Review of Wild Turkey Data and Management
July 24, 2024

Purpose of this Document:

The North Carolina Wildlife Resources Commission is overseen and directed by a 21-member Board of Commissioners. The Board operates with several standing committees, and this document addresses the following charge that came from one of those committees. On February 21, 2024, the Small Game – Wild Turkey Committee met and asked the agency staff to:

1) review the agency's current Wild Turkey Management Goal and report back potential modifications that might be considered, and

2) continue to review wild turkey data and research information and examine potential modifications to the turkey seasons that might be considered.

Contents

Introduction

The restoration of wild turkeys is considered one of the greatest North American conservation success stories. Although historically abundant, wild turkey numbers in the southeastern United States declined sharply during the late 1800s and early 1900s due to unregulated harvest and habitat loss. Wild turkeys were able to make a successful comeback mainly through the cooperative restoration efforts of state agencies and many conservation partners, resulting in turkeys once again being found throughout the region. With an estimated current population of 2.3 million across the southeastern United States, turkeys are widely recognized as an important species from an ecological, recreational, aesthetic, and economic standpoint.

In North Carolina, turkey populations have increased dramatically over the last five decades, from an estimated 2,000 turkeys in 1970 to an estimated 270,000 turkeys today. Statewide restoration efforts were completed by 2005, with turkeys once again established across all 100 counties. This was a major effort that required the trapping and transfer of 6,031 wild turkeys to 358 sites across the state. Releases included 1,985 turkeys that came from other states.

North Carolina was not alone in its successful wild turkey restoration efforts, and populations rapidly increased in many other states as well post-restoration. Taking advantage of the increasing turkey populations, many states extended their season lengths, increased bag limits, and opened spring turkey hunting seasons earlier. However, as time passed, many states began to document stable or declining trends in turkey populations and reproduction. Currently, state agencies, researchers, and other turkey managers across the southeast are faced with compelling evidence that eastern wild turkey populations overall are exhibiting long term declines in productivity and harvest. Some state agencies have recently begun adjusting their seasons to reflect these current turkey population trends, with regulatory responses including shortening turkey hunting seasons, lowering bag limits, and delaying the start dates of spring hunting seasons.

In the late 1960’s and early 1970’s, turkey hunting in North Carolina changed fundamentally as fall hunting seasons were closed and new opportunities were offered for hunting in the spring. In that era, science-based information on turkey ecology was scarce and offered only limited utility for determining the appropriate timing of spring hunting seasons. However, the timing of the spring turkey hunting season is thought to be vitally important to both hunter satisfaction and the productivity of turkey populations. The opening date of the North Carolina spring season fluctuated somewhat through the years, with opening dates as late as the third Saturday in April in the 1970’s to as early as the first Saturday in April for the current youth-only season. Other than the relatively recent addition of days for youth-only turkey hunting, the season framework for turkey hunting has remained unchanged since 1980. The regulatory changes that have occurred largely resulted from hunter requests rather than any new understanding of turkey biology or assessment of biological data. Daily (one bird/day) and seasonal (two birds/season) bag limits in the spring season have remained consistent since 1972. The number of turkeys harvested each year by hunters has increased dramatically over the last few decades. Spring turkey hunting is very popular, with more than 70,000 individuals hunting turkeys in North Carolina each year.

Given this history of wild turkey management, we present herein a brief update on wild turkey hunting, harvest, and research projects, as well as identify additional research and management actions that are needed at this time and in the future

Goal for Wild Turkey Management

When considering how to best manage wild turkeys and turkey hunting, it is important to keep in mind the North Carolina Wildlife Resources Commission's (WRC) Mission Statement, which is **"*To conserve North Carolina's wildlife resources and their habitats and provide programs and opportunities that allow hunters, anglers, boaters and other outdoor enthusiasts to enjoy wildlife-associated recreation*."**

Shortly after North Carolina's wild turkey restoration work ended in 2005, the Commission adopted a goal for wild turkey management, which was **"*To emphasize spring gobbler hunting by managing the population below maximum sustained yield in order to maintain high quality spring hunting and maximize continued increases in population size and distribution."*** This post-restoration goal provided the necessary direction for regulatory decisions and management and wisely anticipated the increases in the population size and distribution that, in fact, did come to fruition.

Today, North Carolina's wild turkey population is approximately two decades post-restoration. Additional range expansion is unlikely and significant population increases are unlikely to continue much longer. Thus, the Wildlife Management Division staff respectfully suggested that revisiting the management goal at this time was appropriate. During the July 2024 Small Game and Wild Turkey Committee meeting, staff suggested a simple core statement to guide the agency's wild turkey management, and after discussion, the Committee voted to change the wild turkey management goal as follows: ***"To provide quality spring gobbler hunting opportunities by conserving North Carolina's wild turkeys."*** The full Commission voted to adopt this change during the July business meeting. Staff further suggest that the Commission and agency staff continue discussions about wild turkey management and further develop and expand upon this goal as appropriate, including defining specific terms and setting measurable objectives as needed.

Projects and Accomplishments

Annual Surveys and Monitoring

Wild Turkey Harvest - WRC has annually tracked reported harvest since 1977 through a variety of methods including, paper books, phone, internet, and most recently GoOutdoors. Tracking wild turkey harvest each year provides tremendous insight into changes in turkey populations, hunter success, and also provides a mechanism for enforcing bag limits. Yearly wild turkey harvest reports can be found at https://www.ncwildlife.org/hunting/harvest-statistics.

Wild Turkey Reproduction - WRC has annually tracked turkey reproduction through a summer observation survey since 1988 with a variety of methods including paper postcards, internet, and mobile phone applications. This survey is conducted annually and provides insight into turkey productivity, poult survival, and nesting success at various scales. Annual summary reports can be found at https://www.ncwildlife.org/species/wild-turkey.

Deer Hunter Observation Survey– WRC has annually tracked observations of turkeys and several other species by deer hunters as an independent way to evaluate trends in wild turkey distribution and abundance. Each fall since 2014, several thousand deer hunters have recorded their daily observations of deer, turkeys, and other wildlife while still-hunting across the state. A detailed report about this survey is available at https://www.ncwildlife.org/media/1429/download?attachment

Research Completed During Restoration Period (prior to 2005)

1978 – 1981. Movements, mortality, and productivity of restocked wild turkeys in a Southern Appalachian Habitat. This telemetry study was initiated by the WRC, but discontinued early because of poor trapping success and heavy losses to poachers and predators.

1985- 1990. Impacts of unnatural, asynchronous river flooding on habitat use and population dynamics of a wild turkey population along the Roanoke river, North Carolina. This telemetry study was led by David T. Cobb in partial fulfillment of his doctorate degree. The study documented negative impacts of river flooding on turkey ecology and provided recommendations for river flow strategies from John H. Kerr Dam and Reservoir.

