

**2023**  
**ONLINE SUMMMER BROOD SURVEY**  
**SUMMARY REPORT**

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## Introduction

Many thanks to all the people throughout New Hampshire who submitted sightings of wild turkey broods in 2023. The results of the survey summarized here will help the NH Fish and Game Department keep track of the status and reproductive success of the wild turkey population around the state. This was the 13th year of the internet-based turkey brood survey which covers observations made statewide between June 1 and August 31.

## Number of Broods Reported

There were 1,665 brood observation reports from this year's 2023 Summer Brood Survey (Table 1). Observations were up compared to last year when 1,094 broods were reported. As in previous years, over half of all brood sighting reports (862 or 51.8% of the total) were from the Southeast Region, primarily because this region has the highest turkey density and also the highest human density to report turkey broods. This was an increase compared to last year when 552 broods representing 50.5% of the total were reported from the Southeast Region.

The North Region and the White Mountain Region had a combined 101 broods observed or 6% of the statewide total of brood observation reports. This is understandable because these two regions have the least amount of suitable turkey habitat, fewer turkeys and fewer people to report them. The North Region was very similar to last year with 26 broods reported in 2022 and 24 broods reported in 2023. The White Mountain Region saw a slight increase from 53 broods in 2022 to 77 broods in 2023.

Of the State's 18 Wildlife Management Units across the state, the three units with the most brood sighting reports were the same in both 2022 and 2023: unit M at 417 (25.1%), unit J2 at 254 (15.3%) and unit L at 248 (14.9)% (Table 2).

**Table 1. Number and Percent of Brood Observations by Region (Summer 2023)**

<b>Region</b>	<b># of Brood Reports</b>	<b>% of Total</b>	<b>WMUs Included</b>
North	24	1.4%	A,B,C1,C2
White Mountain	77	4.6%	E, F
CT River	80	4.8%	D1,D2,G
E. Central	338	20.3%	J1, J2
Southwest	284	17.1%	H1,H2,I1,I2
Southeast	862	51.8%	K, L, M
Statewide	1665		All

**Table 2. Number and Percent of Brood Observations by WMU's (Summer 2023)**

WMU	# of Brood Observations	% of Total		WMU	# of Brood Observations	% of Total
A	11	0.7%		H1	40	2.4%
B	5	0.3%		H2	123	7.4%
C1	4	0.2%		I1	89	5.4%
C2	4	0.2%		I2	32	1.9%
D1	15	0.9%		J1	84	5.1%
D2	12	0.7%		J2	254	15.3%
E	34	2.0%		K	197	11.8%
F	43	2.6%		L	248	14.9%
G	53	3.2%		M	417	25.1%

**Number of Poults Per Hen**

The six regions of the state were compared for the month of August because at this time the poults are larger and more readily seen and counted, and most attrition of young turkeys has already occurred. The Connecticut River region had the highest average this year with 3.36 poults per hen. The Southeast and White Mountain regions were the lowest with 2.49 and 2.51 poults per hen respectively (Table 3). The White Mountain Region had the lowest poults per hen average last year as well.

For the state as a whole, the average was 2.66 poults per hen which is down compared to the previous two years when 3.22 poults per hen were reported in 2022 and 2.95 poults per hen were reported in 2021. It is up compared to 2020 when only 2.13 poults per hen were reported, which is the lowest recorded productivity since the survey started. The highest average on record was 4.38 poults per hen reported during 2011 which was the first year of the survey (Table 4).

**Table 3. Regional and Statewide Poults per Hen Average (August 2023)**

Region	# of Hens	# of Poults	Poults per Hen Average	# of Reports
North	48	145	3.02	20
White Mountain	120	301	2.51	54
CT River	157	527	3.36	63
E. Central	637	1860	2.92	237
Southwest	676	1865	2.76	223
Southeast	1908	4750	2.49	647
Statewide	3546	9448	2.66	1244

**Table 4. Statewide Poults per Hen Average during the Month of August by Year**

<b>Year</b>	<b>Poults per Hen Average</b>
2011	4.38
2012	3.90
2013	3.33
2014	3.40
2015	3.90
2016	2.97
2017	3.32
2018	4.15
2019	3.23
2020	2.13
2021	2.95
2022	3.22
2023	2.66

Estimated Hatching Periods

Statewide, over half (51.8%) of all hatching occurred within one month period from July 7<sup>th</sup> – through August 3<sup>rd</sup>. During 2023, the most hatching occurred during the following 2-week periods: July 7-20 (30.6%) and July 21-August 3 (21.2%). This is more than a month later than last year when 60% of hatching occurred between May 26<sup>th</sup> and June 22<sup>nd</sup>.

