 deg. 00 min. 36 sec. East 30.00 feet to an iron pipe in the southern edge of the right of way of N.C. Secondary Road 1119 and the same being also in the edge of a 20 foot right of way shown as point #5 on the map recorded in Book 639, page 682, Bertie County Registry and hereinafter referred to and made a part hereof, the same being the beginning point of the tract of land herein conveyed and running thence from said beginning point South 19 deg. 31 min. 18 sec. West 172.11 feet to an iron pipe; thence running South 21 deg. 08 min. 36 sec. West 171.95 feet to an iron pipe; thence running South 20 deg. 39 min. 12 sec. West 165.32 feet to an iron pipe; thence running South 50 deg. 35 min. 36 sec. East along an old railroad tram 364.47 feet to a point; thence running South 23 deg. 04 min. 23 sec. West 921.56 feet to a point; thence running South 38 deg. 51 min. 40 sec. East 340.84 feet to a point; thence running South 23 deg. 12 min. West 355.82 feet to a point; thence continuing South 23 deg. 12 min. West 2,027.53 feet to an existing concrete monument the beginning corner of the tract of land herein conveyed and running thence from said beginning corner South 23 deg. 12 min. West 3467.14 feet to a point, a black gum tree in Roquist Swamp, the same being in the Georgia-Pacific line; thence along the swamp and Georgia-Pacific's line South 59 deg. 36 min. 06 sec. East 239.56 feet to a black gum tree; thence running along and with the line of the land now or formerly owned by Harry Thompson North 22 deg. 59

min. 26 sec. East 3522.17 feet to a point in the tract of land owned now or formerly by the N.C. Highway Commission; thence running along the Highway Commission line North 73 deg. 08 min. 34 sec. West 226.18 feet, more or less, to the existing concrete monument, the point of beginning and containing 18.55 acres, more or less.

Map of the foregoing described lot or parcel of land is recorded in Book 639, page 682 and is identified by the legend: "Weyerhaeuser Company's Joseph M. Browne, Jr. Tract Block (A) & (C) = 38.43 ac. Woodville Twsp. - Bertie Co., N.C. Date Surveyed: 2-21-83 by Bryant Hardison Date Drawn: 2-28-83 By: Bryant Hardison Scale 1' = 600.

For reference and chain of title see deed to Weyerhaeuser Company dated July 21, 1983 recorded in Book 639, page 682, Bertie County Registry.

TO HAVE AND TO HOLD the aforesaid lands with all rights and privileges thereunto belonging or in anywise appertaining unto the said party of the second part and its successors and assigns, in fee simple forever.

And the said party of the first part for itself, its successors and assigns covenants to and with the said party of the second part and its successors and assigns, that it is seized of said lands in fee simple and has a good right to convey the same in fee simple; that the said lands are free and clear of all encumbrances, SAVE AND EXCEPTING rights of ways for highways and public utilities and ad valorem taxes for the current year and subsequent years, and that it will forever warrant and defend the title to the same against the lawful claims of all persons whomsoever.

IN TESTIMONY WHEREOF, WEYERHAEUSER COMPANY has caused this instrument to be signed in its name by its (Senior) (Vice) President, attested by its

(Assistant) Secretary, with its corporate seal hereunto affixed, all by the authority duly given, this the day and year first above written.



WEYERHAEUSER COMPANY, a corporation of the State of Washington

By: Scott Marshall (SEAL)
Scott Marshall
(print name)

Vice President

(CORPORATE SEAL)

ATTEST:

G.W. Bjerke

G.W. BIERKE

(Print Name)

Assistant Secretary

STATE OF WASHINGTON

COUNTY OF KING

I, Alicia A. Hanson, a Notary Public of the County and State aforesaid, certify that Scott Marshall G.W. Bjerke, either being personally known to me or proven by satisfactory evidence, personally came before me this day and acknowledged that he is Assistant Secretary of **WEYERHAEUSER COMPANY**, a Washington State corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was voluntarily signed in its name by its Vice President, sealed with its corporate seal and voluntarily attested by him as its Assistant Secretary for the purposes stated therein.

Witness my hand and official stamp or seal, this 12th day of December, 2008.

Alicia A. Hanson

Notary Public

My EXP. DATE 1-31-09



(Affix Notary Seal) to State of North Carolina - Bertie County tracts(08-7-774)

Speller and Outlaw Tracts

09-00955

BOOK 652 PAGE 147

BOOK 2-11 PAGE 87

BOOK 1310 PAGE 183

FILED

STATE OF NORTH CAROLINA

THIS INSTRUMENT PREPARED BY:
CAMILLA M. HERLEVICH
THE NATURE CONSERVANCY SUPER
P. O. BOX 270
CHAPEL HILL, N.C. 27514
CLEARED THROUGH
BY *Nora Thompson*

MAR 17 3 43 PM '86
COUNTIES OF BERTIE, MARTIN AND HALIFAX

THAD EURE
SECRETARY OF STATE
NORTH CAROLINA

GENERAL WARRANTY DEED

THIS GENERAL WARRANTY DEED made this 14th day of November, 1985, by and between THE NATURE CONSERVANCY, a nonprofit corporation organized and existing under the laws of the District of Columbia, hereinafter Grantor, and the STATE OF NORTH CAROLINA, a body politic and corporate, with an address at Raleigh, NC 27603, hereinafter Grantee.

WHEREAS, Grantor is the owner of the property hereinafter described, together with all improvements thereon.

NOW THEREFORE, for and in consideration of the sum of ONE MILLION EIGHT HUNDRED ELEVEN THOUSAND SEVEN HUNDRED SEVENTY DOLLARS (\$1,811,770.00) paid to the Grantor, the receipt of which is hereby acknowledged, the mutual covenants, undertakings, and promises contained in this instrument, and other good and valuable consideration, the receipt of which is hereby acknowledged, the Grantor does hereby GRANT, BARGAIN, SELL, and CONVEY unto the Grantee in fee simple, all that certain lot or parcel of land situate, lying and being in Bertie, Martin and Halifax Counties, North Carolina, and being more particularly described in Exhibit A, attached.

TO HAVE AND TO HOLD the aforesaid lands with all rights and privileges thereunto belonging or in anywise appertaining unto the said Grantee and its successors and assigns, in fee simple forever.

SUBJECT, however to the following:

- 1) Easements of record.
- 2) Unrecorded hunting Lease between The Nature Conservancy and Clark Gun Club, dated July 25, 1985 and expiring December 31, 1985.
- 3) Unrecorded hunting Lease between The Nature Conservancy and Woodville Gun Club, dated October 2, 1985 and expiring February 28, 1986.
- 4) Unrecorded hunting Lease between The Nature Conservancy and Conoho Gun Club, Inc., dated August 12, 1985 and expiring February 28, 1986.

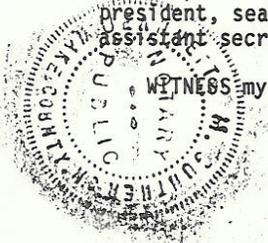
AND THE SAID GRANTOR for itself, its successors and assigns covenants to and with the said Grantee, and its successors and assigns that it is seized of said lands in fee simple and has a good right to convey the same in fee simple; that the said lands are free and clear of all encumbrances, except as provided for herein, and that it will forever warrant and defend the title to the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, this instrument has been made and executed the day and year first above written.

NORTH CAROLINA \$
COUNTY OF ORANGE \$



I, JEANNETTE M. GUNTHER, a Notary Public duly authorized in the County and State aforesaid, certify that CAMILLA M. HERLEVICH personally came before me this day and acknowledged she is assistant secretary of THE NATURE CONSERVANCY, a corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its vice president, sealed with its corporate seal, and attested by herself as its assistant secretary.



WITNESS my hand and official seal this 15th day of November, 1985.

