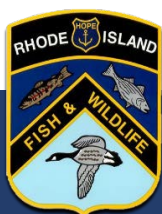


State of Rhode Island Department of Environmental Management Division of Fish & Wildlife

2022 Wild Turkey Program Summary



Acknowledgements

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January 2023



THIS PROJECT WAS SUPPORTED by Wildlife Restoration Grants administered by the U.S. Fish and Wildlife Service, Wildlife and Sport Fish Restoration Program: *Partnering to fund conservation and connect people with nature.*

Federal Aid Project funded by your purchase of hunting equipment.

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Introduction

The wild turkey is an important game bird in Rhode Island; however, they were not always as abundant as they are today. A combination of forest clearing, overharvest, and harsh weather conditions eliminated the wild turkey from Rhode Island in the early 1800's.

The Rhode Island Division of Fish and Wildlife (DFW) along with the National Wild Turkey Federation (NWTf) began a wild turkey restoration project on February 8th, 1980. Twenty-nine wild turkeys trapped and transferred from Vermont were released into the town of Exeter. Rhode Island DFW released additional turkeys from New York and Pennsylvania during the mid-1990's. In 1994, 48 turkeys from New York were released in Burrillville (20), Little Compton (15), and West Greenwich (13). In 1995, 45 turkeys from Pennsylvania were released in Foster (22) and Scituate (23), and in 1996, 15 turkeys from Pennsylvania were released in Tiverton. Population growth was assisted by the immigration of birds released in 1983 and 1984 by the Connecticut Department of Environmental Protection along the border of Rhode Island and Connecticut. Subsequent generations of turkeys dispersed from release sites and have colonized all towns in Rhode Island apart from New Shoreham (Block Island) and all islands other than Aquidneck in Narragansett Bay.

Since 1985, the Division of Fish and Wildlife has conducted various surveys to monitor wild turkey population trends over time. Annual surveys include gobble call counts, summer brood surveys, mast surveys, and statewide sighting reports as well as the analysis of hunter harvest data. The state has taken a conservative approach toward managing the turkey flock with the goal of

preserving a quality spring hunt and a healthy, self-sustaining population. Today wild turkeys occur throughout mainland Rhode Island and their comeback is hailed as one of the true wildlife success stories. The DFW continues to collect turkey population data to ensure proper management of the wild turkey resource for future generations.

This report presents a summary of the 2022 spring and fall turkey season results, the 2022 spring hunter survey, the 2022 wild turkey brood survey, and the 2022 spring gobbler call count survey.

Regulation Changes

New for spring 2022, the youth turkey hunting season was extended from 2-days to 7-days. The 7-day youth season coincided with spring break for most K-12 students and provided additional opportunities for youth to harvest a turkey.

2022 Spring Turkey Season

Highlights

The 37th annual state-wide spring turkey season was held from April 28th to May 22th, 2022. Turkey hunters reported harvesting 262 birds, a 7.6% decrease in harvest from the 282 birds taken during the 2021 season (Figure 1). Harvest remained relatively stable between 2020 to 2022 despite changing outdoor recreation participation during the COVID pandemic. Resident hunters accounted for the majority, 69% (181 birds), of the spring harvest. Turkeys harvested by non-resident hunters made up 31% (81 birds) of the total harvest and hunters came from as far away as Florida, Utah, Wisconsin, and Louisiana to hunt turkey in Rhode Island. Most out-of-state hunters reside in Massachusetts (n = 23). Seventy-four percent (194 birds) of the total birds harvested during the spring of 2022 occurred before 9:00am and 46% (120 birds) of the total birds harvested occurred within the first seven days of the season (excluding youth season; Figure 2). The youth hunt occurred between April 18th – 24th and paraplegic hunt occurred on April 23rd and 24th. These special hunts resulted in the harvest of 23 turkeys.