More hatching occurred during the month of August this year compared to last year. August 4<sup>th</sup> through August 31<sup>st</sup> saw 8.4% of the total hatch in 2023 vs only 1.4% of the total hatch in 2022. (Table 5).

**Table 5. Estimated Percentage of Poults Hatched by 2-Week Periods (Summer 2023)**

<b>Time Period</b>	<b>Total Number of Poults 2022</b>	<b>% of Total Hatch 2022</b>	<b>Total Number of Poults 2023</b>	<b>% of Total Hatch 2023</b>
May 1 – May 11	45	0.56%	9	0.1%
May 12 – May 25	858	10.75%	290	3.1%
May 26 – June 8	2602	32.60%	866	9.4%
June 9 – June 22	2187	27.40%	1230	13.3%
June 23 – July 6	1080	13.53%	1284	13.8%
July 7 – July 20	799	10.01%	2831	30.6%
July 21 – August 3	297	3.72%	1962	21.2%
August 4 – August 17	68	0.85%	733	7.9%
August 18 – August 31	46	0.58%	45	0.5%

Regionally the average hatching varied from July 3 to July 10 in 2023. Again, this is about one month later than last year when regional hatch dates ranged from June 1 to June 13. The average hatching date statewide in 2023 was July 10 compared to one month earlier of June 11 during 2022.

The average hatch dates by region, and statewide for 2023, are the latest recorded over the past 13 years of this survey with one exception: in the North Region the average hatch date was July 7 in both 2023 and 2013. In 13 years of this survey, 2023 was the first year that the statewide average hatch date occurred during the month of July (Table 6).

The later hatch dates in 2023 were likely weather related. Frost during the month of May affected many trees and shrubs and caused new buds and leaves to die off. Consistent rain during the spring and summer months led to flooding throughout central and southern parts of the state. Per WMUR News, 2023 was the 7<sup>th</sup> rainiest year on record since 1868 when records first started being kept.

**Table 6. Regional and Statewide Average Hatching Dates**

<b>Region</b>	<b>North</b>	<b>White Mtn</b>	<b>CT River</b>	<b>E. Central</b>	<b>Southwest</b>	<b>Southeast</b>	<b>Statewide</b>
<b>2011</b>	June 13	June 17	June 15	June 10	June 7	June 7	June 8
<b>2012</b>	June 11	June 14	June 23	June 12	June 12	June 15	June 15
<b>2013</b>	July 7	June 28	June 27	June 23	June 30	June 24	June 25
<b>2014</b>	June 23	June 20	June 22	June 18	June 15	June 20	June 19
<b>2015</b>	June 19	June 16	June 17	June 19	June 20	June 19	June 19
<b>2016</b>	June 29	June 19	June 19	June 19	June 18	June 19	June 19
<b>2017</b>	June 30	June 25	June 26	June 25	June 25	June 19	June 21
<b>2018</b>	June 16	June 19	July 5	June 15	June 23	June 18	June 20
<b>2019</b>	June 27	June 28	June 26	June 24	June 24	June 20	June 22
<b>2020</b>	July 1	June 29	June 19	June 19	June 26	June 23	June 23
<b>2021</b>	June 22	June 18	June 22	June 12	June 18	June 15	June 15
<b>2022</b>	June 9	June 1	June 10	June 13	June 10	June 12	June 11
<b>2023</b>	July 7	July 3	July 10	July 5	July 9	July 7	July 7

Towns with the Most Brood Observations

Reports were received from a total of 215 (89%) towns statewide in 2023 which is up compared to last year when 203 towns reported observations. A total of 10 towns reported 25 or more broods during summer 2023. The top towns were: Derry (40), Manchester (38) Concord (35) Hooksett (29) Moultonboro (28) Bedford (27) Milford (27) Merrimack (26) and Windham (26) broods each (Table 7).

There were 26 towns that recorded 175 or more total turkeys (hens and poults combined). This was up from only 6 towns reporting 175 or more total turkeys the previous year. The following five towns recorded the highest number of turkeys observed with over 300 birds each: Concord (389), Derry (384), Manchester (339), Moultonboro (334), and Bedford (316) (Table 8).