Jeannette M. Gunther
NOTARY PUBLIC

My Commission Expires:

MARCH 23, 1987

Embossed Hereon is My
Wake County, N. C., Notary Public Seal
My Commission Expires March 23, 1987
JEANNETTE M. GUNTHER

\$ 7.29 N. C. EXCISE TAX

Stamp attached and cancelled
Berta G.



NORTH CAROLINA, BERTIE COUNTY.

The foregoing certificate (s) of Jeannette M. Gunther

N.C.

is (are) certified to be correct
This instrument was presented for registration and recorded

in this office at Book 652, Page 147.

This 3 day of Dec., 1985, at 11:55 o'clock A.M.

Peggy R. Jones
Register of Deeds

Assistant/Deputy

NORTH CAROLINA, HALIFAX COUNTY.

The foregoing certificate of Jeannette M. Gunther

a Notary Public of Wake Co. is certified to be correct.

This 3 day of Dec., 1985.

Recorded 8:55 A.M. in Book 1310, Page 183

D. S. Hill
Register of Deeds, Halifax County

By: J. H. Edwards, Deputy

NORTH CAROLINA, MARTIN COUNTY

The foregoing certificate (s) of Jeannette M. Gunther

is (are) certified to be correct. This instrument was presented for registration and recorded in the office of Register of Deeds, Martin County, N. C., in Book Z-11, Page 87.

This 3 day of December, 1985, at 11:05 o'clock A. M.

Julia E. Manning Register of Deeds

by: James P. Griffin, Dep. Ass't - Deputy

BOOK 652 PAGE 149

BOOK Z-11 PAGE 89

EXHIBIT A

Broad Neck and Barnes river lands

A certain tract or parcel of land known as part of the Broadneck and Barnes tracts, in Bertie County, North Carolina, and located, bounded and described as follows: Beginning in the mouth of Forked Gut on the north side of Roanoke River about two and one-half miles above Hamilton; and running thence up Roanoke River the various courses thereof, to the mouth of Indian Creek; thence along the said Indian Creek the various courses thereof to a point in the said creek at its intersection with a small gut leading from said creek about S 18° E, toward an old field of about eight acres; thence from said point on Indian Creek, along the various courses of the said creek and Beech Island Swamp, those thirteen certain courses and distances (generally north-eastwardly) listed in that certain deed of record in Book 308 at page 549 -- of December 31, 1936, of The National Handle Company to The American Fork and Hoe Company, in the Bertie County Registry, reference to which deed is hereby expressly made -- to a corner in Beech Island Swamp, four feet from a broken top bold gum on a small island or peninsula in the run of the said Beech Island swamp; thence from said point S 27° 37' E, along a line of marked trees 45.28 ch., to a corner; thence S 56° 37' E 36.53 ch., along a line of marked trees to a corner; thence south along a line of marked trees 40.67 ch., to a corner southwest of old Broad Neck field; thence S 50° 45' E along a line of marked trees 18.39 ch., to a corner south of Old Broad Neck field; thence south along a line of marked trees 54.03 ch., to a corner (said corner in old marked line bearing N 6° 42' W, 0.14 ch. from a hornbeam tree pointer with four notches); thence from the said corner along an old marked line of the Broad Neck tract of land South 61° 46' West 29.44 chains, South 63° 16' West 2 chains, South 67° 26' West 3.25 chains, South 65° 46' West 3.60 chains, South 68° 16' West 3.90 chains, South 62° 46' West 4 chains, to a marked bold gum corner tree on the north-east side of Duck Gut; thence S 27° 46' W, along a line of marked trees 17.61 ch., to a corner in Forked Gut, with marked pointers; thence along the center of the said Forked Gut the various courses thereof to the mouth of the said gut at Roanoke River the point of beginning; containing Two Thousand (2000) acres; being the western or river part of those tracts of land known as Broadneck and Barnes.

And being the same land conveyed as PARCEL SIX in that certain deed from Allegheny International Realty Development Corporation to The Nature Conservancy, dated May 17, 1985, recorded in Book 649 at Page 667; in Book W-11 Page 190; and Book 1286 Page 133, in the Register of Deeds Offices in Bertie, Martin and Halifax Counties North Carolina, respectively.

Speller Swamp

A certain tract or parcel of land, variously known as the Vernoy Swamp, the Quitsna Swamp, or the Speller Swamp, in Martin County, North Carolina, opposite Quitsna landing in Bertie County, North Carolina, lying on the Roanoke River, and adjoining what are now or were formerly known as the Thompson Swamp, Simmons and Biggs Swamp, and others, containing about 1200 acres, more or less.

Excepting, however, the portion of the above described tract of land conveyed by deed recorded in Book "000", Page 183, Register of Deeds Office, Martin County, North Carolina, from J. Davis Reed to E. R. Outlaw described as follows: Beginning at Byrd's Gut on Roanoke River, and running down the various courses of said River 210 poles to Turtle Gut; thence up Turtle Gut and along a line of marked trees South 70 degrees West 80 poles to a hornbeam; thence North 43 degrees West 96 poles to an ash; thence North 6 degrees West

EXHIBIT A (cont.)

And being the same land conveyed as PARCEL SEVEN in that certain deed from Allegheny International Realty Development Corporation to The Nature Conservancy, dated May 17, 1985, recorded in Book 649 at Page 667; in Book W-11 Page 190; and Book 1286 Page 133, in the Register of Deeds Offices in Bertie, Martin and Halifax Counties North Carolina, respectively.

Outlaw Swamp

A certain tract or parcel of land, known as the Outlaw Swamp, in Martin County, North Carolina, located, bounded and described as follows: Beginning at a gum sapling on the Roanoke River at J. Davis Reed's corner (Speller land), and running along the said Reed's line South 2 degrees West 49 chains to a large sweet gum on the north side of Our Gut; thence along a line of marked trees North 31 degrees West to a birch tree standing on the bank of Roanoke River, a distance of 50.75 chains; thence down the various courses of Roanoke River 95.50 chains to the beginning.

And being the same land conveyed as PARCEL EIGHT in that certain deed from Allegheny International Realty Development Corporation to The Nature Conservancy, dated May 17, 1985, recorded in Book 649 at Page 667; in Book W-11 Page 190; and Book 1286 Page 133, in the Register of Deeds Offices in Bertie, Martin and Halifax Counties North Carolina, respectively.

Urquhart Swamp

Two certain tracts of land, which together comprise what is known as the Urquhart Swamp, in Halifax County, North Carolina, located, bounded and described as follows:

First Tract: Beginning at the mouth of Spring Gut, thence North 336 poles to a Holly, thence North 70 degrees East 262 poles to an Elm, thence along a line of division South 1.5 degrees East 544 poles to the Roanoke River, thence down the River 260 poles to the beginning.

Second Tract: Beginning at a Chestnut oak, on Roanoke River, thence North 34 poles, thence South 46 degrees West 62 poles, thence South 14.5 degrees West 88 poles to an Elm, thence along the line of division South 1.5 degrees East 544 poles to Roanoke River, thence up the River 868 poles to the beginning.

The two tracts together containing 1190 acres, more or less; being the land conveyed by N. S. Pell, Receiver, and N. J. Mayo, Guardian, to J. Davis Reed, by deed recorded in Book 115, Page 430, Register of Deeds office, Halifax County, North Carolina.