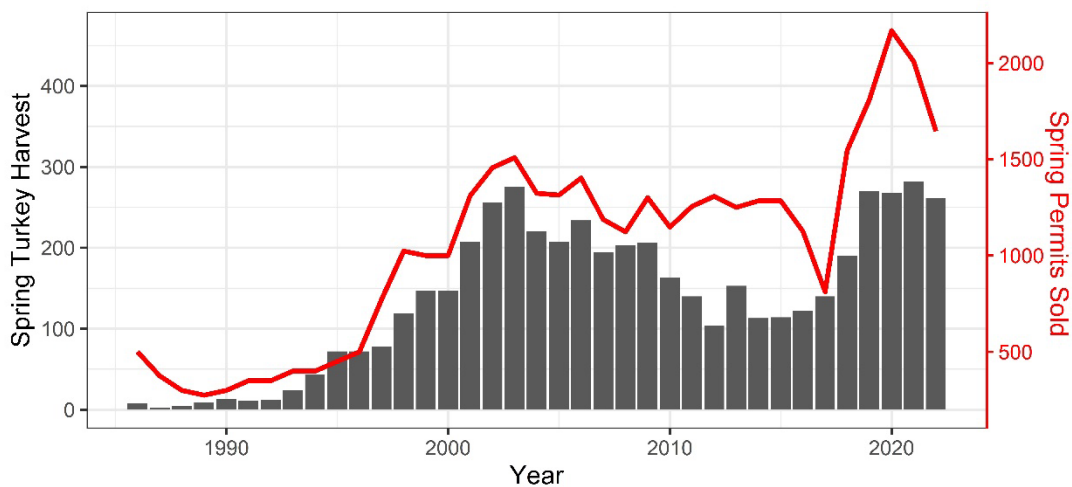


Figure 1. Spring wild turkey harvest from 1986 to 2022 in Rhode Island. The wild turkey harvest (gray bars) correspond to the left y-axis and the number of permits sold (red polyline) correspond to the right y-axis.

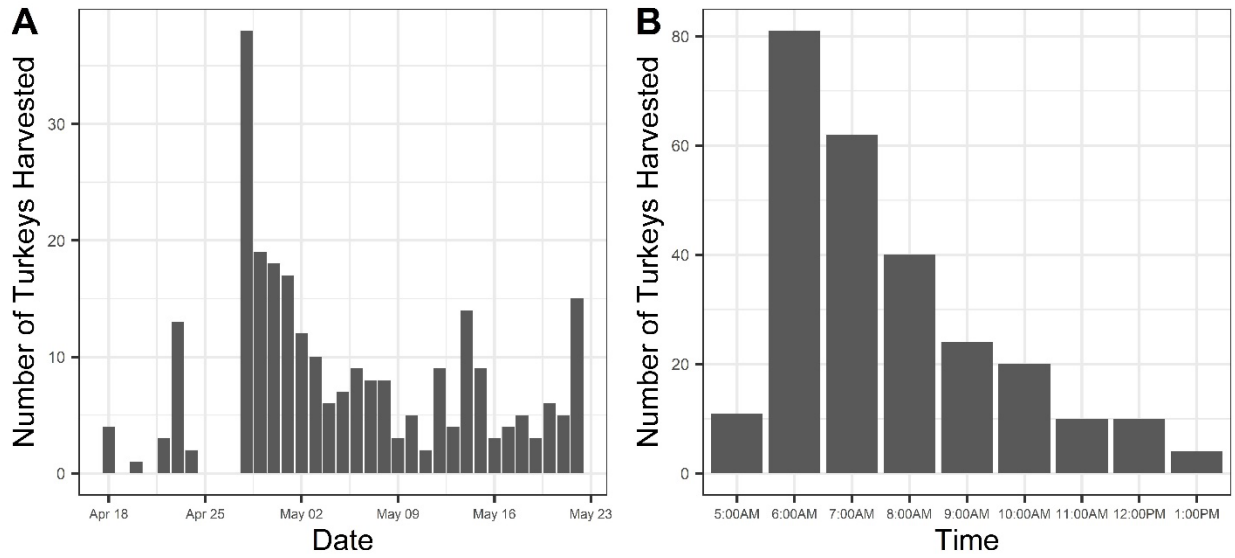


Figure 2. Distribution of the spring 2022 wild turkey harvests by date (A) and time (B) as reported via the online licensing system in Rhode Island.

Spring Harvest Composition and Trends

The 2022 spring turkey harvest consisted of 46 juveniles (jakes; 18%), and 216 adult toms (82%); a 0.21:1 juvenile to adult ratio (Table 1). During the 2022 spring turkey hunting season, hunters harvested twenty fewer turkeys than in the previous spring season. The drop in harvest co-occurred with a decrease in ~400 spring turkey permits sold and may be related to changing outdoor recreation participation as we emerge from the COVID pandemic (Figure 1). Recent harvests (2019–2022) have remained high and are comparable to the high harvests in the early 2000’s. The proportion of young males to adult males has generally fluctuated between 13-24% between 2018 and 2022 (Table 1). The percentage of jakes harvested is comparable to other New England states and can be an indicator of the previous year’s reproductive success. Overall, the trend in harvest is positive from 1986 to 2022 despite fluctuations from year to year.