1985 – 1989. Nesting and brood ecology of the wild turkey in the mountains of western North Carolina. This telemetry study was conducted by D. J. Reed (as partial fulfillment of his master's degree) and James R. Davis (as partial fulfillment of his doctorate degree). The study area was the Coweeta Hydrologic Laboratory in Macon County, North Carolina. This study showed the importance to wild turkeys and their movements that gated roads play in the mountains of North Carolina where forest openings are very limited.

1990 – 1992. Logging roads as linear wildlife strips in the southern Appalachian Mountains. This telemetry study was led by Joel S. Martin as partial fulfillment of his master's degree. The study area was the Coweeta Hydrologic Laboratory in Macon County and was a follow-up to the previous study. It was concluded that increasing sunlight penetration along roads and periodic maintenance by mowing, either with or without supplemental plantings, can function to enhance turkey and/or general wildlife habitat on gated and closed roads.

1992 – 1994. Utilization of linear wildlife strip by wild turkeys in western North Carolina. This telemetry study was conducted by Bradley W. Howard as partial fulfillment of his master's degree. It was another companion study to the previous ones on the Coweeta Hydrologic Laboratory in Macon County, North Carolina. His work showed that linear strips can be a viable alternative for creating openings of early successional habitat where forest management practices such as clearcutting, burning, and logging are absent or restricted.

1992 – 1994. Forage and arthropod production on linear wildlife strips in the southern Appalachian mountains. This telemetry study was conducted by Jody K. Knox as partial fulfillment of his master's degree. It was yet another companion study to the previous ones on the Coweeta Hydrologic Laboratory in Macon County, North Carolina. This study concluded that linear wildlife strips provide forage and arthropods associated with early successional vegetation so that areas with limited openings can better meet the habitat needs of wild turkey populations.

1994 – 1998. Analysis of Wild Turkey Brood Habitat within the Southern Appalachians. This telemetry study was conducted by Craig A. Harper as partial fulfillment of his doctorate degree. The study area was the Wine Spring Creek Ecosystem located on the Wayah Ranger District of the Nantahala National Forest in western Macon County, North Carolina. It concluded that both brooding and non-brooding hens primarily used mature mesic forest stands and non-forested openings (which comprised <1% of the total area). It recommended continuation of direct habitat improvements on non-forested areas, such as logging roads, old home sites, and other openings.

1989 – 1992. Surveys of Turkey Hunters. With help from the National Wild Turkey Federation, the WRC surveyed approximately 700 turkey hunters each spring after the turkey season closed. The survey provided insight into hunting techniques (decoys, blinds, shot size, etc.) and hunter satisfaction (opinions of season timing, bag limits, etc.).

Research Completed After Restoration Period (since 2005)

2011-2012. Wild turkey nesting ecology and nest survival in the presence of frequent growing season fire. This telemetry study was conducted by Eric L. Kilburg as partial fulfillment of his master's degree. Research was conducted on Fort Bragg Military Reservation and showed that growing season fire did not significantly reduce nest survival.

2013 – 2015. Lymphoproliferative Disease Virus (LPDV). WRC staff collected more than 800 tissue samples from wild turkeys to establish baseline prevalence and geographic distribution of LPDV. Results showed LPDV to be common in turkeys across North Carolina. However, the prevalence of LPDV did not correlate with the reported turkey harvest.

2016 – 2019. Gobbling Chronology. The timing of gobbling activity in spring was examined over four years by Autonomous Recording Units (ARUs) on unhunted sites across the state. The study revealed large variation in gobbling from year to year and that 60% of gobbling occurs during the time of the hunting season. A detailed summary report is available at https://www.ncwildlife.org/species/wild-turkey.

2020 – 2024. Statewide Wild Turkey Ecology. This telemetry study was led by David Moscicki as partial fulfillment of his doctorate degree. It is by far North Carolina's largest ever turkey research project, with study sites in each region of the state and involved capturing more than 700 turkeys. The project's objectives were to identify nesting chronology, nesting success, hunter harvest rates, survival rates of gobblers and hens, gobbling chronology, and disease testing. A summary of results is provided as an Appendix in this document.

In-Progress Research

2024 – 2026. Disease Research –WRC is currently collaborating with the Southeast Cooperative Wildlife Disease Study (SCWDS) to further evaluate the disease results from the statewide wild turkey ecology project, which provided insight into the prevalence of diseases and pathogens. This current project is taking those results one step further and will provide an in-depth analysis of how the various diseases and pathogens may be impacting turkey survival, nesting success, habitat use, or movements.

Future Research and Management Actions

2025. Survey of Wild Turkey Hunters – WRC will implement an in-depth survey of wild turkey hunters, similar to the surveys that were conducted from 1989 – 1992. This will be an extensive survey, providing details about hunting techniques (decoys, blinds, shot size, etc.) and hunter satisfaction (opinions of season timing, bag limits, etc.). This will not necessarily be an annually recurring survey but may be repeated periodically in future years.

2025. Establish an Annual Post-Season Turkey Survey – Beginning in 2025, WRC staff will conduct a relatively small-scale survey after the close of the spring turkey hunting season each year. This survey's purpose will be to gain timely estimates of hunting effort (number of days hunted), hunting techniques, and additional harvest details (such as time of day of harvest).

Wild Turkey Productivity

Each summer since 1988, the North Carolina Wildlife Resources Commission (NCWRC) has coordinated an observation survey to gain insight into how successful turkeys are in nesting and raising poults. Several thousand hunters and wildlife enthusiasts participate in the survey each year by reporting on the gobblers, hens, and poults they see. Examining hens and poults reported gives a glimpse into turkey population dynamics The overall trend in wild turkey productivity has been declining steadily for many years (Figure 1). It is important to note that this overall decline in productivity has occurred at the same time that the turkey population has expanded to new areas and spring harvest has increased to record levels. This decline in productivity will likely result in stable, or possibly declining, levels of harvest in the coming years.