Subject, however, to a boundary agreement recorded in Book 211, Page 31, Register of Deeds office, Halifax County, North Carolina, between J. Davis Reed and W. W. Kitchin, John P. Futrell, and Claude Kitchin, which establishes the line between the lands of Reed, above described, and the lands of W. W. Kitchin, John P. Futrell, and Claude Kitchin, known as the Nicholson Tract, as follows: Beginning on Roanoke River at Spring Gut, thence N. 14.75 degrees East 124 poles (by a line of chopped trees) to a large chopped red oak on the

07 60 815

Rev. 200.00
Rec. 14.00

58-19

STATE OF NORTH CAROLINA

BOOK L - 13 PAGE 72
DEED

FILED

JAN 25 1991

SECRETARY OF STATE

COUNTY MARTIN

Prepared by: T. Buie Costen
Special Deputy Atty. General

THIS DEED, made and entered into this the 12th day of October, 1990, by and between ODIS W. WHITAKER and wife, DELOIS W. WHITAKER, Grantors, and the STATE OF NORTH CAROLINA, C/O State Property Officer, 116 W. Jones Street, Raleigh, North Carolina, 27603, Grantee;

WITNESSETH:

THAT the said Grantors, in consideration of the sum of TWO HUNDRED THOUSAND AND NO/100 (\$200,000.00) DOLLARS to them paid by the Grantee, receipt of which is hereby acknowledged, has bargained and sold and by these presents does bargain, sell and convey, unto the said Grantee, its successors and assigns, all of that certain tract or parcel of land situate, lying and being in Hamilton Township, Martin County, North Carolina, and being more particularly described as follows:



BEGINNING at Clay Landing on Conoho Creek at the line of T. B. Slade, running thence along the line of T. B. Slade North 65 degrees West 100 feet, thence North 15 degrees 30 minutes East 195 feet, North 22 degrees 30 minutes West 116 feet, North 2 degrees 30 minutes West 224 feet, North 4 degrees 30 minutes West 104 feet, North 7 degrees East 177 feet, North 36 degrees West 61 feet, North 58 degrees West 94 feet, North 4 degrees East 148 feet, North 1 degree East 175 feet, North 18 degrees 45 minutes East 182 feet, North 31 degrees East 133 feet, North 2 degrees 45 minutes East 2890 feet to an old wall and Walnut tree, a corner between T. B. Slade and J. V. Champion, thence along the line of J. V. Champion South 58 degrees East 1,970 feet to the Willis Williams line, thence along the line of Willis Williams South 5 degrees West 1,035 feet to a Pine stump in a branch between the lands of Willis Williams and Mrs. Hattie E. Edmondson, thence down said branch

\$ 200.00 N. C. EXCISE TAX
STAMP ATTACHED AND CANCELLED

MARTIN COUNTY TAX OFFICE
Taxes paid thru 1990
Referred to District Treasurer

TRANSFERRED ASSessor
- 9 - 19

South 49 degrees 30 minutes East 149 feet, North 82 degrees 30 minutes East 134 feet, North 57 degrees 30 minutes East 148 feet, North 62 degrees 45 minutes East 116 feet, North 63 degrees 30 minutes East 182 feet, North 82 degrees 30 minutes East 116 feet, South 81 degrees 30 minutes East 107 feet, South 79 degrees East 91 feet, South 73 degrees 30 minutes East 157 feet, South 55 degrees 30 minutes East 123 feet, South 10 degrees 30 minutes East 107 feet, South 61 degrees East 132 feet, North 76 degrees 30 minutes East 132 feet, North 53 degrees 30 minutes East 148 feet, North 78 degrees East 181 feet, North 78 degrees East 200 feet, North 83 degrees 30 minutes East 1250 feet to an Ash and Maple in Conoho Creek, thence along the various courses of Conoho Creek South 25 degrees West 255 feet, South 20 degrees East 164 feet, South 33 degrees East 76 feet, South 16 degrees East 105 feet, South 31 degrees East 231 feet, South 32 degrees 30 minutes East 217 feet, South 60 degrees East 320 feet, South 39 degrees East 94 feet, South 15 degrees East 98 feet, South 9 degrees East 123 feet, South 54 degrees East 85 feet, North 77 degrees East 222 feet, South 18 degrees East 256 feet, South 27 degrees West 140 feet, South 44 degrees 30 minutes West 201 feet, South 45 degrees West 261 feet, South 88 degrees West 167 feet, South 69 degrees 30 minutes West 208 feet, North 58 degrees West 94 feet, South 78 degrees 30 minutes West 126 feet, North 81 degrees 30 minutes West 131 feet, South 58 degrees West 162 feet, South 8 degrees 15 minutes East 192 feet, South 18 degrees West 160 feet, South 44 degrees West 195 feet, South 15 degrees East 132 feet, South 2 degrees East 127 feet, South 23 degrees West 77 feet, South 68 degrees 30 minutes West 115 feet, South 27 degrees 30 minutes West 168 feet, South 31 degrees West 148 feet, South 18 degrees West 84 feet, South 13 degrees East 103 feet, South 62 degrees West 177 feet, South 49 degrees West 111 feet, South 59 degrees West 96 feet, South 48 degrees West 150 feet, South 61 degrees West 113 feet, South 48 degrees 30 minutes West 98 feet, South 56 degrees West 297 feet, South 80 degrees 30 minutes West 106 feet, South 60 degrees 45 minutes West 171 feet, South 80 degrees West 103 feet, South 17 degrees West 140 feet, South 47 degrees West 100 feet, North 81 degrees 30 minutes West 167 feet, North 87 degrees 30 minutes West 188 feet, North 59 degrees 30 minutes West 130 feet, North 64 degrees West 163 feet, North 78 degrees West 161 feet, North 78 degrees West 132 feet, North 21 degrees West 131 feet, North 63 degrees 30 minutes West 146 feet, North 76 degrees West 172 feet, South 84 degrees 30 minutes West 143 feet, South 88 degrees West 111 feet, North 31 degrees West 173 feet, North 34 degrees East 133 feet, North 10 degrees East 131 feet, North 21 degrees East 184 feet, North 1 degree 30 minutes East 185 feet,

North 5 degrees West 210 feet, North 4 degrees East 190 feet, North 8 degrees West 170 feet, North 20 degrees West 160 feet, North 30 degrees West 200 feet, North 35 degrees West 150 feet, North 43 degrees West 200 feet, North 61 degrees West 180 feet, North 85 degrees West 190 feet, South 75 degrees West 100 feet, South 45 degrees West 250 feet, South 55 degrees West 150 feet, South 31 degrees 30 minutes West 370 feet to Clay Landing, the beginning, containing 366.6 acres, more or less, and being the same premises described on a map or plat thereof entitled "Map of Robert Andrews Land" made by A. Corey, Surveyor, Williamston, N.C., June 26, 1941.

This is the identical tract or parcel of land conveyed by Robert Andrews, unmarried, to Odis W. Whitaker and wife, Delois W. Whitaker, by deed dated January 17, 1969, recorded in Deed Book M-8, page 639, in the Office of the Register of Deeds of Martin County.

See also boundary line agreement recorded in Book M-11, page 317 in the Office of the Register of Deeds of Martin County and map recorded in Plat Cabinet B slide 306-E referenced herein.

LESS AND EXCEPT: That certain tract or parcel of land containing 13.650 acres situate in Hamilton Township, Martin County, North Carolina, bounded on the West by the lands now or formerly owned by Slade Heirs, on the North by the lands now or formerly owned by Odis W. Whitaker, on the East and South by the lands now or formerly owned by Odis W. Whitaker, and being more particularly shown on map of survey dated June 19, 1990, revised September 19, 1990, entitled "Survey for Odis W. Whitaker", prepared by W. Ward Leggett, R.L.S. having license No. 3126, copy attached hereto for a more complete description of said property.

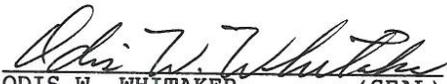
IN ADDITION, Grantors do bargain, sell and convey unto Grantee, its successors and assigns a perpetual easement for ingress and egress across the excepted 13.650 acre tract being 20 feet in width measured 10 feet on either side of the centerline shown as " 20' INGRESS EGRESS EASEMENT" on the Leggett map of survey attached hereto. IN ADDITION Grantors do bargain sell and convey unto Grantor, its successors and assigns the right of joint use with Grantors for ingress and egress of the "Farm Road"

across lands of J. B. Slade, Jr. heirs shown on the Leggett map of survey attached hereto.

TO HAVE AND TO HOLD the aforesaid tracts or parcels of land and all privileges and appurtenances thereto belonging to the State of North Carolina, its successors and assigns, forever.