Table 1. Age and sex breakdown of spring harvested wild turkeys in Rhode Island, 2018–2022. The fall 2018–2022 wild turkey harvest summary is in Table 6.

	2022	2021	2020	2019	2018
<i>Number Harvested</i>					
Adult Male (Tom or Gobbler)	216	228	232	216	144
Young Male (Jake)	46	54	35	54	45
Bearded Hen	0	0	1	0	1
Total	262	282	268	270	190
<i>Harvest Proportion</i>					
Adult Male (Tom or Gobbler)	0.82	0.81	0.87	0.80	0.76
Young Male (Jake)	0.18	0.19	0.13	0.20	0.24
Bearded Hen	0.00	0.00	0.00	0.00	0.01
Total	1.00	1.00	1.00	1.00	1.00

Private and State Land Hunting

Private land accounted for most of the harvested birds (n = 223; 85%); however, 39 birds were taken on 13 different state wildlife management areas (Table 2). Arcadia Management Area had the highest harvest (9), followed by Tillinghast Management Area (5), Eight Rod Management Area (3), Sapowet Marsh Management Area (3), Carolina Management Area (2), George Washington Management Area (2), Lake Road Management Area (2), South Shore Management Area (2), Big River Management Area (1), Durfee Hill Management Area (1), Great Swamp Management Area (1), Killingly Pond Management Area (1), and Ponagansett River Corridor Management Area (1). Six additional turkeys were harvest on other public lands that are not Management Areas. Turkey harvest over the past four years has predominately occurred on private land, typically with 10–11% of the harvest occurring public lands (Table 2). In 2022, 15% of turkeys were harvested on public lands, which is higher than the previous three years.

Table 2. The proportion of spring harvested wild turkey on both private and state land in Rhode Island between 2019 to 2022.

Land Type	2022	2021	2020	2019	Mean
Private Land	0.85	0.89	0.90	0.89	0.89
Public Land	0.15	0.11	0.10	0.11	0.11
Total	262	282	268	270	273

Harvest by Town

Turkeys were harvested in 24 of the 39 towns in the state (Table 3). The following five towns had the highest harvests during the 2021 spring season: Glocester (26), Tiverton (24), Burrillville (22), Foster (22) and Scituate (19; Figure 3).

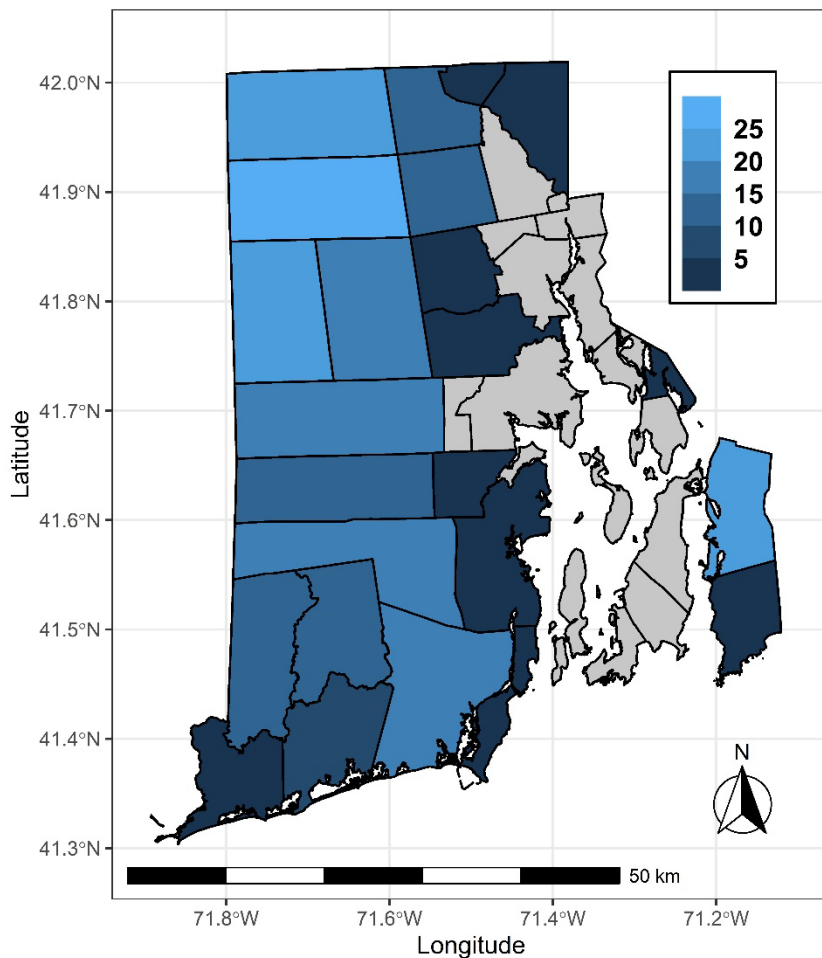


Figure 3. Distribution of the spring 2022 wild turkey harvest in Rhode Island. Towns where turkeys were not harvested are shaded in light gray. New Shoreham (Block Island) does not have a resident turkey population and is not displayed.

