

2018 Connecticut Deer Program Summary



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Table of Contents

Introduction.....	4
Hunter Notes.....	4
Regulated Deer Harvest.....	5
Permit Allocation.....	5
Hunter Success.....	7
Archery Statistics.....	8
Connecticut Deer Management Zones.....	8
Insight into Deer Hunter Success Rates by Zone.....	10
Fall Acorn Crop.....	12
Private Land Deer Harvest.....	13
Harvest Effort, Observations, and Fawn Recruitment.....	14
Deer Harvest Sex Ratios.....	15
Antler Points and Yearling Fraction.....	16
Replacement Tags.....	16
Deer Hunter Expenditures, Effort, Venison Calculations, and Opinions.....	17
Subscription Rates for State Land Lottery Permits.....	18
Moose Sightings.....	18
Controlled Deer Hunts.....	19
Crop Damage Permits.....	20
Non-hunting Deer Mortality.....	20
Conclusion.....	21
Appendix 1. Total reported deer harvest and roadkills by town, 2018.....	23
Appendix 2. Deer harvest on state hunting areas, including Deer Lottery Hunting Areas (DLHA), 2018.....	27
Appendix 3. Sex ratios (male:female) of deer harvested during Connecticut's regulated hunting seasons, 2016-2018.....	30
Appendix 4. Non-hunting deer mortality reported in Connecticut, 2005-2018.....	31
Appendix 5. Frequency of deer roadkills in each of Connecticut's Deer Management Zones, a 5-year comparison, 2014-2018.....	31
Appendix 6. Deer removed using crop damage permits in Connecticut's Deer Management Zones, 2006-2018.....	32

List of Tables

- Table 1. Deer harvested during Connecticut's regulated hunting seasons, 2017-2018.
- Table 2. Deer hunting permits issued in Connecticut for all regulated hunting seasons, 2016-2018.
- Table 3. Deer hunter success rates (%) in Connecticut, 2017-2018.
- Table 4. Zonal hunter numbers, harvest, and success rates for private land during the 2018 shotgun/rifle hunting season.
- Table 5. Zonal comparisons in private land shotgun/rifle harvest, hunter distributions, and success rates, 2016-2018.
- Table 6. Zonal comparisons of archery season success rates, 2018.
- Table 7. Private land deer harvest for all seasons (excluding landowner) in each of Connecticut's Deer Management Zones, 2008-2018.
- Table 8. Hunter observations and harvest ratios reported during the first month of the archery season in Connecticut, 2015-2018.
- Table 9. Observation rates (deer seen/hour; D/hr), number of fawns per doe (F:D), and number of deer harvested per hour (H/hr) collected at the time harvest was summarized for the first month of the archery season by Deer Management Zone (DMZ) in Connecticut, 2016-2018.
- Table 10. Sex ratios (male:female) and antlered to antlerless ratios of deer harvested in 2018.
- Table 11. Sex ratios (male:female) of deer harvested during Connecticut's regulated hunting seasons, 2016-2018.
- Table 12. Instant award deer lottery selection results by Deer Hunting Lottery Area, 2018.

List of Figures

- Figure 1. Total deer permit issuance and total deer harvest in Connecticut, 1975-2018.
- Figure 2. Connecticut's Deer Management Zones, 2018.
- Figure 3. Perception of zonal deer population trends (average rank) by Connecticut's deer hunters, 2016-2018.
- Figure 4. Private land shotgun/rifle deer harvest in Deer Management Zones 4A and 4B, 1996-2018.
- Figure 5. Perception of acorn crops (average rank) by Connecticut's deer hunters, 2015-2018.
- Figure 6. Relationship between private land shotgun/rifle hunter success rates and fall acorn productivity, 1993-2018.
- Figure 7. Number of antler points on bucks collected by the telecheck/online reporting system during the shotgun/rifle hunting season in Connecticut, 2015-2018.
- Figure 8. Comparisons of trends in roadkills and the antlered and antlerless deer harvests during the archery deer season in Deer Management Zone 11, 1995-2018.
- Figure 9. Changes in the sex ratios of harvested deer from Deer Management Zone 11 after implementing various management strategies during the archery season, 1994-2018.
- Figure 10. Moose sightings reported on deer hunter surveys, 1996-2018.
- Figure 11. Crop damage deer removals by month, 2018.