AND the said Grantors do covenant that they are seized of the said premises in fee simple and have the right to convey the same in fee simple; that the same are free from any encumbrances; and that they will warrant and defend the said title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the said Grantors have hereunto set their hands and seals, all on the day and year first above written.


ODIS W. WHITAKER (SEAL)


DELOIS W. WHITAKER (SEAL)

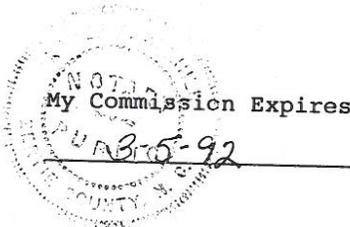
STATE OF NORTH CAROLINA

COUNTY OF BERTIE

I, Karen A. Spruill, a Notary Public in and for the aforesaid County and State do hereby certify that ODIS W. WHITAKER and DELOIS W. WHITAKER, personally appeared before me this date and acknowledged the due execution of the foregoing instrument for the purpose therein expressed.

WITNESS my hand and Notarial Seal, this the 12th day of October, 1990.

Karen A. Spruill
Notary Public



NORTH CAROLINA, MARTIN COUNTY
The foregoing certificate(s) of Karen A. Spruill, Notary Public,
is (are) certified to be correct. This instrument was presented for registration and recorded in the office of
Register of Deeds, Martin County, N. C., in Book L-13, Page 72.
This 12 day of October, 1990, at 12:40 o'clock P M.
Shirley P. Manning Register of Deeds
By: Day C. Bryant Ass't - Deputy

INDEXED
 GRANTOR GRANTEE

Mail to: State of North Carolina
c/o State Property Office
116 W. Jones Street
Raleigh, N.C. 27603

\$ 14.00 Rec.
200.00 St.
\$ 214.00 Ft.

STATE OF NORTH CAROLINA

COUNTY OF MARTIN

RESTRICTIVE COVENANT

THAT, WHEREAS, the State of North Carolina acquired certain properties from Odis W. Whitaker and wife, Delois W. Whitaker, described in Book L-13, page 72, Martin County Registry, for inclusion within the Roanoke River Wetlands project in Martin County, North Carolina, said property more fully described as follows:

All of that certain tract or parcel of land situate, lying and being in Hamilton Township, Martin County, North Carolina, and being more particularly described as follows:

BEGINNING at Clay Landing on Conoho Creek at the line of T. B. Slade, running thence along the line of T. B. Slade N 65° W 100 feet, thence N 15° 30' E 195 feet, N 22° 30' W 116 feet, N 2° 30' W 224 feet, N 4° 30' W 104 feet, N 7° E 177 feet, N 36° W 61 feet, N 58° W 94 feet, N 4° E 148 feet, N 1° E 175 feet, N 18° 45' E 182 feet, N 31° E 133 feet, N 2° 45' E 2890 feet to an old wall and Walnut tree, a corner between T. B. Slade and J. V. Champion, thence along the line of J. V. Champion S 58° E 1,970 feet to the Willis Williams line, thence along the line of Willis Williams S 5° W 1,035 feet to a pine stump in a branch between the lands of Willis Williams and Mrs. Hattie E. Edmondson, thence down said branch S 49° 30' E 149 feet, N 82° 30' E 134 feet, N 57° 30' E 148 feet, N 62° 45' E 116 feet, N 63° 30' E 182 feet, N 82° 30' E 116 feet, S 81° 30' E 107 feet, S 79° E 91 feet, S 73° 30' E 157 feet, S 55° 30' E 123 feet, S 10° 30' E 107 feet, S 61° E 132 feet, N 76° 30' E 132 feet, N 53° 30' E 148 feet, N 78° E 181 feet, N 78° E 200 feet, N 83° 30' E 1250 feet to an ash and maple in Conoho Creek, thence along the various courses of Conoho Creek S 25° W 255 feet, S

20° E 164 feet, S 33° E 76 feet, S 16° E 105 feet, S 31° E 231 feet, S 32° 30' E 217 feet, S 60° E 320 feet, S 39° E 94 feet, S 15° E 98 feet, S 9° E 123 feet, S 54° E 85 feet, N 77° E 222 feet, S 18° E 256 feet, S 27° W 140 feet, S 44° 30' W 201 feet, S 45° W 261 feet, S 88° W 167 feet, S 69° 30' W 208 feet, N 58° W 94 feet, S 78° 30' W 126 feet, N 81° 30' W 131 feet, S 58° W 162 feet, S 8° 15' E 192 feet, S 18° W 160 feet, S 44° W 195 feet, S 15° E 132 feet, S 2° E 127 feet, S 23° W 77 feet, S 68° 30' W 115 feet, S 27° 30' W 168 feet, S 31° W 148 feet, S 18° W 84 feet, S 13° E 103 feet, S 62° W 177 feet, S 49° W 111 feet, S 59° W 96 feet, S 48° W 150 feet, S 61° W 113 feet, S 48° 30' W 98 feet, S 56° W 297 feet, S 80° 30' W 106 feet, S 60° 45' W 171 feet, S 80° W 103 feet, S 17° W 140 feet, S 47° W 100 feet, N 81° 30' W 167 feet, N 87° 30' W 188 feet, N 59° 30' W 130 feet, N 64° W 163 feet, N 78° W 161 feet, N 78° W 132 feet, N 21° W 131 feet, N 63° 30' W 146 feet, N 76° W 172 feet, S 84° 30' W 143 feet, S 88° W 111 feet, N 31° W 173 feet, N 34° E 133 feet, N 10° E 131 feet, N 21° E 184 feet, N 1° 30' E 185 feet, N 5° W 210 feet, N 4° E 190 feet, N 8° W 170 feet, N 20° W 160 feet, N 30° W 200 feet, N 35° W 150 feet, N 43° W 200 feet, N 61° W 180 feet, N 85° W 190 feet, S 75° W 100 feet, S 45° W 250 feet, S 55° W 150 feet, S 31° 30' W 370 feet to Clay Landing, the beginning, containing 366.6 acres, more or less, and being the same premises described on a map or plat thereof entitled "Map of Robert Andrews Land" made by A. Corey, Surveyor, Williamston, N.C., June 26, 1941.

This is the identical tract or parcel of land conveyed by Robert Andrews, unmarried, to Odis W. Whitaker and wife, Delois W. Whitaker, by deed dated January 17, 1969, recorded in Deed Book M-8, page 639, in the Office of the Register of Deeds of Martin County.

See also Boundary Line Agreement recorded in Book M-11, page 317, in the Office of the Register of Deeds of Martin County, and map recorded in Plat Cabinet B, Side 306-E, referenced herein.

LESS AND EXCEPT: That certain tract or parcel of land containing 13.650 acres situate in Hamilton Township, Martin County, North Carolina, bounded on the west by the lands now or formerly owned by Slade Heirs, on the north by the lands now or formerly owned by Odis W. Whitaker, on the east and south by the lands now or formerly owned by Odis W. Whitaker, and being more particularly shown on map of survey dated June 19, 1990, revised September 19, 1990, entitled "Survey for Odis W. Whitaker," prepared by W. Ward Leggett, R.L.S., having License No. 3126.

IN ADDITION, a perpetual easement for ingress and egress across the accepted 13.650-acre tract being 20 feet in width measured 10 feet on either side of a center line shown as "20-Foot Ingress, Egress Easement" on the Leggett map of the survey referenced above.

IN ADDITION, the right of joint use with Whitakers for ingress and egress of the "farm road" across lands of J. B. Slade, Jr., Heirs shown on the Leggett map referenced above.

WHEREAS, a portion of the purchase price for said lands consisted of funds from a federal grant from the North American Wetlands Conservation Council, administered by the United States Fish and Wildlife Service (hereinafter "Service"); and,

WHEREAS, the State of North Carolina agreed to place the restrictive covenant hereinafter set forth upon said lands as a condition of using federal funds to purchase same;

NOW, THEREFORE, the State of North Carolina, the owner of the lands described in that certain deed recorded in Book L-13, page 72, Martin County Registry, does hereby impose upon said land the following restrictive covenant which shall be binding and enforceable from this time forward.