**Table 7. Towns with 25 or More Brood Observations (Summer 2023)**

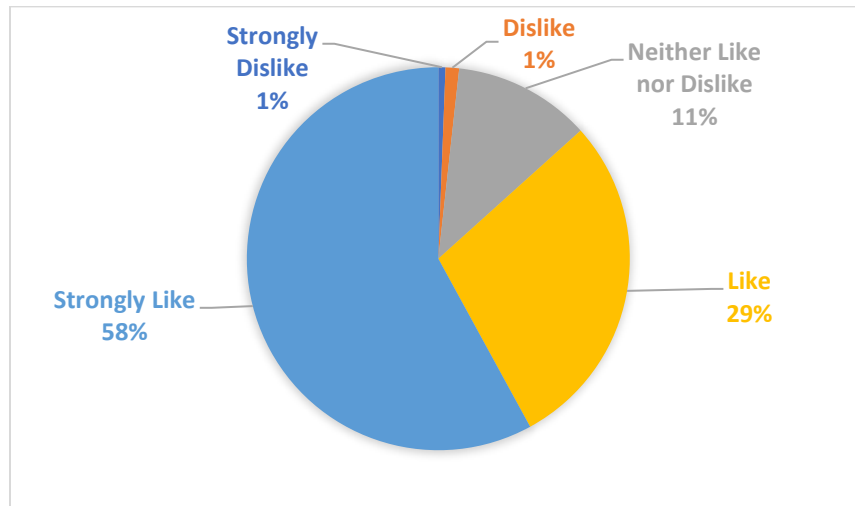
<b>Town</b>	<b>Total # of Reports</b>
Derry	40
Manchester	38
Concord	35
Hooksett	29
Moultonboro	28
Bedford	27
Milford	27
Merrimack	26
Windham	26
Dover	25

**Table 8. Towns with  $\geq 175$  Turkeys (Hens and Poults) Observed per Town (Summer 2023).**

<b>Town</b>	<b>Total # of turkeys Reported</b>
Concord	389
Derry	384
Manchester	339
Moultonboro	334
Bedford	316
Alton	278
Pembroke	275
Dover	267
Londonderry	266
Hooksett	257
Milford	250
Rochester	241
Raymond	235
Windham	229
Barrington	228
Ossipee	216
Goffstown	214
Pelham	207
Salem	195
Chesterfield	194
Belmont	192
Newmarket	190
Exeter	184
Merrimack	182
Epping	176
Weare	175

### Public Attitudes Towards Wild Turkeys

A total of 29 out of 1,665 respondents indicated they disliked, or strongly disliked turkeys. This was an increase from only 4 last year. The majority of respondents 1,443 (87%) continue to feel favorably towards wild turkeys and indicated they liked, or strongly liked, seeing wild turkeys on the landscape in NH. However, this was a decrease from 95% of respondents that indicated they liked, or strongly liked, seeing wild turkeys last year.



### Symptoms of Avian Pox and LPDV Virus

Reports of turkeys displaying symptoms of Avian Pox or Lymphoproliferative Disease Virus (LPDV) were down this year compared to last. Only 9 symptomatic turkeys were reported for summer 2023. Reports from past years include: 2014 (5), 2015 (11), 2016 (6), 2017 (4), 2018 (0), 2019 (2), 2020 (2) 2021 (3) and 2022 (13).

### Conclusions

- There were 1,665 brood observation reports statewide during summer 2023 which was up compared to 1,094 brood observation reports in summer 2022.
- Statewide, over half (51.8%) of all hatching occurred from July 7<sup>th</sup> through August 3<sup>rd</sup>. This is more than a month later than last year when 60% of hatching occurred between May 26<sup>th</sup> and June 22<sup>nd</sup>.
- The Statewide average hatch date for 2023 was July 7<sup>th</sup>. This is the latest hatch date recorded since the survey started 13 years ago.
- Productivity was the second lowest recorded since the survey started 13 years ago with only 2.66 poult per hen average statewide. This was down compared to 3.22 poult per hen in 2022.

- Twenty six towns reported 175 turkeys or more (hens and poults combined) in 2023. This was up from only 6 towns reporting 175 or more birds last year.
- Five towns reported over 300 birds each: Concord, Derry, Manchester, Moultonboro and Bedford
- The majority of respondents 1,443 (87%) continue to feel favorably towards wild turkeys and indicated that they liked, or strongly liked seeing wild turkeys on the landscape in NH.
- Reports of turkeys displaying symptoms of Avian Pox or Lymphoproliferative Disease Virus (LPDV) remained low with only 9 reports of symptomatic turkeys this year.