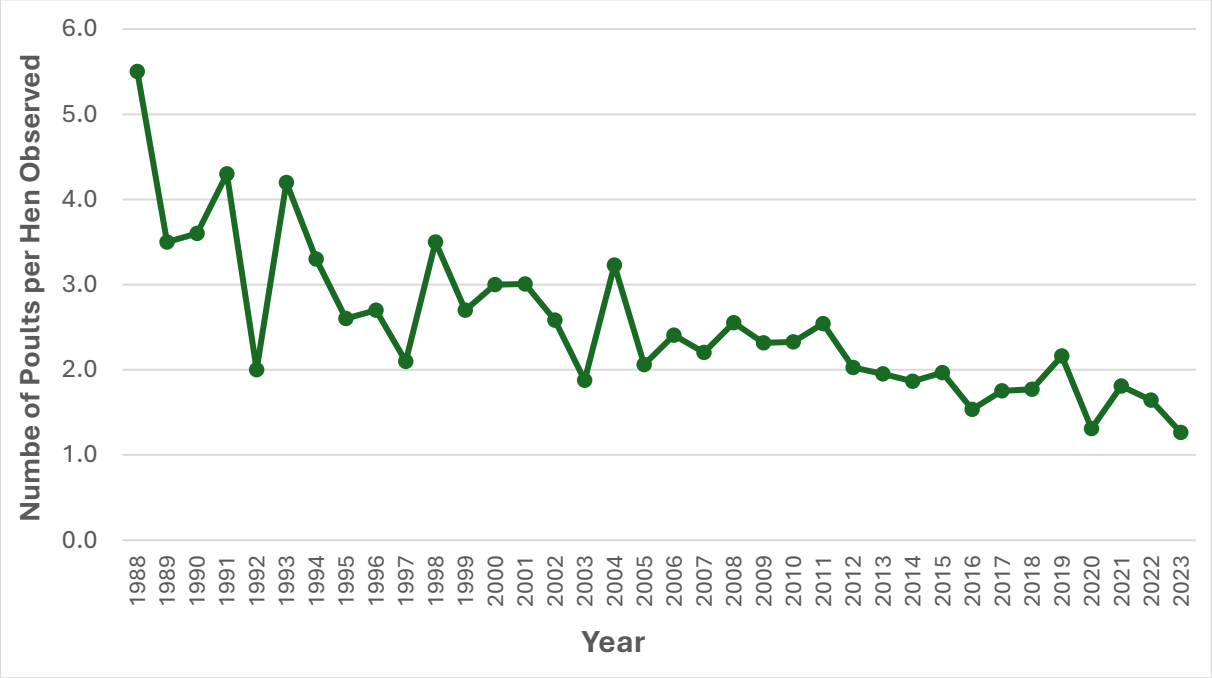

Figure 1. Statewide productivity estimates from North Carolina's Wild Turkey Summer Observation Survey, 1988 – 2023.

Wild Turkey Harvest

Reported Harvest

Since 1977, turkey hunters in North Carolina have been required to report the turkeys they harvest, thereby providing insight into harvest trends and also providing a mechanism for enforcing bag limits. The overall trend in wild turkey harvest in North Carolina has been increasing steadily for many years with a slight dip in harvest in some years (Figure 2). This overall trend varies greatly in recent years across North Carolina's three regions, with the coastal region increasing sharply and relative stability in the mountains. Peak reported harvest occurred in the mountains in 2013, in 2020 in the piedmont, and in 2024 in the coast. This increasing trend and time of peak harvest are not consistent in every locale. Some local areas are experiencing stabilizing, or in a few cases declining, turkey populations.

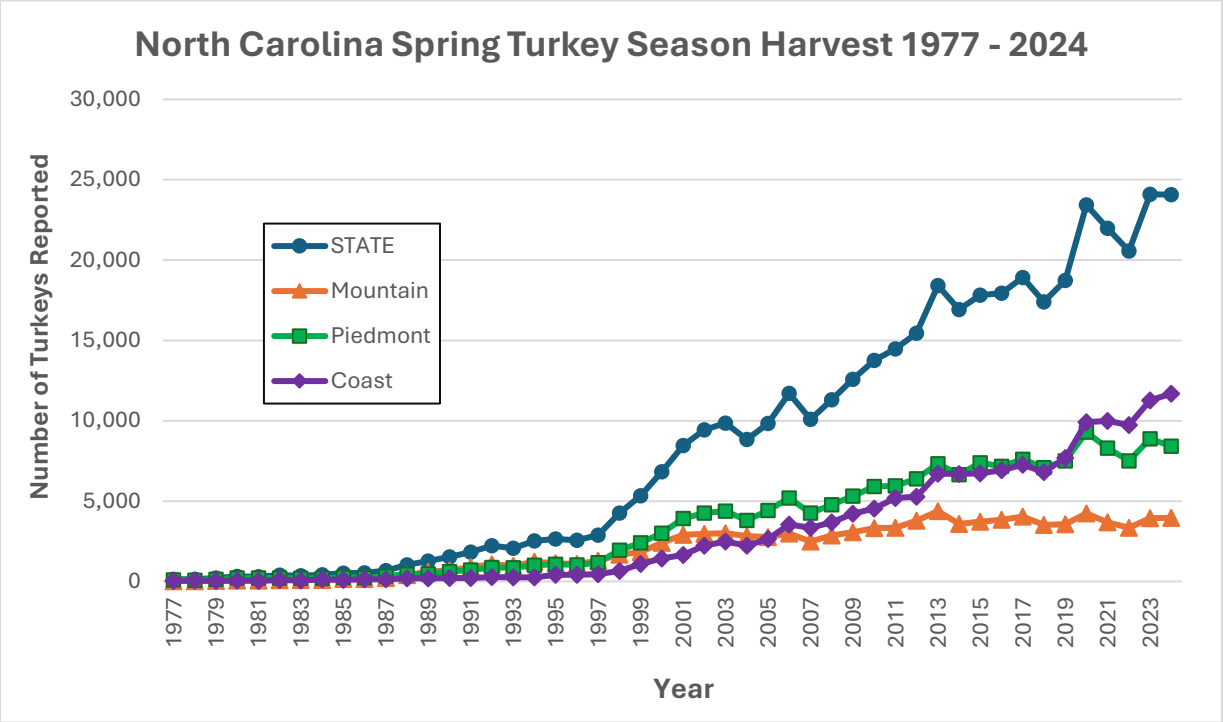

Figure 2. North Carolina reported spring wild turkey harvest by region, 1977 – 2024.

Harvest by Huntable Square Mile

Comparing turkey harvest statistics between regions and counties can be misleading when those areas are different sizes. For example, many of North Carolina's coastal counties are much larger than many of the mountain counties. This makes it difficult to determine if a harvest in a county is high because the county is large or because harvest was high irrelevant to the size of the county. As such, comparing harvest by square mile is a better way to understand turkey harvest across areas that have different amounts of land available. Furthermore, it is also important to consider how much of the land in a given area is being hunted. This helps avoid misleading results in

areas that are highly urbanized or areas with large tracts of land that are closed to hunting, such as national and state parks. Thus, in 2010 and again in 2017, we assessed each of North Carolina's 100 counties to estimate the huntable area. In determining huntable areas, we took the total area of each county and removed large water bodies, national parks, state parks, areas within municipal limits, and areas with human housing density of one person per two acres or higher.