Table 3. Wild turkey harvest by town during the spring seasons in Rhode Island, 2019–2022.

Town of Harvest	Number of Birds			
	2022	2021	2020	2019
Bristol	0	1	3	0
Burrillville	22	35	29	28
Charlestown	6	11	12	8
Coventry	16	22	21	19
Cranston	3	2	1	1
Cumberland	5	3	4	5
E. Greenwich	4	1	1	4
E. Providence	0	0	0	0
Exeter	18	30	23	18
Foster	22	14	21	22
Glocester	26	21	23	13
Hopkinton	12	16	5	13
Johnston	4	2	0	1
Little Compton	4	14	6	7
Lincoln	0	1	0	0
Middletown	0	0	4	1
Narragansett	1	0	0	3
N. Kingstown	4	4	12	5
N. Providence	0	1	0	0
N. Smithfield	11	12	8	15
Portsmouth	0	0	1	1
Richmond	13	21	12	18
Scituate	19	16	18	25
Smithfield	11	9	13	11
S. Kingstown	16	15	19	14
Tiverton	24	11	18	21
Warren	4	3	1	0
W. Greenwich	11	10	9	6
Westerly	4	3	4	7
Woonsocket	2	4	0	4
TOTAL	262	282	268	270

Special Hunt Opportunities

A youth hunt, termed a Junior Turkey Hunt and a Paraplegic Hunt, occurred prior to the 2022 regular season. During these special season, youth and paraplegic hunters harvested a combined 23 birds. The youth hunt is a seven-day hunt ending the weekend before the statewide opening day and the paraplegic hunt is a two-day hunt on the weekend prior to the statewide opening day. The youth hunt is open to junior hunters, age 12 -15 years, with a valid license accompanied by at least one adult who is a legal resident and holds a valid hunting license. The first youth/paraplegic hunt took place in 2004 and resulted in the harvest of five birds. The overall impact of the youth season can be best measured in the opportunity it provides to attract and retain new hunters. The small number of participating hunters make it unlikely that youth/paraplegic hunts affect the regular season in any significant way.



Spring Turkey Hunter Survey Results

The spring turkey hunter survey was once again emailed out to anyone who purchased a turkey permit and had a valid email address within the Rhode Island Outdoor system. The survey provides insight into perceived population trends, hunter effort, hunter experience, and youth mentorship. This survey has varied over the years, but the goal remains the same; to understand the dynamics of the spring turkey hunt and the preferences of the RI spring turkey hunters. The spring turkey hunter survey was emailed out to a total of 1,574 email addresses of hunters who purchased a spring 2022 turkey permit. Of the 1,574 hunters, 32% responded (505) to the survey and of those 21% (105) purchased a permit but did not hunt during the spring 2022 season.

A total of 1,645 spring wild turkey permits were sold (Table 4). This is a decrease from the two previous years in which over two-thousand permits were sold and may be in part related to the reduction in COVID related restrictions and the return to typical work schedules. Eight percent of hunters that responded (40) indicated they either mentored a junior hunter during the 2022 spring youth turkey hunt or were a junior hunter (Table 4). Hunter effort across both state and private land during the spring 2022 season was 5.25 days on average with a range of 1 to 30 days per hunter (Table 4).

Table 4. Summary of Rhode Island spring turkey hunter survey, 2019–2022.

Hunter Profile	2022	2021	2020	2019
Number of Permits Issued	1645	2111	2167	1812
Estimated Number of Active Turkey Hunters¹	1300	1583	1712	1013
Rate of Participation in Hunt	79%	75%	79%	82%
Average Number of Years Hunter Spent Turkey Hunting	14.0	12.5	N/A	N/A
Average Number of Days per Hunter/Season	5.25	5.5	6.1	5.7
Hunter Success Rate	20.15%	17.81%	15.65%	26%
Participation Rate in Youth Turkey Hunt²	8%	11%	N/A	N/A

¹Estimated number of active turkey hunters was derived based on the total number of permits issued and the percentage of hunters surveyed that indicated they actively hunted during the 2022 spring season.