Introduction

This booklet is the 37th in a series, since the passage of the White-tailed Deer Management Act of 1974, reporting on the status of the white-tailed deer resource in Connecticut. It summarizes white-tailed deer information for 2018, including changes in deer management regulations and reporting requirements, harvest statistics, research activities, and population dynamics of Connecticut's deer population. Connecticut's Deer Management Program goals are: 1) to maintain the population at levels compatible with available habitat and land uses, and 2) to allow for a sustained yield of deer for use by Connecticut hunters. The program has focused on stabilizing or reducing deer population growth for the best long-term interest of the deer resource, native plant and animal communities, and the public. Regulated deer hunting has proven to be an ecologically sound, socially beneficial, and fiscally responsible method of managing deer populations. Deer Program efforts have focused on increasing harvest of antlerless deer, coordinating controlled hunts for overabundant deer herds, assisting communities and large landowners with deer management issues, and research and management of urban deer populations.

Pursuant to the goal of reducing overabundant deer populations, aggressive management strategies have been implemented in areas with high deer densities. Strategies include the issuance of free replacement antlerless tags (1995), changes in state law to allow hunting over bait (2003), extending the archery season to include the month of January (2003), implementation of sharp-shooting programs (2003), development of an earn-a-buck program (EAB) (2005), increased bag limits in specific deer management zones (2009), allowing the use of crossbows during January (2010), allowing the use of crossbows statewide (2013), allowing the harvest of deer on Sundays during the archery season in specific zones (2015), and harvesting of deer on Sundays during the archery season in all zones (2018).

In 1995, the replacement antlerless tag program was initiated, allowing hunters in deer management zones (DMZs) 11 and 12 to harvest additional antlerless deer, with the goal of increasing the doe harvest. In 2003, hunting over bait was permitted in DMZs 11 and 12 during all seasons on private land. The use of bait in areas where hunter access to private land is limited increases hunter opportunity and success. Starting in 2005, hunters could earn a free either-sex tag for harvesting a buck after harvesting 3 antlerless deer during the same season (EAB). In 2009, hunters were issued 1 additional antlerless tag in DMZ 7 and an additional 2 antlerless tags in DMZ 11 and DMZ 12 with their shotgun/rifle and muzzleloader permits. In 2010, hunters were allowed to use crossbows in January in DMZs 11 and 12. In 2013, use of crossbows was expanded to allow use during the entire archery season on state and private land in all DMZs. In October 2015, archery hunters were allowed to hunt on Sundays on private land in DMZs where deer were considered overpopulated, which included all DMZs except 2, 3, and 4A. In 2018, archers were allowed to hunt on Sundays on private land in all DMZs. In developed areas where firearms hunting is not feasible, DEEP encourages the use of bowhunting as a management tool. Communities experiencing deer overpopulation problems may choose to initiate controlled hunts or, under special conditions, may be eligible to implement sharp-shooting programs.

In recent years, town governments have been taking a more active role in initiating local deer management programs. In 2004, representatives of 10 towns in Fairfield County formed a Regional Deer Management Working Group called the Fairfield County Municipal Deer Management Alliance (www.deeralliance.com). Currently, 18 of 23 Fairfield County towns have joined the Alliance. The Alliance assists towns in establishing deer committees, shares knowledge and experience about managing urban deer with other towns, provides input on urban deer problems so as to influence wildlife policy decision makers, increases public awareness, and provides input for developing long-term solutions to control deer overabundance in southwestern Connecticut.

In early September 2017, a concerned hunter reported finding several dead deer along a small body of water adjacent to the Connecticut River in Portland. Several fresh carcasses were submitted for testing with 3 deer testing positive for Epizootic Hemorrhagic Disease (EHD). EHD is one of the most important infectious diseases affecting white-tailed deer and spreads by a bite from an infected midge. No infected animals were reported in 2018. Additional information about EHD can be found on the DEEP website at <http://www.ct.gov/deep/cwp/view.asp?a=4918&q=597280>.

The Connecticut Department of Energy and Environmental Protection (DEEP) Wildlife Division expects to be collecting deer heads to test for chronic wasting disease (CWD) and blood samples for EHD (from towns along the Connecticut River) during the 2019 hunting season. Anyone interested in donating deer heads or blood samples from harvested deer should contact Wildlife Division biologist Andrew LaBonte (andrew.labonte@ct.gov) at 860-418-5921 for more information.

Hunter Notes

Information on dates and locations of hunter education courses can be obtained by calling the DEEP Wildlife Division at 860-424-3011, or on the DEEP website (www.ct.gov/deep/hunting). Licenses and permits to fish, hunt, and trap in Connecticut can be purchased online by going to Connecticut's Online Sportsmen Licensing System at www.ct.gov/deep/sportsmenlicensing or in person at authorized vendors, town clerk offices, and select DEEP offices.