Examining the number of turkeys harvested by huntable square mile reveals similar harvest rates in all three regions. In recent years, harvest has fluctuated between 0.5 and 0.7 turkeys per huntable square mile (Figure 3) in each region. To put this differently, that means harvest has been approximately one gobbler for every 900 to 1200 acres of huntable land. The mountain and piedmont regions have been relatively stable for several years, but harvest per huntable square mile in the coastal region increased dramatically over that same period, and it's only been the last couple of years that the harvest by huntable square miles is comparable to the other regions. The average harvest during the 2022-24 spring wild turkey seasons ranged from some counties on the Albemarle peninsula that were below 0.25 turkeys per huntable square mile (approximately one gobbler for every 2500 acres) to some counties around the state where harvest exceeded 1.0 turkeys per huntable square mile (approximately one gobbler for every 640 acres; Figure 4).

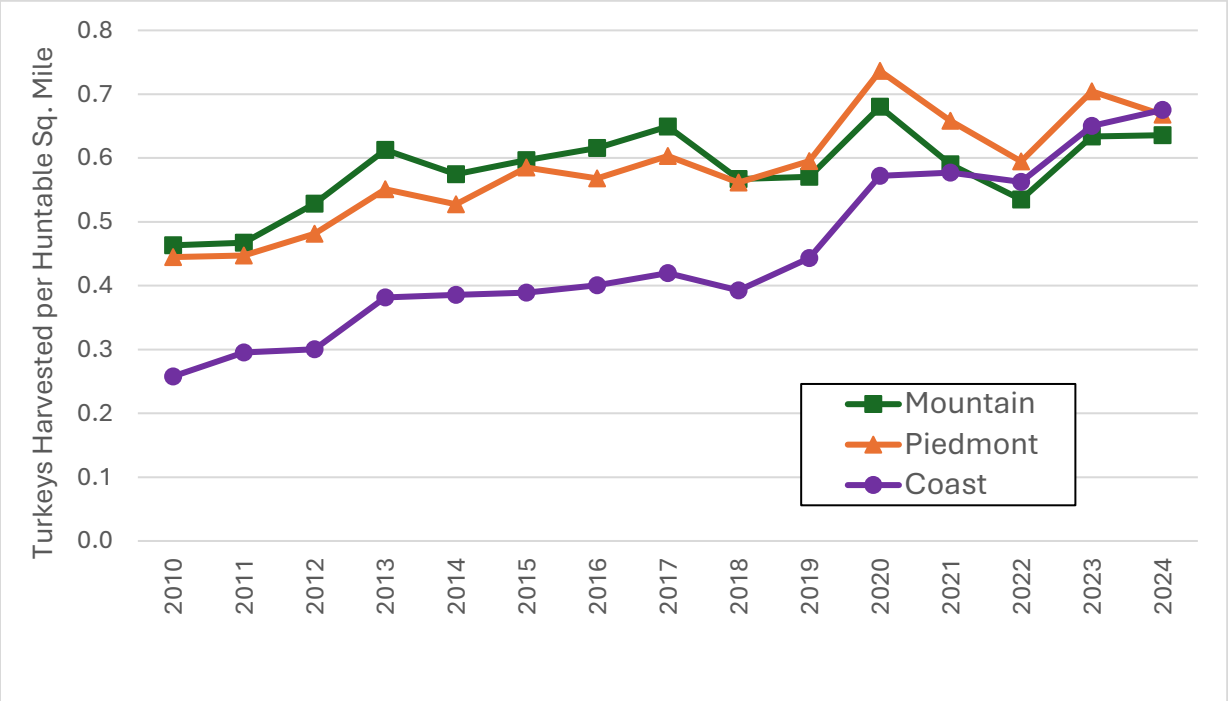

Figure 3. Harvest per huntable square mile for North Carolina reported spring wild turkey harvest, 2010 – 2024. Huntable square miles do not include large water bodies, national and state parks, city limits and high human density areas.

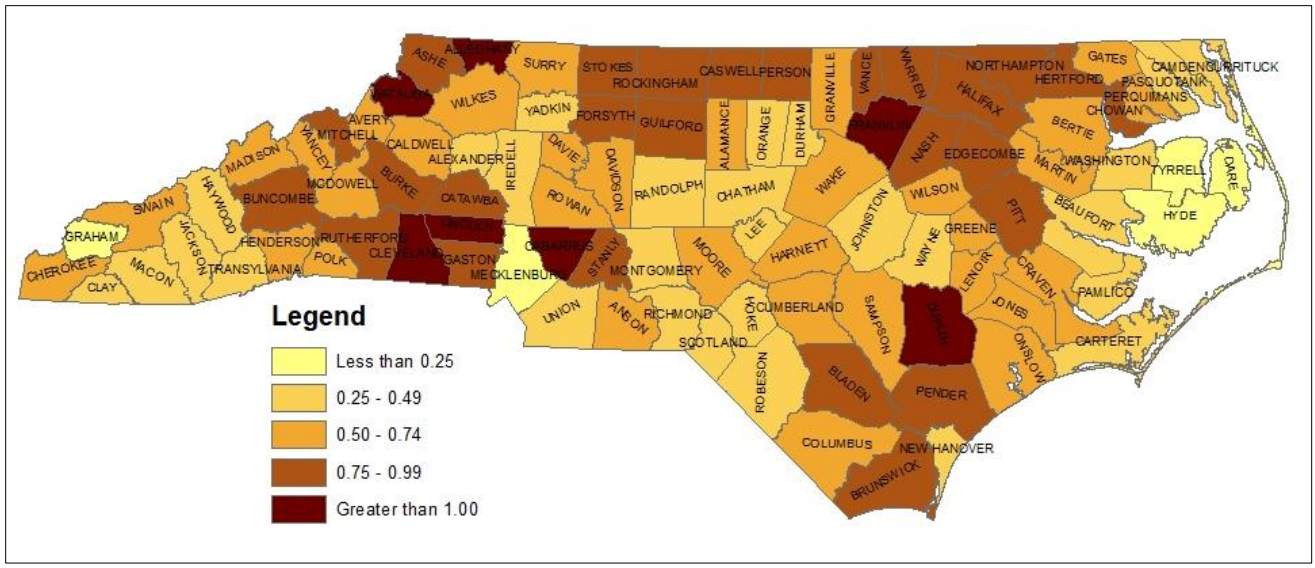

Figure 4. North Carolina 2022-24 Average Spring Turkey Harvest by Huntable Square Mile. Huntable square miles do not include large water bodies, national and state parks, city limits and high human density areas.

Hunter Success and Effort

In recent years, approximately 75,000 hunters actively hunt turkey in North Carolina each spring, however, the vast majority of these hunters have not been successful in harvesting a bird (Table 1). This information is very valuable in considering the impacts of changing season length and bag limits. North Carolina's two-bird bag limit promotes high quality spring hunting opportunities by limiting gobbler mortality, decreasing the number of jakes harvested, and giving the opportunity for harvest to be spread among as many hunters as possible.