If the land is sold, transferred, hypothecated, or otherwise disposed of or encumbered, or ceases to be used in whole or in part for the purpose for which it was acquired and held, the State of North Carolina shall:

1. provide the Service real property that is of equal value and will serve the purpose for which the original project was undertaken; or,
2. acquire title to and manage real property that is of equal value and will serve the purpose for which the original project was undertaken; or, as a last resort,
3. repay to the Service the funds, plus interest at the current prime rate, used in accomplishing the restoration and/or enhancement objectives.

IN TESTIMONY WHEREOF, the STATE OF NORTH CAROLINA has caused this instrument to be executed in its name by JAMES G. MARTIN, Governor, attested by RUFUS L. EDMISTEN, Secretary of State, and the Great Seal of the State of North Carolina to be hereto affixed by virtue of the power and authority aforesaid.

STATE OF NORTH CAROLINA

By James G. Martin
Governor

ATTEST:

By Rufus L. Edmisten
Secretary of State

APPROVED AS TO FORM:

LACY H. THORNBURG
ATTORNEY GENERAL

By Teresa L. White
Teresa L. White
Assistant Attorney General

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Perry H. Harper, a Notary Public
in and for the County and State aforesaid, do hereby certify that
RUFUS L. EDMISTEN, Secretary of State of North Carolina, person-
ally came before me this day and acknowledged that he is Secre-
tary of State of North Carolina, and that by authority duly given
and as the act of the State, the foregoing instrument was signed
in its name by JAMES G. MARTIN, Governor of the State of North
Carolina, sealed with the Great Seal of the State of North Caro-
lina, and attested by himself as Secretary of State of North
Carolina.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial
Seal, this the 12 day of May, 1992.



Perry H. Harper
Notary Public

My Commission Expires:

3-29-93

INDEXED
GRANTOR () GRANTEE ()

NORTH CAROLINA, MARTIN COUNTY
The foregoing certificate(s) of

Perry H. Harper

is (are) certified to be correct. This instrument was presented for registration and recorded in the office of
Register of Deeds, Martin County, N. C. in Book X-13, Page 626.

This 17 day of June, 1992, at 2:10 o'clock P.M.

To: Teresa White, Asst. Att. General

Lina P. Manning Register of Deeds

Prepared by Daniel A. Manning,
Attorney at Law, Williamston, N.C.

NORTH CAROLINA
MARTIN COUNTY

THIS DEED, made this the 19th day of April, 1991, by John S. Whitley and wife, Esther W. Whitley, of Martin County, North Carolina, parties of the first part to The State of North Carolina, party of the second part.

WITNESSETH:

That said parties of the first part for and in consideration of the sum of TEN DOLLARS (\$10.00) and other valuable considerations paid to them by the said party of the second part, the receipt of which is hereby acknowledged, have bargained and sold and by these presents do grant, bargain, sell and convey unto the said party of the second part, its successors and assigns, the following described tract or parcel of land, to-wit:

A parcel of land in Williamston Township, Martin County, North Carolina and being more particularly described on "Exhibit A" which is attached hereto and made a part of this deed.

TO HAVE AND TO HOLD the aforesaid tract or parcel of land and all privileges and appurtenances thereto belonging to the said party of the second part, its successors and assigns, to its only use and behoof forever.

And the said parties of the first part for themselves and their heirs, executors and administrators, covenant with the said party of the second part, its successors and assigns, that they are seized of said premises in fee and have the right to convey in fee simple; that the same are free and clear from all encumbrances and that they do hereby forever warrant and will forever defend the title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the said parties of the first part have hereunto set their hands and seals, this the day and year first above written.

John S. Whitley (SEAL)
JOHN S. WHITLEY

Esther W. Whitley (SEAL)
ESTHER W. WHITLEY

\$ 230.50 N. C. EXCISE TAX
STAMP ATTACHED AND CANCELLED



MARTIN COUNTY TAX OFFICE
Taxes Paid thru 1990
05-03-91

TRANSFERRED ASSESSOR

For Restrictive Covenant See Book X-13 Pg. 631

EXHIBIT A

A parcel of land in Williamston Township, Martin County, North Carolina, bounded on the west by N. C. Highway 125, on the north by Willie Lassiter land and the Lindsley Estate, on the east by the Lindsley Estate, on the south by the Roanoke River, Dr. J.S. Rhodes, and Skewarkee Gut and being the same lands conveyed to John S. Whitley in deeds recorded in Book C-6, page 589 and Book Q-6, page 44 of the Martin County Registry.

SAVING AND EXCEPTING the following described tract of land:
 Beginning at an existing P K Nail in the centerline of N.C. Highway 125, said beginning point being N 61 degrees 00' 00" W 337.56 feet (measured along the centerline of N.C. Highway 125) from an existing PK Nail located where the centerline of N.C. Highway 125 intersects the centerline of Mulberry Street; thence from said beginning point the following courses and distances along the centerline of N. C. Highway 125: N 59 degrees 55' 30" W 508.18 feet to an existing PK Nail, N 50 degrees 12' 16" W 394.89 feet to an existing PK Nail, N 39 degrees 36' 36" W 316.26 feet to an existing PK Nail, N 29 degrees 05' 49" W 414.18 feet to an existing PK Nail, N 25 degrees 30' 11" W 924.65 feet to an existing PK Nail, N 26 degrees 14' 27" W 300.08 feet to an existing PK Nail, and N 28 degrees 56' 09" W 275.82 feet to an existing nail, a corner; thence leaving N.C. Highway 125 and running along the Lassiter line the following courses and distances: N 61 degrees 57' 30" E 603.13 feet to a new iron pipe, N 63 degrees 39' 15" E 177.39 feet to a new iron pipe, N 70 degrees 45' 18" E 483.54 feet to a new iron pipe, thence N 75 degrees 10' 57" E 293.54 feet to a new iron pipe, thence S 85 degrees 17' 41" E 105.90 feet to a new iron pipe, thence N 81 degrees 48' 50" E 192.71 feet to a new iron pipe, thence N 69 degrees 25' 07" E 277.07 feet to a new iron pipe, thence N 43 degrees 47' 53" E 208.28 feet to a new iron pipe, thence N 76 degrees 45' 55" E 476.53 feet to a new iron pipe, thence N 9 degrees 06' 23" E 231.17 feet to a new iron pipe, thence N 79 degrees 56' 45" E 145.84 feet to a new iron pipe, thence N 32 degrees 56' 44" E 250.09 feet to a new iron pipe, and N 67 degrees 22' 50" E 112.83' to a new iron pipe, a corner; thence leaving the Lassiter line and running the following courses and distances to Skewarkee Gut: Along the centerline of a ditch S 39 degrees 20' 17" E 120.89 feet to a new iron pipe, S 37 degrees 01' 46" E 122.12 feet to a new iron pipe, S 38 degrees 17' 45" E 351.35 feet to a new iron pipe, S 42 degrees 24' 12" E 500.03 feet to a new iron pipe, and S 74 degrees 53' 23" E 248.35 feet to a new iron pipe in the center of a farm path, and thence continuing S 74 degrees 53' 23" E 184.62 feet to a new iron pipe, thence S 06 degrees 16' 32" E 180.32 feet to a new iron pipe, S 42 degrees 56' 54" E 243.44 feet to a new iron pipe, S 75 degrees 55' 33" E 226.18 feet, S 54 degrees 56' 17" E 247.34 feet to a new iron pipe, S 52 degrees 53' 22" E 142.16 feet to a new iron pipe, S 16 degrees 41' 20" E 263.35 feet to a new iron pipe, S 12 degrees 06' 18" E 157.69 feet to a new iron pipe, S 32 degrees 29' 34" E 143.56 feet to a new iron pipe, S 35 degrees 07' 42" E 175.19 feet to a new iron pipe, S 40 degrees 25' 03" E 226.29 feet to a new iron pipe, S 29 degrees 34' 33" E 186.55 feet to a new iron pipe,