In 2018, the DEEP collected 350 CWD samples from throughout the state, all of which tested negative. Since the beginning of collection efforts in 2003, over 6,500 samples have been collected, all of which have tested negative for CWD.

Regulations remain in place prohibiting hunters from transporting into Connecticut any deer or elk carcasses or part thereof from any state where chronic wasting disease (CWD) has been documented, unless de-boned. Specific wording of the regulation and an updated list of states where CWD has been documented can be found on the DEEP website at https://www.ct.gov/deep/cwp/view.asp?a=2700&q=323412&deepNav_GID=1655.

Regulated Deer Harvest

Regulated hunting is an effective and cost-efficient method for maintaining deer populations at acceptable densities. With the implementation of a new system for reporting harvested deer in 2009, caution should be exercised when comparing harvest data collected before 2009 to harvest data collected thereafter. During the 2018 hunting season, 11,345 deer were legally harvested and reported (Table 1; Figure 1). This represents a 6.1% decrease from the 2017 harvest. Harvest by crossbow hunters during the January season has continued to increase over the last four years (41%, 54%, 63%, and 63%).

In 2018, 1,783 deer were harvested during the first 4 days of the shotgun/rifle season (includes junior hunting days), a 5% decrease from 2017 (1,873). Using the telephone and online reporting systems, the reported shotgun/rifle harvest was 4,298 deer in 2018, a 0.4% increase from 2017 (4,281). In 2018, the landowner harvest was 1,009, a 6.5% decrease from 2017 (1,079). Typically, unlike the 3-week shotgun/rifle season, the landowner season runs from November to December and is less affected by periods of inclement weather and snowfall. The decrease in harvest is likely due to poorer weather conditions on typical peak harvest days.

The antlerless and EAB tag harvest was lower in 2018 (349) than in 2017 (379). Deer harvested under the replacement antlerless and EAB programs (349) contributed to 13.6% of the total deer harvest on private land in DMZs 11 and 12. Archery and shotgun/rifle seasons accounted for 47.0% and 37.9% of all deer taken in 2018, which is the fifth consecutive year the archery harvest has exceeded the shotgun/rifle harvest. Landowners and muzzleloader hunters accounted for 8.9% and 6.2% of all deer taken in 2018. Harvest varied considerably by season and town (Appendix 1). Harvest on state land varied considerably by area with 22 areas exceeding 10 deer harvested/mi² (Appendix 2). The overall decrease in the 2018 deer harvest was likely attributed to a higher harvest during the 2017 season and poorer weather conditions during peak harvest days.

A Junior Deer Hunter Training Day was established in 2003 for youth hunters. This training period was increased to two days in 2009, and then expanded to a full week in 2014. Youth hunters continue to take advantage of these special training days. The recent 3-year average harvest for Junior Deer Hunter Training Days is 52 deer (Table 1).

Permit Allocation

To reduce Connecticut's deer population growth rate, the Wildlife Division provides opportunities for hunters to purchase multiple deer permits. Permit issuance increased consistently from 1975 to 1992, and remained relatively stable from 1992 to 2009 (Figure 1). Since implementation of the online license system and an increase in fees, permit issuance declined 9% (2009-2011) from the previous 3-year average of 61,859 (2006-2008). Deer permit issuance in 2014 declined nearly 1,000 permits from 2013, and declined another 2,327 permits in 2015. Permit issuance in 2016 was similar to permit issuance levels in 1989, while issuance continues to decline every year (Figure 1). Issuance for state land muzzleloader permits had the greatest one-year decline (7.4%), followed by state land A shotgun (6.3%) (Table 2). Archery permit issuance increased to a record high of 17,029 in 2017, but declined slightly (3.5%) in 2018 (Table 2). Overall, shotgun/rifle hunters purchased the largest percentage of permits (37.1%), followed by archery hunters (36.9%), muzzleloader hunters (17.9%), and landowners (8.1%). Seventy-one percent of firearms deer permits were issued for use on private land and the remaining 29% were issued for state-managed lands. During the ninth year of authorizing the use of revolvers for deer hunting, 857 hunters took advantage of this opportunity, a 0.5% increase in issuance from 2017 (853).

Table 1. Deer harvested during Connecticut's regulated hunting seasons, 2017-2018.