Table 1. Estimated number of turkey hunters and number of turkeys harvested per hunter in North Carolina from 2020 – 2022. The estimated number of hunters are derived from North Carolina's Hunter Harvest mail survey, which annually surveys more than 10,000 hunters about their effort (number of days hunting) and success (number of animals harvested) for all game species. Determining percentage of successful hunters incorporates reported harvest data.

Year	Number of Turkey Hunters	Percentage of Hunters That Did Not Harvest a Turkey	Percentage of Hunters That Harvested One Turkey	Percentage of Hunters That Harvested Two Turkeys
2020	75,428	74.1%	20.7%	5.2%
2021	75,820	76.1%	18.8%	5.1%
2022	74,755	77.0%	18.5%	4.5%
Average	**75,334**	**75.8%**	**19.3%**	**4.9%**

Another way of evaluating hunter success is to consider how much effort (i.e. number of days hunted) it takes, on average, for a hunter to harvest a gobbler. More specifically, this success rate is computed as the total number of days all hunters spent hunting divided by the total number of turkeys harvested. Examining trends in this information provides insight into the dynamics of turkey hunting and also into turkey populations. Improvements in hunting tactics or equipment could lead to decreases in the number of days required to harvest a bird. Conversely, declining turkey populations or increasing numbers of hunters could lead to increases in how many days are required to harvest a bird, simply because there are fewer birds available. Since multiple factors could be influencing these numbers, it is therefore important to interpret hunter effort numbers cautiously. In recent years in North Carolina there has been a modest increase in the number of days required for harvesting a bird (Figure 5). However, there are meaningful difference in hunter success across regions, with fewer days per bird harvested in the coastal region and a generally increasing trends in the mountains and piedmont (Figure 6).

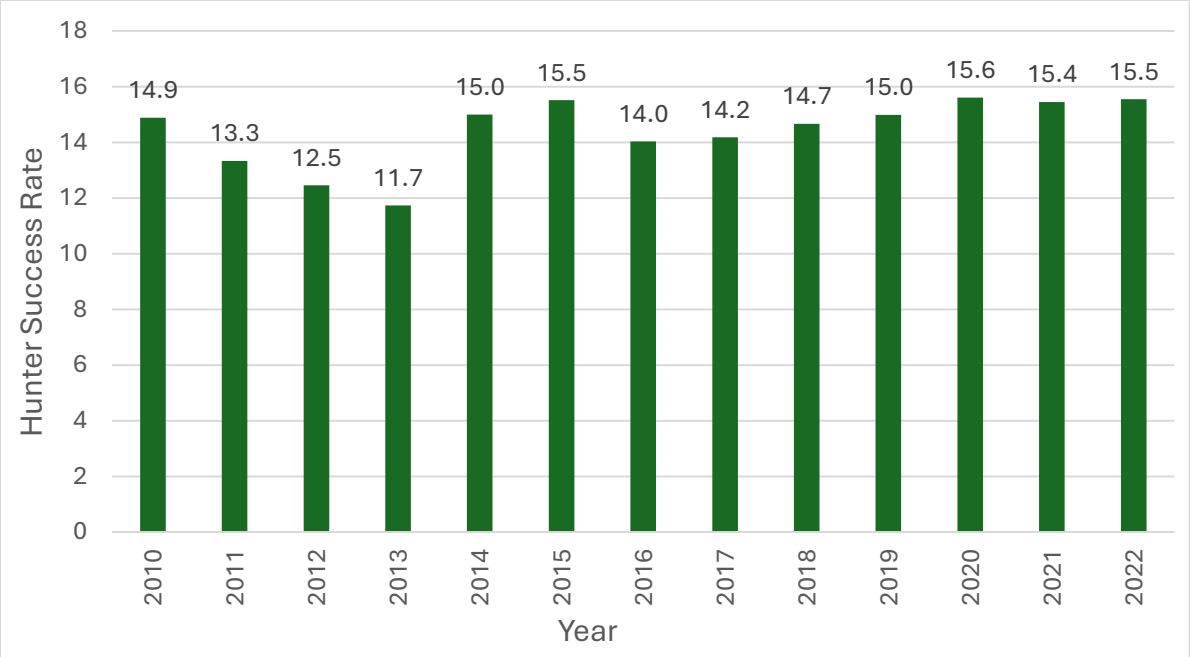

Figure 5. Statewide hunter success rate (number of days hunted/number of turkeys harvested), 2010 – 2022. These estimates are derived from North Carolina's Hunter Harvest mail survey, which annually surveys more than 10,000 hunters about their effort (number of days hunting) and success (number of animals harvested) for all game species.

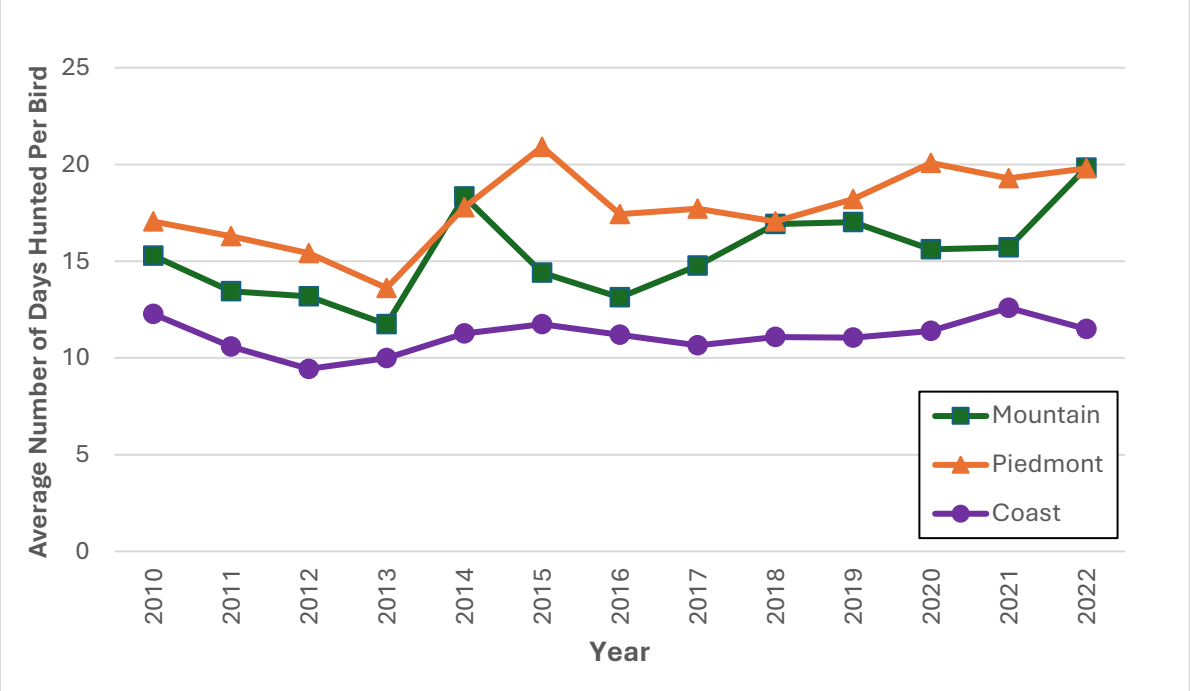

Figure 6. Regional hunter success rates (number of days hunted/number of turkeys harvested), 2010 – 2022. These estimates are derived from North Carolina's Hunter Harvest mail survey, which annually surveys more than 10,000 hunters about their effort (number of days hunting) and success (number of animals harvested) for all game species.