²Beginning in 2022, this value is a combination of adult mentors and youth that participated in turkey hunting

In the 2021 Wild Turkey Hunter Survey, we discovered that new hunters were more likely to hunt state land than experienced hunters, and that most turkey harvest occurs on private land. This relationship led us to specifically ask new turkey hunters (<5 years of experience) about their experience turkey hunting in the 2022 Wild Turkey Hunter Survey. Thirty-four percent of respondents started turkey hunting in the last five years. New turkey hunters mentioned that skill development (e.g., calling), locating turkeys, securing access to private land, and finding time to hunt were the biggest barriers encountered. Only 8% of new hunters had previously participated in the Wild Turkey Hunting clinic hosted by the Division of Fish and Wildlife and most respondents were interested in participating in future years.

The Rhode Island spring turkey season bag limits have remained conservative across the years allowing for ample opportunity and enjoyable hunts. Overall, 51.3% of survey respondents were either satisfied or very satisfied with the spring 2022 wild turkey season. Hunter satisfaction has remained consistent and high between 2019–2022. Twenty-six percent of the survey respondents did not have an opinion and 22.7% responded as unsatisfied or very unsatisfied. Rhode Island turkey hunters on average heard 6 gobblers, saw 5 gobblers, heard 3 hens, and saw 4 hens. These sightings indicate that most hunters are finding turkeys which likely contributes to hunter satisfaction. The hunter success rate during the 2022 spring season was 20.2% and was higher than the two previous years (Table 4).

When asked about interference from other hunters while turkey hunting, most hunters (76%) reported they had not experienced interference during the spring 2022 season. Of the 24% of respondents that experienced interference, 4.8% experienced interference on private land, 15.5% experienced interference on state land, and 3.7% reported interference on both state and private land.

2022 Fall Archery Turkey Season Summary

The fall 2022 wild turkey archery season ran from October 1st to October 31st, 2022. The 2022 season resulted in a harvest of three birds (Table 5). This is the same number of birds harvested during the fall 2021 season. Hunters harvested all three birds on private land. The fall archery season continues to have low harvest, with more female than male turkeys being harvested between 2018 and 2022 (Table 5).

Table 5. Composition of fall harvested wild turkey in Rhode Island, 2018–2022.

	2022	2021	2020	2019	2018
<i>Male</i>					
Adult (Tom or Gobbler)	--	--	1	4	--
Juvenile (Jake)	--	--	--	--	--
<i>Female</i>					
Adult (Hen)	3	2	2	4	--
Juvenile (Jenny)	--	1	2	1	1
Total	3	3	5	9	1

2022 Wild Turkey Brood Survey

Observations of wild turkey hens (adult females) with their young (poults) have been recorded in Rhode Island since 1995. Typically, observations occur between the months of June and August and can be an indicator of fall recruitment. In 2019, the survey analysis changed to follow the standardized protocol for conducting wild turkey brood surveys prepared by the National Wild Turkey Federation Technical Committee. This standardized approach will help facilitate comparison of brood indexes across states within the Northeast and across the US. Major changes to the survey analysis include: the exclusion of June observations (only July and August observations used); and standardized filtering that reduces bias in observations.

We estimated the 2022 brood index to be 2.96 (CI= 2.5, 3.44) poults per hen gathered from 109 observations (Figure 4). The brood index fluctuates from year to year and likely reflects the impacts of weather and rainfall on brood success and survival in any given year. The average number of poults per brood was 4.14 (CI= 3.65, 4.62) resulting from 78 observations. Sixty-five percent of hen observations had a brood (n= 109) and the male to female ratio was estimated to be 0.23 males per female (n= 116). Overall, the brood index depicts good survival during the spring of 2022 and is similar to the ten-year average (3.3 poults/hen). Long term trends (1993–2022) in the brood index show a decline since the start of the brood survey in 1993. This decline is likely in part due to high reproduction at low population densities following reintroduction and translocations in the 1990’s, and lower per hen reproduction as the population reached carrying capacity. Although the number of turkey brood reports has grown from ~40 in the early 90’s to

almost 300 in 2021, the number of observations in 2022 was lower (n= 116). Most recently, the ten-year average brood index (2013–2022), indicates a stable index of 3.3 poults/hen (Figure 4).

The Rhode Island Division of Fish and Wildlife relies on observations of poults and hens from the public. Members of the public can report their observations via an online form (<http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/wild-turkey-brood-packet.pdf>) as well as by submitting hard copies of the forms to the division’s wildlife office.