EXHIBIT A CON'T

and S 04 degrees 51' 26" E 590.66 feet to the centerline of Skewarkee Gut, a corner; thence along the centerline of Skewarkee Gut the following courses and distances to the beginning: N 79 degrees 44' 47" W 417.52 feet, N 83 degrees 17' 06" W 264.03 feet, S 76 degrees 50' 34" W 409.72 feet, S 71 degrees 56' 42" W 298.87 feet, S 58 degrees 01' 34" W 332.59 feet to a new iron pipe; thence N 73 degrees 02' 09" W 354.68 feet to a new iron pipe, thence N 81 degrees 45' 43" W 171.47 feet to a new iron pipe, thence S 85 degrees 25' 03" W 208.57 feet to a new iron pipe, thence S 89 degrees 26' 43" W 347.03 feet; thence N 84 degrees 53' 06" W 437.31 feet, thence S 56 degrees 49' 56" W 374.74 feet, thence S 43 degrees 48' 14" W 195.05 feet, and thence S 12 degrees 07' 31" W 250.58 feet to the northerly edge of N.C. Highway 125, and thence S 29 degrees 00' 00" W 50 feet to the centerline of N. C. Highway 125, the point of beginning.

It is intended herein to convey tract 2 consisting of 597.36 acres, more or less as shown on a map entitled "Survey for John Whitley" by W. Ward Leggett, R.L.S., L-3126, dated March 11, 1991, together with rights of ingress and egress to and from said tract over an easement of right of way 30 feet wide running from N.C. Highway 125 to said tract 2, the centerline of said right of way being described as follows:

Beginning at a new PK nail set in the centerline of N. C. Highway 125, said beginning point being S 28 degrees 56' 09" E 15.00 feet (measured along the centerline of N.C. Highway 125) from the northwestern corner (in Highway 125) of the above described parcel reserved to John Whitley; thence from said beginning point N 61 degrees 57' 30" E 602.68 feet to a new iron pipe, N 63 degrees 39' 15" E 177.16 feet to a new iron pipe, N 80 degrees 05' 47" E 351.19 feet to a new iron pipe, N 60 degrees 45' 00" E 189.18 feet to a new iron pipe, N 78 degrees 08' 30" E 199.75 feet to a new iron pipe, S 22 degrees 42' 08" E 143.34 feet to a new iron pipe, N 80 degrees 50' 34" E 172.26 feet to a new iron pipe, N 70 degrees 28' 02" E 328.16 feet to a new iron pipe, N 65 degrees 31' 24" E 227.33 feet to a new iron pipe, N 80 degrees 48' 09" E 343.45 feet to a new iron pipe, N 69 degrees 17' 29" E 243.14 feet to a new iron pipe, N 39 degrees 19' 14" E 500.38 feet to a new iron pipe, S 26 degrees 47' 52" E 548.17 feet to a new iron pipe, S 27 degrees 44' 25" E 504.25 feet to a new iron pipe, N 60 degrees 01' 04" E 356.70 feet to a new iron pipe, and thence N 48 degrees 47' 33" E 237.61 feet to a new iron pipe.

The map referred to above is recorded in Plat Cabinet B, Slide 360-P, Martin County Registry and is incorporated herein by reference.

This instrument was prepared by
T. Eric Garrison, P. O. Box 1499
Columbia, South Carolina 29202

STATE OF NORTH CAROLINA)
COUNTY OF MARTIN) SPECIAL WARRANTY
DEED TO REAL ESTATE

THIS INSTRUMENT, Made this the 1st day of April, 1991
between The Farm Credit Bank of Columbia, (successor by merger to The Federal
Land Bank of Columbia), a corporation organized, created and existing pursuant
to the laws of the United States of America, with its principal office located
in Columbia, South Carolina, hereinafter called Grantor and East Carolina Farm
Credit, ACA hereinafter called Grantee (whether one or more).

WITNESSETH:

That Grantor for and in consideration of the sum of Ten (\$10.00)
Dollars, and other good and valuable considerations, to it in hand paid,
receipt thereof is hereby acknowledged, has granted, bargained, sold and
conveyed and by these presents does grant, bargain, sell, and convey unto
grantee, the following described real estate, to wit:

See Attached Exhibit "A"

TO HAVE AND TO HOLD, the aforesaid lands and premises together with all
the privileges and appurtenances thereunto belonging to the Grantee in fee
simple.

AND, the Grantor covenants with the Grantee, that Grantor has done
nothing to impair such title as Grantor received and Grantor will warrant and
defend the title against the lawful claims of all persons claiming by, under
or through Grantor, except for easements, conditions and restrictions of
record, if any, and prior and current years ad valorem taxes.

IN WITNESS WHEREOF, first party has caused these presents to be signed
in its name by its senior Vice President thereunto first duly authorized, the
day and year first above written.

THE FARM CREDIT BANK OF COLUMBIA

By: Charles H. Cook
Charles H. Cook
Senior Vice President

Attest: Maribeth K. Corbett
Maribeth K. Corbett
Assistant Corporate Secretary



STATE OF SOUTH CAROLINA)
COUNTY OF RICHLAND)

I, Susan M. Tidwell, certify that Maribeth K. Corbett personally
came before me this day and acknowledged that she is Assistant Corporate
secretary of The Farm Credit Bank of Columbia, a corporation, and that by
authority duly given and as the act of the corporation, the foregoing
instrument was signed in its name by its Senior Vice President, sealed with
its corporate seal, and attested by herself as its Assistant Corporate
Secretary.

WITNESS my hand and official seal, this the 1st day of April,
1991.

(Official Seal)
My Commission expires:

5-13-92

Susan M. Tidwell
signature of officer

Notary Public for SC.
Title of officer

INDEXED
WARRANTY GRANTEE

NORTH CAROLINA, MARTIN COUNTY
The foregoing certificate(s) of Susan M. Tidwell

is (are) certified to be correct. This instrument was presented for registration and recorded in the office of
Register of Deeds, Martin County, N. C. in Book 0-13, Page 493.

This 1st day of April, 1991, at 11:45 o'clock A. M.

Theresa R. Alspaugh Register of Deeds
By: Theresa R. Alspaugh Deputy

To: Farm Credit, Winston

STATE OF NORTH CAROLINA

COUNTY OF MARTIN

RESTRICTIVE COVENANT

THAT, WHEREAS, the State of North Carolina acquired certain properties from John S. Whitley and wife, Esther W. Whitley, described in Book O-13, page 489, Martin County Registry, for inclusion within the Roanoke River Wetlands project in Martin County, North Carolina, said property more fully described as follows:

A parcel of land in Williamston Township, Martin County, North Carolina, bounded on the west by N.C. Highway 125, on the north by Willie Lassiter land and the Lindsley Estate, on the east by the Lindsley Estate, on the south by the Roanoke River, Dr. J. S. Rhodes, and Skewarkee Gut and being the same lands conveyed to John S. Whitley in deeds recorded in Book C-6, page 589, and Book Q-6, page 44, of the Martin County Registry.