Deer Hunter Observation Survey

The NCWRC's Deer Hunter Observation Survey (DHOS)provides an additional way to gain insight about wild turkeys in the state. Since it is not dependent on turkey hunters or reported turkey harvest, it provides an objective way to compare trends with other turkey-based surveys. The DHOS began in 2014 and each fall asks volunteer hunters to record their daily observations of deer and other wildlife, including turkeys, while still-hunting for deer. In general, information from the DHOS confirms much of what other turkey surveys tell us (Figure 7). Observations from deer hunters in the coastal region over the past decade suggest that turkey numbers are increasing, which is similar to harvest in that region. Similarly, observations by deer hunters in the mountains and piedmont suggest that turkey numbers may be relatively stable (piedmont) or declining (mountains). This too is generally in agreement with other turkey-based trends, where harvest has been relatively stable and the number of days of turkey hunting per bird harvest has been increasing somewhat as well.

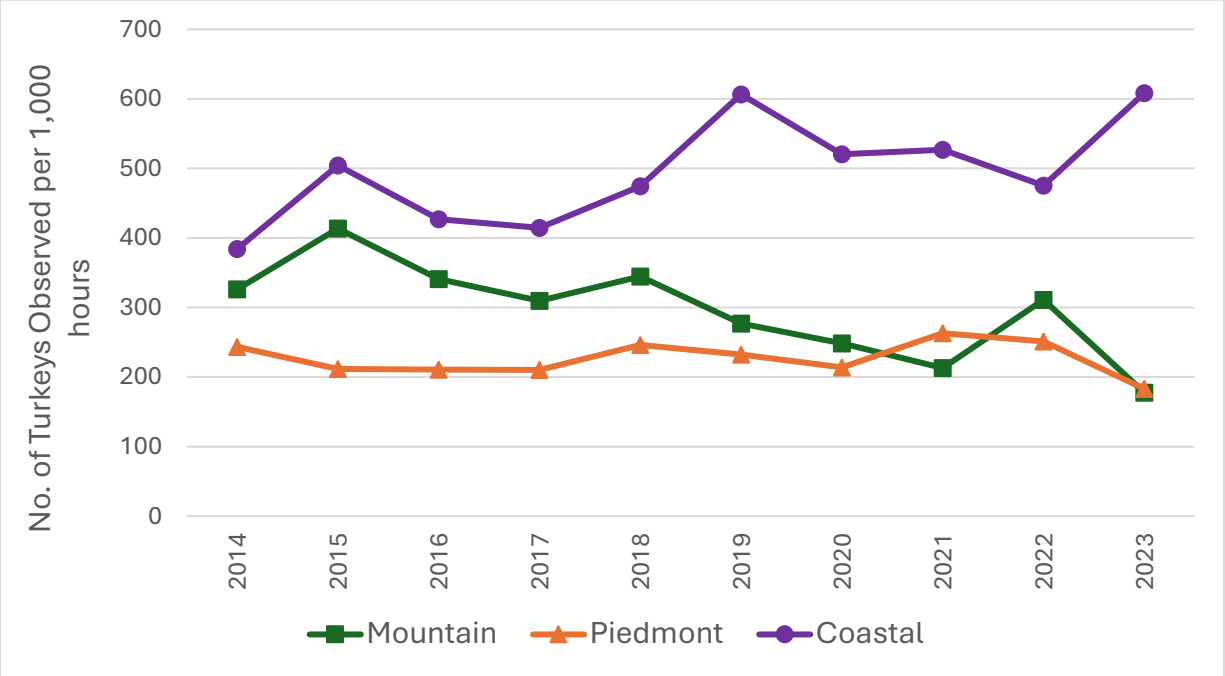

Figure 7. The number of wild turkeys observed for every 1,000 hours of deer hunting during the North Carolina Deer Hunter Observation Survey, 2014 – 2023.

Gobbling Chronology

Turkey hunters get satisfaction from hearing turkey gobbles while hunting and, as such, the timing of gobbling activity, the timing of spring turkey seasons, hunter success, and hunter satisfaction are all intertwined. Appropriate timing (i.e. opening and closing dates) of the spring hunting season is a key factor in achieving hunter satisfaction, but timing must also safeguard the population against potential impacts of overharvesting males, harvesting males before breeding occurs, and the illegal or inadvertent harvest of hens. There are numerous peaks in gobbling activity within North Carolina's regions and across years. It is not clear what might be driving these peaks but there are likely numerous and complicated factors involved. Overall, gobbling activity maintains high levels just prior to and throughout the spring hunting seasons (Figure 8). In most years approximately 60% of gobbling activity occurs during the time at which spring turkey hunting seasons are open.