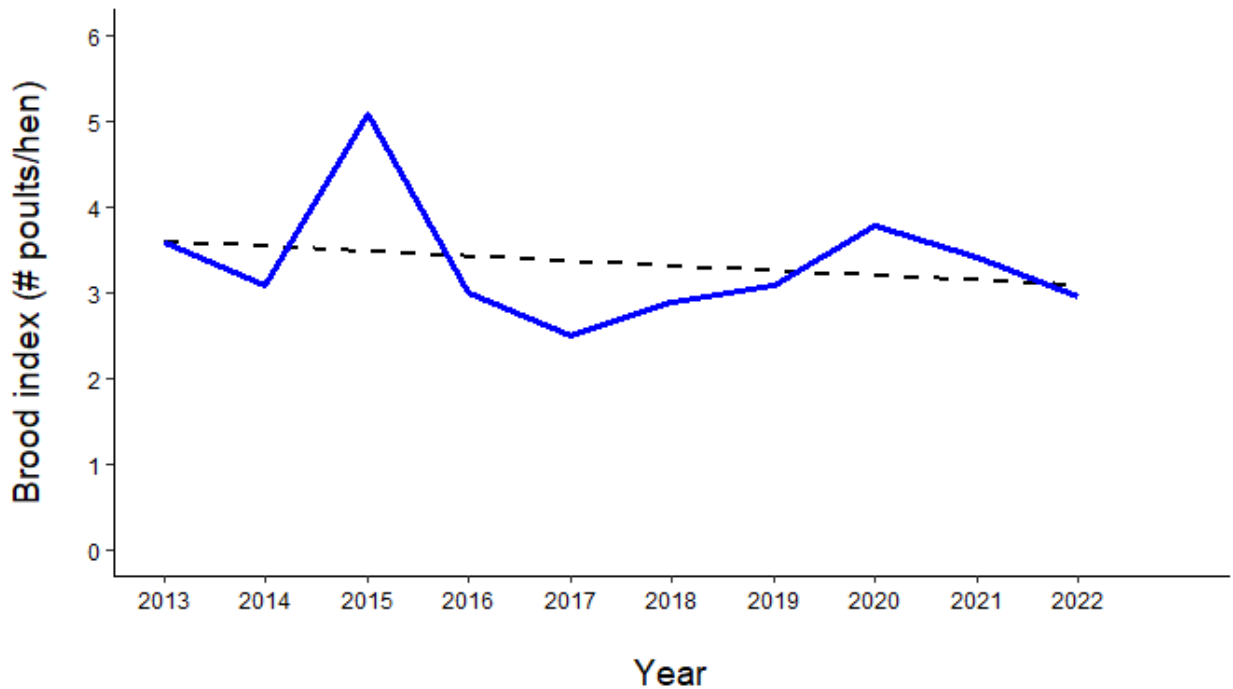


Figure 4. Rhode Island 10-year average brood index (# poults/hen) collected from public and biologist observations, 2013–2022. The dashed trendline indicates a slight decrease in the brood index between 2013 to 2022, but the trend was not significant ($p = 0.51$).

2022 Wild Turkey Gobble Call Count Survey

The wild turkey gobble call count survey was re-instated during the spring of 2020 and conducted again during 2021 and 2022. Three weeks prior to the opening of the turkey season, volunteers and biologists conducted call counts on 11 routes throughout Rhode Island. Each driving route contained 13 survey locations, each 1 mile apart, for which the observer would stop and listen for turkey gobblers for four minutes. The observer records the total number of gobblers heard, the number of turkeys gobbling, and the number of turkeys visually observed at each stop. Routes were run twice per week, alternating driving directions, for a duration of three weeks. Effort was made to conduct surveys on good weather days whenever possible. During the 2022 gobbler survey 9.1% of the total stops were active with an activity index of 0.25 active gobblers per stop and a gobble index of 4.8 calls per active gobbler (Table 6). We observed an 8% decrease in the

proportion of stops with active gobblers compared to 2021. A combination of weather and year-to-year variation likely contributed to this decline. The activity index and gobble index were relatively similar to 2021 and the long-term average. Gobbler activity (Figure 5) and the percent of stops that were active has increased over time while the gobble index (Figure 6) remains relatively stable.

Table 6. Summary of the spring turkey gobble call count survey results from 1993–2022 in Rhode Island.