Season	Harvest 2017	Harvest 2018	3-year Average Harvest (2015-2017)	% of Total 2018	% Change from 2017 to 2018	% Change 3-year Average to 2018
Archery						
State Land	551	497	594	4.4%	-9.8%	-16.3%
Private Land	5,075	4,597	4,448	40.5%	-9.4%	3.4%
Crossbow^{A, B}	2,934	2,814	2,612	24.8%	-4.1%	7.7%
Replacement Antlerless ^{A, B}	171	115	168	1.0%	-32.7%	-31.4%
Either-sex Tag ^{A, B}	116	102	95	0.9%	-12.1%	7.7%
January ^E	284	238	213	2.1%	-16.2%	11.9%
Replacement Antlerless ^A	21	27	13	0.2%	28.6%	107.7%
Either-sex Tag ^A	3	0	1	0.0%	-100.0%	-100.0%
Crossbow	179	151	117	1.3%	-15.6%	29.4%
Subtotal	5,910	5,332	5,254	47.0%	-9.8%	1.5%
Muzzleloader						
State Land	137	108	97	1.0%	-21.2%	11.3%
Private Land	673	598	545	5.3%	-11.1%	9.7%
Replacement Antlerless ^{A, C}	15	7	7	0.1%	-53.3%	-4.5%
Either-sex Tag ^{A, C}	9	7	7	0.1%	-22.2%	5.0%
Subtotal	810	706	642	6.2%	-12.8%	10.0%
Shotgun/Rifle						
State Land A	623	581	568	5.1%	-6.7%	2.2%
State Land B	129	123	87	1.1%	-4.7%	40.8%
Private Land	3,529	3,594	3,181	31.7%	1.8%	13.0%
Replacement Antlerless ^{A, D}	13	26	21	0.2%	100.0%	23.8%
Either-sex Tag ^{A, D}	55	65	55	0.6%	18.2%	18.9%
Revolver ^D	7	9	7	0.1%	28.6%	28.6%
Muzzleloader ^D	24	26	22	0.2%	8.3%	18.2%
Subtotal	4,281	4,298	3,837	37.9%	0.4%	12.0%
Youth Hunting Days^D	32	25	52	0.2%	-21.9%	-51.9%
Landowner	1,079	1,009	885	8.9%	-6.5%	14.0%
Total	12,080	11,345	10,618	100.0%	-6.1%	6.8%

^A Replacement antlerless and either-sex tags were available in zones 11 and 12 only.

^B Included as part of private land archery total.

^C Included as part of private land muzzleloader total.

^D Included as part of private land shotgun/rifle total.

^E Refers to the January following harvest year listed.

Figure 1. Total deer permit issuance and total deer harvest in Connecticut, 1975-2018.