SAVING AND EXCEPTING the following described tract of land: BEGINNING at an existing PK nail in the center line of N.C. Highway 125, said beginning point being N 61° 00' 00" W 337.56 feet (measured along the center line of N.C. Highway 125) from an existing PK nail located where the center line of N.C. Highway 125 intersects the center line of Mulberry Street; thence from said beginning point the following courses and distances along the center line of N.C. Highway 125; N 59° 55' 30" W 508.18 feet to an existing PK nail, N 50° 12' 16" W 394.89 feet to an existing PK nail, N 39° 36' 36" W 316.26 feet to an existing PK nail, N 29° 05' 49" W 414.18 feet to an existing PK nail, N 25° 30' 11" W 924.65 feet to an existing PK nail, N 26° 14' 27" W 300.08 feet to an existing PK nail, and N 28° 56' 09" W 275.82 feet to an existing nail, a corner; thence leaving N.C. Highway

125 and running along the Lassiter line the following courses and distances: N 61° 57' 30" E 603.13 feet to a new iron pipe, N 63° 39' 15" E 177.39 feet to a new iron pipe, N 70° 45' 18" E 483.54 feet to a new iron pipe, thence N 75° 10' 57" E 293.54 feet to a new iron pipe, thence S 85° 17' 41" E 105.90 feet to a new iron pipe, thence N 81° 48' 50" E 192.71 feet to a new iron pipe, thence N 69° 25' 07" E 277.07 feet to a new iron pipe, thence N 43° 47' 53" E 208.28 feet to a new iron pipe, thence N 76° 45' 55" E 476.53 feet to a new iron pipe, thence N 19° 06' 23" E 231.17 feet to a new iron pipe, thence N 79° 56' 45" E 145.84 feet to a new iron pipe thence N 32° 56' 44" E 250.09 feet to a new iron pipe, and N 67° 22' 50" E 112.83 feet to a new iron pipe, a corner; thence leaving the Lassiter line and running the following courses and distances to Skewarkee Gut: Along the center line of a ditch S 39° 20' 17" E 120.89 feet to a new iron pipe, S 37° 01' 46" E 122.12 feet to a new iron pipe, S 38° 17' 45" E 351.35 feet to a new iron pipe, S 42° 24' 12" E 500.03 feet to a new iron pipe, and S 74° 53' 23" E 248.35 feet to a new iron pipe in the center of a farm path, and thence continuing S 74° 53' 23" E 184.62 feet to a new iron pipe, thence S 06° 16' 32" E 180.32 feet to a new iron pipe, S 42° 56' 54" E 243.44 feet to a new iron pipe, S 75° 55' 33" E 226.18 feet, S 54° 56' 17" E 247.34 feet to a new iron pipe, S 52° 53' 22" E 142.16 feet to a new iron pipe, S 16° 41' 20" E 263.35 feet to a new iron pipe, S 12° 06' 18" E 157.69 feet to a new iron pipe, S 32° 29' 34" E 143.56 feet to a new iron pipe, S 35° 07' 42" E 175.19 feet to a new iron pipe, S 40° 25' 03" E 226.29 feet to a new iron pipe, S 29° 34' 33" E 186.55 feet to a new iron pipe and S 04° 51' 26" E 590.66 feet to the center line of Skewarkee Gut, a corner; thence along the center line of Skewarkee Gut the following courses and distances to the beginning: N 79° 44' 47" W 417.52 feet, N 83° 17' 06" W 264.03 feet, S 76° 50' 34" W 409.72 feet, S 71° 56' 42" W 298.87 feet, S 58° 01' 34" W 332.59 feet to a new iron pipe; thence N 73° 02' 09" W 354.68 feet to a new iron pipe, thence N 81° 45' 43" W 171.47 feet

to a new iron pipe, thence S 85° 25' 03" W 208.57 feet to a new iron pipe, thence S 89° 26' 43" W 347.03 feet; thence N 04° 53' 06" W 437.31 feet, thence S 56° 49' 56" W 374.74 feet, thence S 43° 48' 14" W 195.05 feet, and thence S 12° 07' 31" W 250.58 feet to the northerly edge of N.C. Highway 125, and thence S 29° 00' 00" W 50 feet to the center line of N.C. Highway 125, the point of beginning.

It is intended herein to convey Tract 2 consisting of 597.36 acres, more or less, as shown on a map entitled "Survey for John Whitley" by W. Ward Leggett, R.L.S., L-3126, dated March 11, 1991, together with rights of ingress and egress to and from said tract over an easement of right of way 30 feet wide running from N.C. Highway 125 to said Tract 2, the center line of said right of way being described as follows:

BEGINNING at a new PK nail set in the center line of N.C. Highway 125, said beginning point being S 28° 56' 09" E 15.00 feet (measured along the center line of N.C. Highway 125) from the northwestern corner (in Highway 125) of the above-described parcel reserved to John Whitley; thence from said beginning point N 61° 57' 30" E 602.68 feet to a new iron pipe, N 63° 39' 15" E 177.16 feet to a new iron pipe, N 80° 05' 47" E 351.19 feet to a new iron pipe, N 60° 45' 00" E 189.18 feet to a new iron pipe, N 78° 08' 30" E 199.75 feet to a new iron pipe, S 22° 42' 08" E 143.34 feet to a new iron pipe, N 80° 50' 34" E 172.26 feet to a new iron pipe, N 70° 28' 02" E 328.16 feet to a new iron pipe, N 65° 31' 24" E 227.33 feet to a new iron pipe, N 80° 48' 09" E 343.45 feet to a new iron pipe, N 69° 17' 29" E 243.14 feet to a new iron pipe, N 39° 19' 14" E 500.38 feet to a new iron pipe, S 26° 47' 52" E 548.17 feet to a new iron pipe, S 27° 44' 25" E 504.25 feet to a new iron pipe, N 60° 01' 04" E 356.70 feet to a new iron pipe, and thence N 48° 47' 33" E 237.61 feet to a new iron pipe.

The map referred to above is recorded in Plat Cabinet B, Slide 360-F, Martin County Registry, and is incorporated herein by reference.

WHEREAS, a portion of the purchase price for said lands consisted of funds from a federal grant from the North American Wetlands Conservation Council, administered by the United States Fish and Wildlife Service (hereinafter "Service"); and,

WHEREAS, the State of North Carolina agreed to place the restrictive covenant hereinafter set forth upon said lands as a condition of using federal funds to purchase same;

NOW, THEREFORE, the State of North Carolina, the owner of the lands described in that certain deed recorded in Book O-13, page 489, Martin County Registry, does hereby impose upon said land the following restrictive covenant which shall be binding and enforceable from this time forward.

If the land is sold, transferred, hypothecated, or otherwise disposed of or encumbered, or ceases to be used in whole or in part for the purpose for which it was acquired and held, the State of North Carolina shall:

1. provide the Service real property that is of equal value and will serve the purpose for which the original project was undertaken; or,
2. acquire title to and manage real property that is of equal value and will serve the purpose for which the original project was undertaken; or, as a last resort,

3. repay to the Service the funds, plus interest at the current prime rate, used in accomplishing the restoration and/or enhancement objectives.

IN TESTIMONY WHEREOF, the STATE OF NORTH CAROLINA has caused this instrument to be executed in its name by JAMES G. MARTIN, Governor, attested by RUFUS L. EDMISTEN, Secretary of State, and the Great Seal of the State of North Carolina to be hereto affixed by virtue of the power and authority aforesaid.

STATE OF NORTH CAROLINA

By James G. Martin
Governor

ATTEST:

By Rufus L. Edmisten
Secretary of State

APPROVED AS TO FORM:

LACY H. THORNBURG
ATTORNEY GENERAL

By Teresa L. White
Assistant Attorney General

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Penny N. Harper, a Notary Public in and for the County and State aforesaid, do hereby certify that RUFUS L. EDMISTEN, Secretary of State of North Carolina, personally came before me this day and acknowledged that he is Secretary of State of North Carolina, and that by authority duly given and as the act of the State, the foregoing instrument was signed in its name by JAMES G. MARTIN, Governor of the State of North Carolina, sealed with the Great Seal of the State of North Carolina, and attested by himself as Secretary of State of North Carolina.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this the 12 day of May, 1992.