Year	% Stops Active	Activity Index	Gobble Index
1993	3.3%	0.04	2.8
1994	9.3%	0.12	3.8
1995	10.4%	0.13	4.4
1996	8.2%	0.10	3.0
1997	14.1%	0.19	3.6
1998	15.5%	0.25	3.6
1999	10.1%	0.14	5.6
2000	12.5%	0.24	4.8
2001	14.6%	0.26	4.4
2002	15.5%	0.25	5.3
2003	15.7%	0.24	14.3
2004	10.9%	0.28	5.4
2005	17.3%	0.27	4.4
2006	16.2%	0.20	6.7
2007	13.7%	0.19	5.4
2008	12.7%	0.21	4.7
2009	15.4%	0.20	3.9
2010	16.7%	0.23	3.8
2011	12.7%	0.19	3.6
2012	21.4%	0.33	4.8
2013	20.0%	0.42	4.3
2014	8.0%	0.19	2.7
2015	21.0%	0.29	2.9
2016	N/A	N/A	N/A
2017	18.0%	0.42	3.6
2018	18.0%	0.36	6.2
2019	N/A	N/A	N/A
2020	19.0%	0.38	3.9
2021	17.2%	0.33	4.1
2022	9.1%	0.25	4.8
Average	14.2%	0.24	4.65

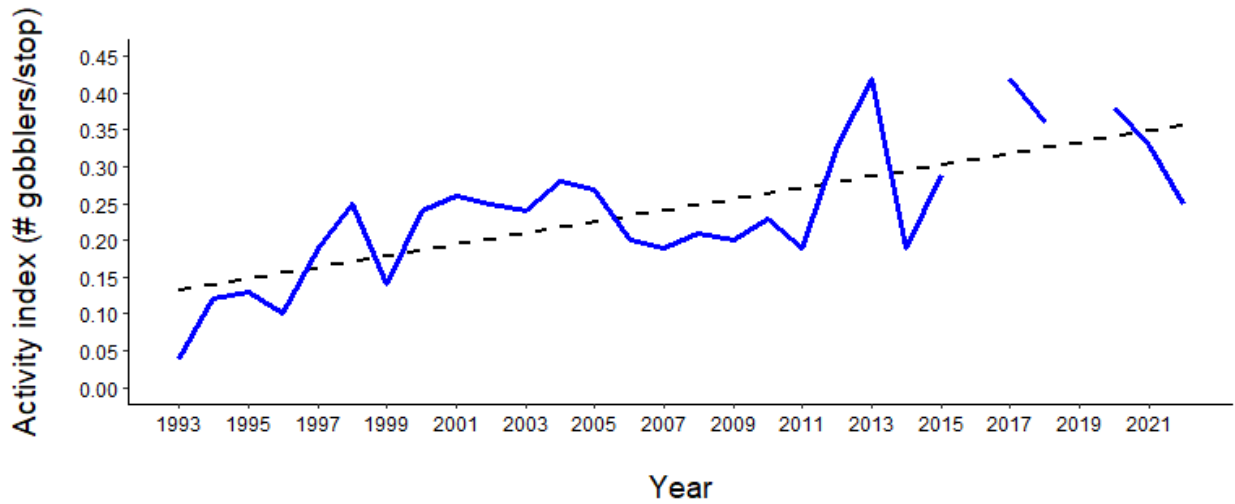


Figure 5. Rhode Island average activity index (# gobblers/stop) collected from public and biologist observations during the spring wild turkey gobble call count survey (survey not conducted in 2016 or 2019), 1993–2022. The dashed trendline indicates a significant increase in gobble activity ($p = 1.25 \times 10^{-5}$).