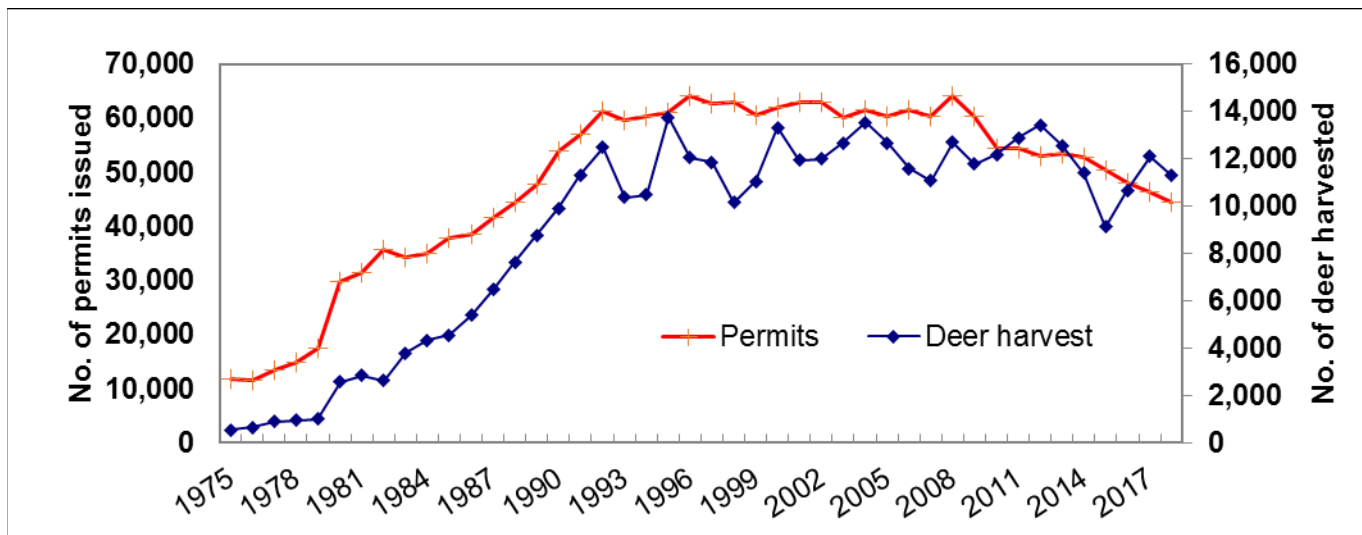


Table 2. Deer hunting permits issued in Connecticut for all regulated hunting seasons, 2016-2018.

Season	Permits 2016	Permits 2017	Permits 2018	3-year Average Permits 2015-2017	% of Total 2018	% Change 2017 to 2018	% Change 3-year Avg. to 2018
Archery	16,864	17,029	16,451	16,956	36.9%	-3.5%	-3.0%
Muzzleloader							
State Land	2,864	2,892	2,693	2,965	6.0%	-7.4%	-9.2%
Private Land	6,262	5,478	5,280	6,062	11.9%	-3.8%	-12.9%
Subtotal	9,126	8,370	7,973	9,027	17.9%	-5.0%	-11.7%
Shotgun/Rifle							
State Land A*	4,534	4,277	4,024	4,522	9.0%	-6.3%	-11.0%
State Land B*	1,615	1,583	1,528	1,604	3.4%	-3.6%	-4.8%
Private Land	12,052	11,629	10,974	12,480	24.6%	-6.0%	-12.1%
Subtotal	18,201	17,489	16,526	18,607	37.1%	-5.8%	-11.2%
Revolver^A	807	853	857	827	1.9%	0.5%	3.7%
Landowner	3,767	3,676	3,594	3,754	8.1%	-2.3%	-4.3%
Total	47,958	46,564	44,544	48,344	100.0%	-4.5%	-7.9%

* Includes controlled hunt permits.

^A Not included in total permits.

Hunter Success

Hunter success rate was estimated by dividing total deer harvest by total permit issuance and multiplying by 100 (Table 3). Success rates may fluctuate annually, depending on weather conditions, timing of rain and snow storms, fall acorn crops, and deer herd size. Bowhunter success rates fluctuated between 24.3% and 27.6% from 2004 to 2008. Bowhunter success exceeded 35% from 2010 through 2014 (35.2% in 2010; 38.0% in 2011; 37.7% in 2012; 38.3% in 2013; and 35.7% in 2014), but declined during the 2015 (26.9%) and 2016 (31.3%) hunting seasons. In 2017, archery success reached nearly 35% (34.7%), but declined again in 2018 (31.3%). Success rates in 2018 decreased for all hunting seasons (except private land shotgun/rifle) compared to 2017, but was still higher than the 3-year average for all seasons. In 2018, archery hunters had the highest annual success rate (31.3%), followed by private land shotgun/rifle hunters (30.9%) and landowners (28.1%). Success rate for the combined muzzleloader seasons was 8.4%. Lower success rates are expected because the muzzleloader season occurs after the shotgun/rifle deer hunting seasons.

Table 3. Deer hunter success rates (%) in Connecticut, 2017-2018.

Season	2017	2018	3-year Avg. Success Rate (2015-2017)	Difference from 2017	Difference from 3-year Avg.
Archery					
Combined ¹	34.7%	31.3%	31.0%	-3.4%	0.3%
Muzzleloader					
State Land	4.7%	3.7%	3.3%	-1.0%	0.4%
Private Land	12.3%	10.9%	9.2%	-1.4%	1.8%
Combined	9.7%	8.4%	7.2%	-1.2%	1.2%
Shotgun/Rifle					
State Land A	14.6%	13.6%	12.6%	-1.0%	0.9%
State Land B	8.1%	7.8%	5.5%	-0.4%	2.3%
Private Land	30.3%	30.9%	25.8%	0.6%	5.1%
Combined	24.5%	24.6%	20.8%	0.1%	3.8%
Landowner	29.4%	28.1%	23.7%	-1.3%	4.4%
Average²	26.0%	24.4%	22.1%	-1.6%	2.3%

¹ Data available only for state and private land combined.

² Average is based on total number of deer harvested/total number of permits issued.