Penny N. Harper
Notary Public

INDEXED
GRANTOR (X) GRANTEE

NORTH CAROLINA, MARTIN COUNTY
The foregoing certificate(s) of Penny N. Harper, Notary Public, is (are) certified to be correct. This instrument was presented for registration and recorded in the office of Register of Deeds, Martin County, N. C. in Book X-13, Page 631.
This 17 day of June, 1992, at 2:10 o'clock P. M.
Sina P. Manning Register of Deeds
By: Patricia B. Hylton Ass't - Deputy

Smear White, Asst. Atty. General
To: NC Dept of Justice
PO Box 629
Raleigh NC 27602

XVIII. Final Draft Public Review Comments



North Carolina Department of Environment and Natural Resources
Office of Land and Water Stewardship

Pat McCrory
Governor

Bryan Gossage
Director

Donald R. van der Vaart
Secretary

January 16, 2015

David Turner, Management Biologist
Lower Roanoke River Game Land

Dear Mr. Turner:

The North Carolina Natural Heritage Program appreciates the opportunity to review the draft Lower Roanoke River Game Land Management Plan. We also welcome a continued partnership with the NC Wildlife Resources Commission (WRC) as it moves forward to implement the final management plan.

The North Carolina Natural Heritage Program (NHP) appreciates the plan's recognition of the value of suppressing exotic plants, of controlling feral hogs, and of converting planted and successional loblolly pine stands to natural hardwood forests or longleaf pine. We encourage all of these forms of management, while recognizing the logistical difficulties involved. We are pleased to see that the WRC is working with the U.S. Army Corps of Engineers on dam management to achieve more natural river flows.

NHP staff did note only a couple of small errors in review of the draft management plan. Planer tree is mentioned as a species of cypress-gum swamps (page 24), but this species reaches its northern range limit in southern North Carolina and is not known along the Roanoke River. Four-toed salamander is listed as a target species associated with oak forest. We know of no records of four-toed salamanders in or near the Roanoke River area, and almost none in the Coastal Plain.

We appreciate the ecosystem management approach that the WRC has historically applied to managing the Game Lands and encourage WRC to continue with this management philosophy, especially as natural habitats across North Carolina are degraded, and habitat fragmentation increases. Maintaining high-quality examples of North Carolina's natural ecosystems is important for native wildlife - including rare species - and for the citizens of our state.

Maintaining the integrity of natural areas and connectivity for wildlife within the Game Lands will provide a much greater opportunity for North Carolina's native diversity to remain viable. Thank you for your contribution to the conservation of our natural resources in North Carolina. Please contact me or other NHP staff if you have any questions, or would like additional information.

Sincerely,



Scott Pohlman

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-707-8600 \ Internet: www.ncdenr.gov

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Plan response: The NCWRC appreciates the partnership it has with the North Carolina Natural Heritage Program. Discussion of planner tree and the four-toed salamander has been removed from the plan since both were unlikely to occur on the LRRWGL.



Steven W. Troxler
Commissioner

**North Carolina Department of Agriculture
and Consumer Services**
N.C. Forest Service



Scott Bissette
Assistant Commissioner

1/16/15

To: NC Wildlife Resources Commission Staff
From: Sean Brogan, NC Forest Service
Director of Forest Management & Development
919-917-5202 sean.brogan@ncagr.gov
Through: David Lane / Scott Bissette
Re: Input on NCWRC Draft Gamelands Management Plans

To Whom it May Concern:

The following input is respectfully submitted for your consideration as it relates to the NCWRC's draft Gamelands Management Plans. These recommendations were offered by our fieldstaff after their review of the documents. Please contact me if you have any questions or if there are any matters where collaboration of our two agencies is warranted.

Best Wishes,

Sean Brogan

Sean Brogan

Recommendation #1:

Several of the Management Plans (ex. Holly Shelter and Suggs Millpond) indicated that acres would be considered “restored” once they had been planted with a certain species (ex. longleaf).

NCFS staff recommend that prior to calling such acreage “restored”, a survival count inspection is conducted to confirm that an acceptable number of trees per acre survived.

Recommendation #2:

The Holly Shelter Plan calls for the creation of four new large burn units (greater than 200 acres) in Pocosin type fuels using grinding or chopping methods.

NCFS staff had some concerns about groundfire in the areas described. In such Pocosin areas, our Agency recommendation would be for such fuels to be evaluated ahead of time through a joint NCWRC – NCFS onsite meeting. NCFS County Rangers would typically be the local NCFS point of contact for such a request.

Recommendation #3:

At least one of the Plans (Suggs Millpond Plan) discussed conducting prescribed burns without installing firelines in ecotones. While the NCFS recognizes the ecological importance of ecotones, staff noted some concerns with prescribed burns that would be allowed to burn into Pocosin fuels rather than be contained by installed firelines.

NCFS staff emphasized the benefits of reviewing each prescribed burn on case-by-case basis, where soils, fuels, weather parameters and other factors were taken into consideration prior to deciding on whether or not to use an ecotone as a firebreak. There may some scenarios where fireline installation is warranted.

Recommendation #4:

Pages 117-124 of the Holly Shelter Plan contains the MOU your Agency has with the DENR / Division of Forest Resources. This MOU is dated 12/18/08 and states it is good for a 5-year period from the date of the last signature (thus, it has expired).

I believe this cited MOU is the most recent agreement between our agencies. We recommend this issue be reviewed, and consideration be given to creating an updated MOU between the NCWRC and NCFS.

Recommendation #5:

In Gamelands where much of the forest management approach is to “let it grow” (ex. bottomland hardwood stands in the Lower Roanoke Plan), it is recommended that annual inspections of the forest be conducted in order to more quickly detect insect / disease outbreaks. NCWRC staff should collaborate with local NCFS staff in the event that such issues arise and forest management technical assistance would be helpful. The NCFS also has Forest Health Specialists and Central Office staff that can provide advanced assistance if required.

Plan response: Response to recommendation #5; after review, comment was addressed in the <i>Habitat – Floodplain Forest</i> section.
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FINAL DRAFT COMMENT	PLAN RESPONSE
<p>Whats the chances of Equestrian trails on the Game LANDS , a lot of riders need places to ride pleas consider us</p>	<p>Addressed in plan.</p>
<p>Only part of the primary users help support the Game Lands through hunting, fishing, trapping, and game lands licenses. Wildlife viewing, hiking, biking, and walking pets are a variety of users who do not have to purchase a license for using game lands. One objective for all game land management plans should be to implement and require all users to purchase a game lands license if the objective is to provide for more public opportunity. This would help generate additional funds to implement objectives. If resources are to be shared by multiple users then those users should have to pay equally.</p>	<p>This is a statewide issue not directly covered in this plan. Comment is noted.</p>
<p>Trapping is allowed in the regulation digest by permit: However, more opportunity would be provided to trappers if the trapping permit authorizing trapping would follow the state trapping season December 1 - February 28. Extending the permit to authorize trapping starting December 1 would increase the use of game lands by trappers and provide consistency with coastal trapping dates. This would also help increase the take of invasive species like nutria and other furbearers that may cause damage like beaver.</p>	<p>Addressed in plan. The trapping opportunity to trap on the LRRWGL is to reduce conflicts with hunters. Other nearby game lands offer trapping opportunities when it is not allowed on the LRRWGL.</p>
<p>Please remove all dog hunting for deer from NC state game land. Until the wildlife commission and more importantly the state legislature addresses this problem - I will have my son's find other activities besides hunting.</p>	<p>The state owned portion of LRRWGL does allow the use of dogs to hunt deer; however, through the permit system and lack of roads, hunting with deer hounds is not very conducive and is not regularly occurring. The federally owned tracts are not hunted with deer hounds. Overall, there are many game lands in the state that either do not allow, or it is not conducive to, hunting deer with dogs.</p>

<p>This is in response not only to the game lands listed but for all. One thing that seems to be burdened on the sportsman using the game lands is that they are the only ones required to pay a use fee. I do not have problem with that at all but believe that all recreational users of game lands should be required to purchase a "habitat stamp". Sportsman do that through licensing requirements but others (hikers, mountain bikers, campers, horseback riders, etc) are using these lands and are for the most part having the most negative impacts to trails and campsites. With budget cuts not going away, the only way to sustain the quality that users expect is to have those same users pay their fair share to maintain these areas. Western states have already adopted this idea and it seems to be working.</p>	<p>This is a statewide issue not directly covered in this plan. Comment is noted.</p>
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