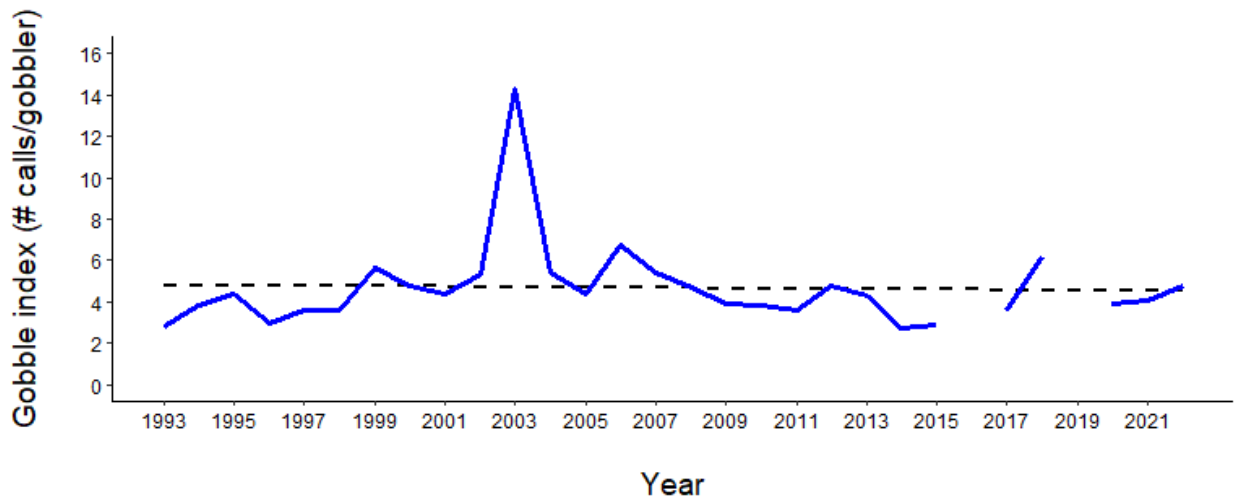


Figure 6. Rhode Island average gobble index (# calls/gobbler) collected from public and biologist observations during the spring wild turkey gobble call count survey (survey not conducted in 2016 or 2019), 1993–2022. The dashed trendline indicates a relatively stable trend in calls per gobbler.

Conclusion

The wild turkey is a highly adaptable species capable of flourishing in an array of habitat types. Once locally extirpated, the wild turkey now occupies most of the state. Recent changes to the bag limits have increased hunting opportunity resulting in an increased turkey harvest for the springs of 2019 to 2022. While fluctuations in the harvest occur, long term trends are positive. Rhode Island turkey hunters indicate that they are satisfied with the spring bag limits and the hunting opportunity provided to them. Like harvest trends, brood index estimates fluctuate from year to year. The 2022 brood index estimate is good, above the 10-year average, and has not changed significantly over the past 16 years. RI DEM Fish and Wildlife will continue to monitor turkey populations and encourages public participation in the yearly brood survey, gobbler survey, and the spring turkey hunter survey.

I encourage you to provide feedback about this report by emailing Elizabeth.Bonczek.CTR@dem.ri.gov



Appendix I

Rhode Island Spring Turkey Harvest by Town from 2010–2022.

Town	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Bristol	0	1	3	0	0	1	0	0	0	0	0	0	0
Burrillville	22	35	29	28	21	13	8	6	12	6	3	0	4
Charlestown	6	11	12	8	6	7	3	1	2	4	4	8	10
Coventry	16	22	21	19	13	8	11	9	8	21	10	9	6
Cranston	3	2	1	1	1	2	1	2	2	8	2	5	3
Cumberland	5	3	4	5	4	3	1	0	0	1	1	2	1
E. Greenwich	4	1	1	4	0	0	0	2	4	0	0	0	1
E. Providence	0	0	0	0	0	0	1	1	0	0	0	2	0
Exeter	18	30	23	18	15	15	9	15	5	9	10	0	23
Foster	22	14	21	22	11	6	10	3	6	9	9	24	3
Glocester	26	21	23	13	11	8	6	7	6	12	6	7	15
Hopkinton	12	16	5	13	19	7	6	3	3	4	8	10	6
Johnston	4	2	0	1	0	0	1	1	1	2	3	7	1
Little Compton	4	14	6	7	3	4	6	4	5	3	3	0	2
Lincoln	0	1	0	0	0	1	1	1	0	0	0	2	0
Middletown	0	0	4	1	0	0	0	0	0	0	0	0	0
Narragansett	1	0	0	3	1	0	0	1	0	0	0	0	0
N. Kingstown	4	4	12	5	8	5	6	4	3	4	0	1	7
N. Providence	0	1	0	0	0	0	0	0	0	0	0	0	0
N. Smithfield	11	12	8	15	13	7	6	7	4	7	6	10	10
Portsmouth	0	0	1	1	0	1	0	0	0	0	0	0	0
Richmond	13	21	12	18	11	9	9	5	5	15	10	9	13
Scituate	19	16	18	25	13	8	6	7	8	13	7	14	11
S. Kingstown	16	15	19	14	13	8	3	8	13	8	5	8	11
Smithfield	11	9	13	11	3	7	3	3	3	2	5	11	12
Tiverton	24	11	18	21	12	12	13	16	15	11	5	8	7
Warren	4	3	1	0	1	0	0	0	1	0	0	0	0
Westerly	4	3	4	7	4	1	5	0	2	3	2	3	9
Woonsocket	2	4	0	4	1	0	0	0	2	0	0	0	0
W. Greenwich	11	10	9	6	6	7	7	8	3	11	5	0	8
TOTAL	262	282	268	270	190	140	122	114	113	153	104	140	163