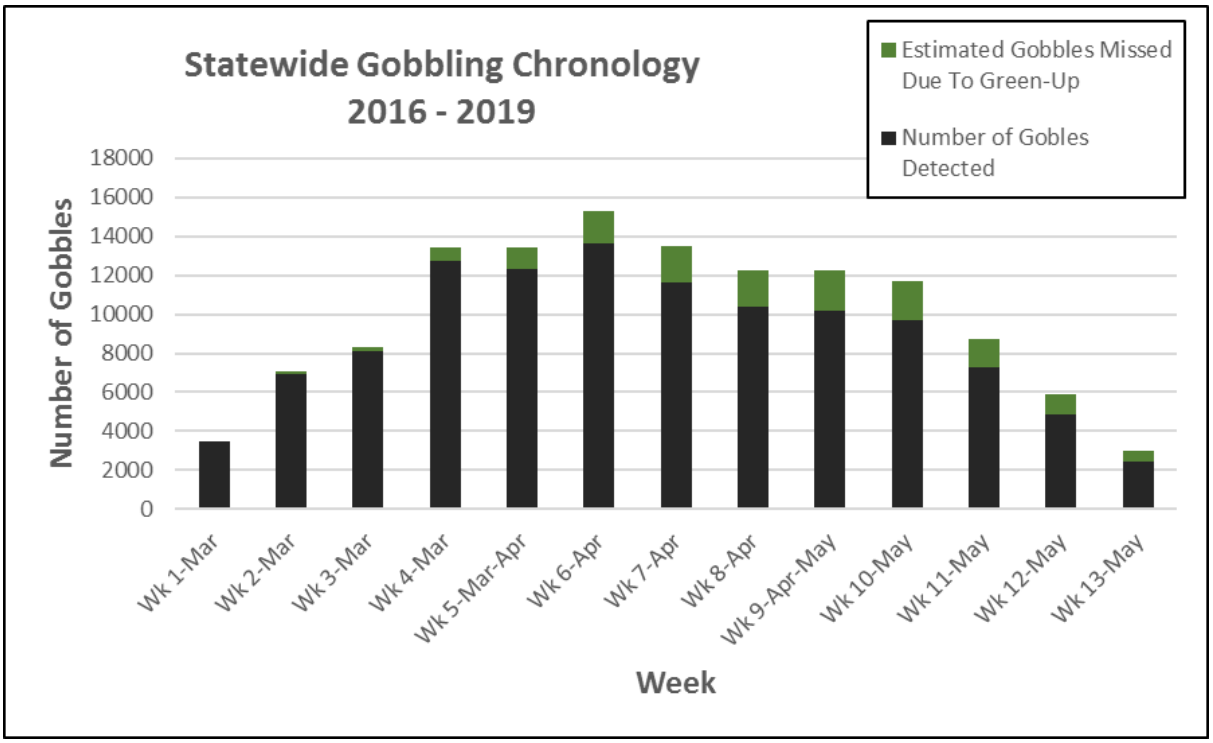

Figure 8. The number of Gobbles recorded on Autonomous Recording Units (ARUs) on unhunted sites in North Carolina from March 1 through May 31, 2016-2019.

Big Game Hunters

North Carolina hunters are required to obtain a Big Game Harvest Report Card annually to hunt deer, bear, or wild turkeys in North Carolina. Most big game hunters are in their 20's, 30's, 40's, and 50's with the largest number being in their 40's (Figure 9). Not all big game hunters pursue turkeys, since some may only be interested in deer or bear hunting, but it's likely that the distribution of ages for turkey hunters is similar to the distribution of ages for all big game hunters. However, considering hunter success by age category reveals a much different picture. Though hunters in their 40's make up the largest group of big game hunters, they appear to be the least successful, with only 7% of hunters in that age group harvesting a bird (Figure 10). The hunters with the highest proportion of success were more than 80 years old

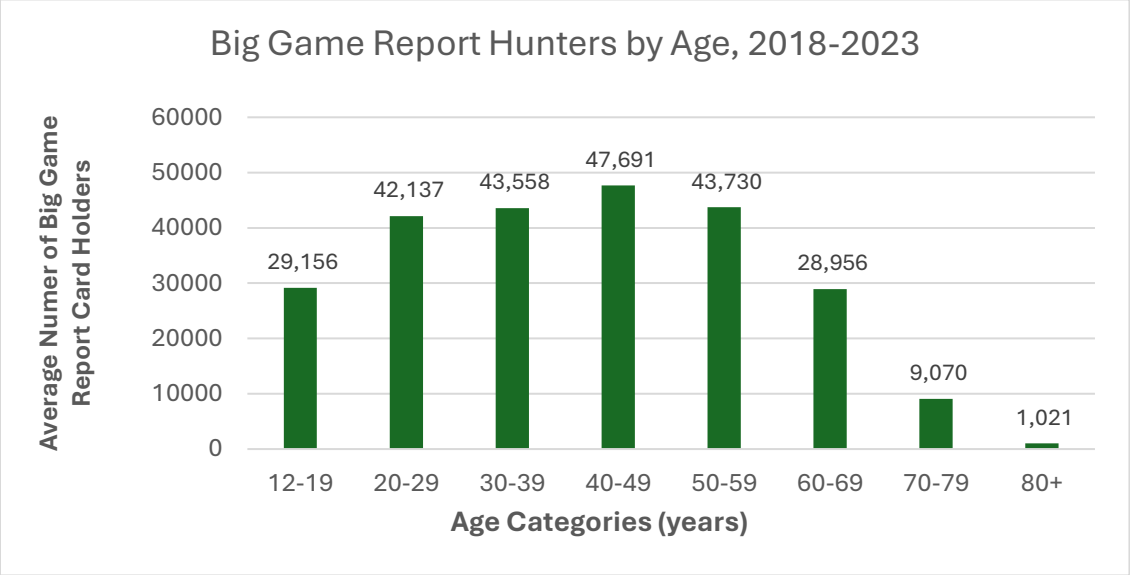

Figure 9. Average number of hunters, older than 10 years, that have a Big Game Harvest Report Card by age, 2018 – 2023. These data are derived from license sales and issuance of Big Game Harvest Report Cards.

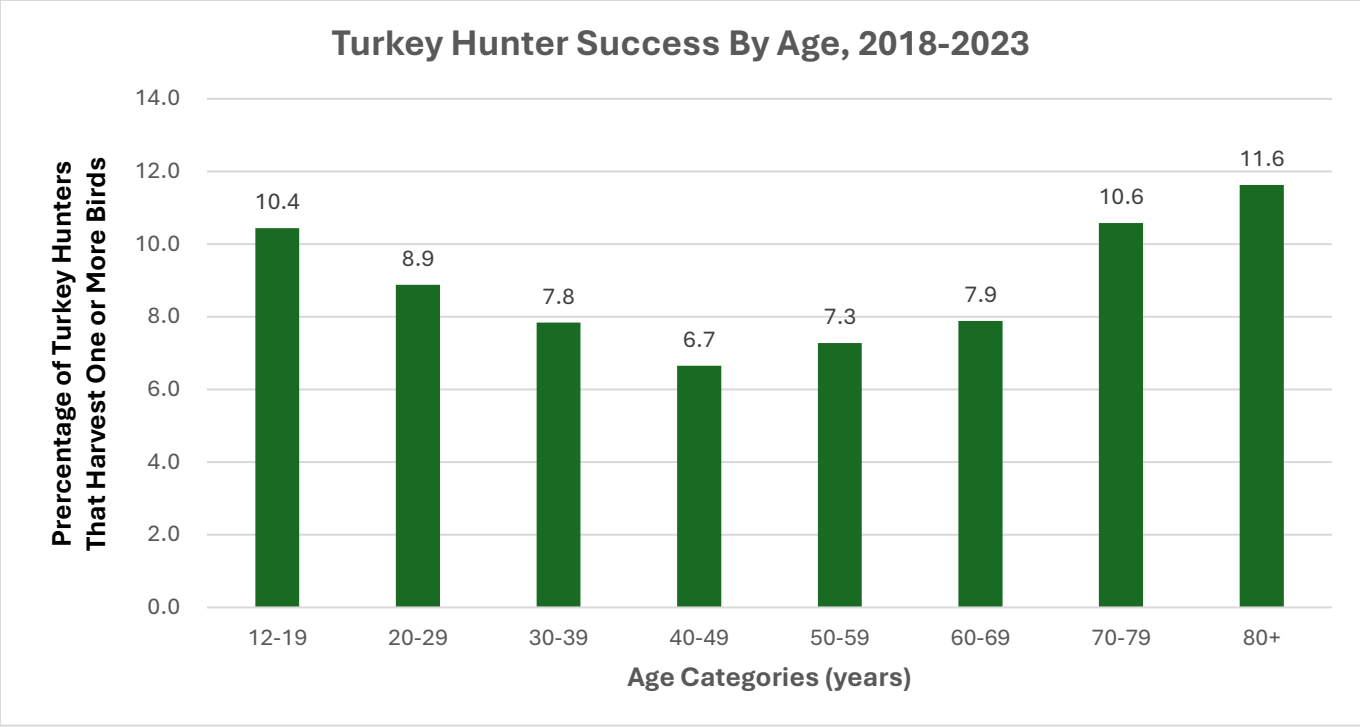

Figure 10. Average percentage of turkey hunters, older than 10 years, that harvest at least one turkey by age each year from 2018 – 2023. These data are derived from reported harvest of wild turkeys.

Appendix. Highlights from the North Carolina Wild Turkey Ecology Research Project 2020 – 2024.

Highlights from the North Carolina Wild Turkey Ecology Research Project 2020–2024

The primary objectives of this five-year, statewide study were to determine (in each region of the state) hen and gobbler annual survival rates, hunter harvest rates, the timing of gobbling activity, the timing of nesting activity, nesting habitat, nest success, and brood survival. To meet these objectives, the study sought to annually capture and mark at least 50 female turkeys and 30 male turkeys in each region. The ultimate goal of this study was to provide a comprehensive understanding of wild turkey ecology across North Carolina's mountain, piedmont, and coastal ecoregions, and the results will serve as a foundation for the Commission to manage turkey hunting, populations and habitat in North Carolina. The following below are just a few of the results and management implications.

SUMMARY STATISTICS

- 708 turkeys were trapped: 468 female and 240 male.
- 328 Adult and 87 Juvenile females were tracked by GPS satellite transmitters.
- 145 Adult and 59 Juvenile males were tracked by VHF radio-transmitters.
- 414 nests were located and monitored and habitat evaluated.
- 105 broods (groups of newly hatched turkeys) were tracked.
- Automated recorders tallied 63,456 gobbles.
- The study was conducted on privately owned property, with total of more than 250 landowners and 20,000 acres.

TIMING OF NESTING

RESULT:

- Average start of egg-laying was April 11.
- Average start of incubation was April 24.
- Nest timing was consistent across years and did not vary between the mountain, piedmont, and coastal regions. Nest timing is driven by daylength rather than weather or green-up.

WHAT DOES THIS MEAN FOR MANAGEMENT:

- This result suggests that North Carolina's spring turkey season should not start earlier than it currently does, and shifting the season later might help improve nesting success. It also suggests that continuing a state-wide season-opening date is appropriate.

NEST SUCCESS

RESULT:

- On average 25% of nests successfully hatched and 75% failed.
- Primary cause of nest failure was predation.
- Nest success was related to habitat quality.

WHAT DOES THIS MEAN FOR MANAGEMENT:

- Habitat management is the key to minimizing predation and supporting robust turkey populations. Successful nesting requires a high density of woody saplings and broad leaf plants. This type of vegetation makes it harder for predators to find the nest.
- Timber thinning, light disking in openings, and controlled burning are excellent tools to promote and maintain nesting cover in forests, woodlands, shrublands, and grasslands.

ADOBE STOCK

CONTINUE ON REVERSE

Highlights from the North Carolina Wild Turkey Ecology Research Project 2020–2024

BROOD AND POULT SURVIVAL

RESULT:

• On average, only 30% of wild turkey broods in the study had one or more poults reach 28 days of age after hatching.
• This low brood and poult survival was consistent across regions and years.

WHAT DOES THIS MEAN FOR MANAGEMENT:

• The low number of poults making it successfully to 28 days of age suggests that high-quality brooding cover is lacking, making the broods vulnerable to high levels of predation.
• Brood survival can be increased by promoting plant diversity and the low-growing grasses, weeds, and shrubs that provide overhead cover for young turkeys as they travel with the hen and feed on insects.
• Active forest management combined with the management of fields, roadsides, and forest openings using rotational disking and prescribed burning creates and improves summer brooding habitat.

HUNTER HARVEST–ADULT GOBBLERS

RESULT:

• Across all regions and years, adult male wild turkey harvest was 30% or less.

WHAT DOES THIS MEAN FOR MANAGEMENT:

• Previous studies throughout the range of wild turkeys have shown that harvest levels of 30% are sustainable.
• Results of the NC study suggest that current hunting season length and bag limits are appropriate but should not be increased.
• On average, 50% of adult gobbler mortality is caused by hunters.

HUNTER HARVEST– JAKES

RESULT:

•Approximately 5% of jakes (or 1-year-old males) are harvested.

WHAT DOES THIS MEAN FOR MANAGEMENT:

• The low number of jakes being harvested shows that hunters are choosing to harvest mature adult males.
• Although jakes typically make up about 15% of the total harvest, the harvest rate of jakes is only 5% of the total number of jakes that are in the population.
• Regulations to protect jakes are not needed.

HEN SURVIVAL

RESULT:

• Annual survival of hens averaged 71%, with survival during incubation being substantially lower than other times of the year.
• Annual survival of hens was slightly lower in the piedmont than in the mountain or coastal regions.

WHAT DOES THIS MEAN FOR MANAGEMENT:

• Successful nesting is critical to turkey populations, both for hatching new poults and also for survival of hens. Hens are very vulnerable to predation while incubating their nests on the ground, particularly at night when they would normally roost in a tree.
• Quality habitat is critical!
• Forest management and other habitat management activities that promote a diversity of forest ages, forest types, and beneficial vegetation ensure the availability of good nesting cover over time.

GOBBLING ACTIVITY

RESULT:

• Gobbling activity was similar across all regions, but gobbling activity did vary from day to day and from year to year.
• Gobbling activity was not consistently related to nest timing.
• Gobbling activity continued through the hunting season.

WHAT DOES THIS MEAN FOR MANAGEMENT:

• Hunter satisfaction is tied to gobbling activity, and so satisfaction can be expected to vary from one year to the next.
• Gobbling activity is only one of several pieces of information necessary to determine when hunting seasons should occur.

Wildlife

To learn more about wild turkeys, visit
NCWILDLIFE.ORG/SPECIES/WILD-TURKEY

LSU

NC STATE UNIVERSITY

nwtf
National Wild Turkey Federation

Thank you to our great partners, North Carolina State University, Louisiana State University, and the National Wild Turkey Federation for all of their time, effort, dedication and funding. Without their support this project would not have been possible!