Archery Statistics

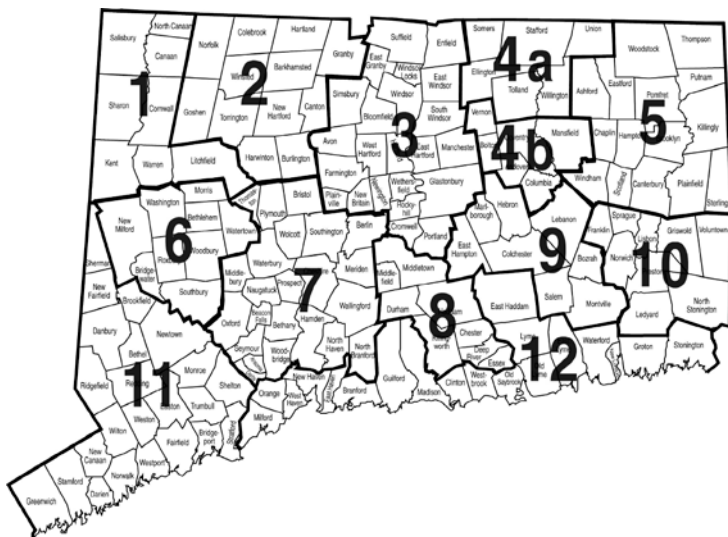
Excluding the landowner season, just over half (52%) of the deer taken during the hunting seasons were harvested by bowhunters. Since 2010, record bow harvests have been recorded (5,211; 5,413; 6,046; 5,433; 4,566; 5,286; 5,910; 5,332 respectively) and those harvests have exceeded the shotgun/rifle harvest. Sixty percent (3,220 total – 2,818 private, 402 state) of the total archery harvest was taken during the early archery season (September 15 to November 13); 29% (1,542 total – 1,471 private, 71 state) was taken during the 3-week shotgun/rifle season (open in all zones on private land and state land bowhunting-only areas); 6% (332 – 308 private, 24 state) was taken during the muzzleloader season (December 19 to December 31); and 5% (238) was taken during the January season open in DMZs 11 and 12 on private land only (January 1-31, 2019). State lands open to archery hunting are a valuable resource to Connecticut deer hunters (Appendix 2). During the 2018 archery season, hunters were allowed to hunt on Sundays on private land. The Sunday harvest comprised 10% of the entire archery harvest and 17% during the January season. Comparing the percent of archery deer harvested on weekends from 2014 (29%; Saturday only) to 2015 (37%; Saturday and Sunday), 2016 (35%; Saturday and Sunday), 2017 (37%; Saturday and Sunday) and 2018 (40%; Saturday and Sunday), there has been about an 8% to 10% increase in harvest on weekends during the regular season and about a 1% to 3% increase during the January season (2014 - 35%; 2015 - 38%; 2016 - 36%; 2017 - 38%; 2018 - 37%) when archery hunting was opened up on Sundays in select zones (all DMZs except 2, 3, and 4A and in all zones in 2018).

In 2018, 13,354 deer hunters were sent an email and asked to complete an online hunter survey. A total of 3,949 hunters responded for a 30% response rate. Hunters were asked on the annual deer hunter survey questions about Sunday hunting. The majority of hunters (76%) indicated they were aware archery hunting on Sundays was permitted in all Deer management zones in 2018. A little over a third of archery hunters (36%) indicated they hunted Saturday and Sunday, 32% hunted one or the other depending on personal time, 19.6% hunt Saturdays only, 11% hunt one or the other depending on the weather, and 2% hunt Sundays only. Based on the survey, the majority of archery hunters hunted 1-2 Sundays a month during the season. To obtain additional information beneficial to zonal deer management, archery hunters were asked how many hours they hunted and how many fawns, does, and bucks they observed on the day they harvested their deer. According to information reported by hunters in response to the questions, the average number of deer observed per hour (Sept.-Dec.) in 2018 was 1.3, which was lower than 2017 (1.6), but higher than 2016 (1.1), and 2015 (0.89). Number of fawns per doe in 2018 (0.48) was lower than in 2017 (0.92), but similar to 2016 (0.48), while number of bucks per doe in 2018 (0.40) was higher than 2017 (0.30), but lower than 2016 (0.48).

Connecticut Deer Management Zones

Data from hunter surveys, regulated deer harvests, and total deer mortality have been recorded and evaluated by Deer Management Zones (DMZs; Figure 2) in an effort to better manage the statewide deer population. Current population status and long-term trends are analyzed for each Deer Management Zone. This approach facilitates the assessment and management of regional deer populations.

Figure 2. Connecticut's Deer Management Zones, 2018.

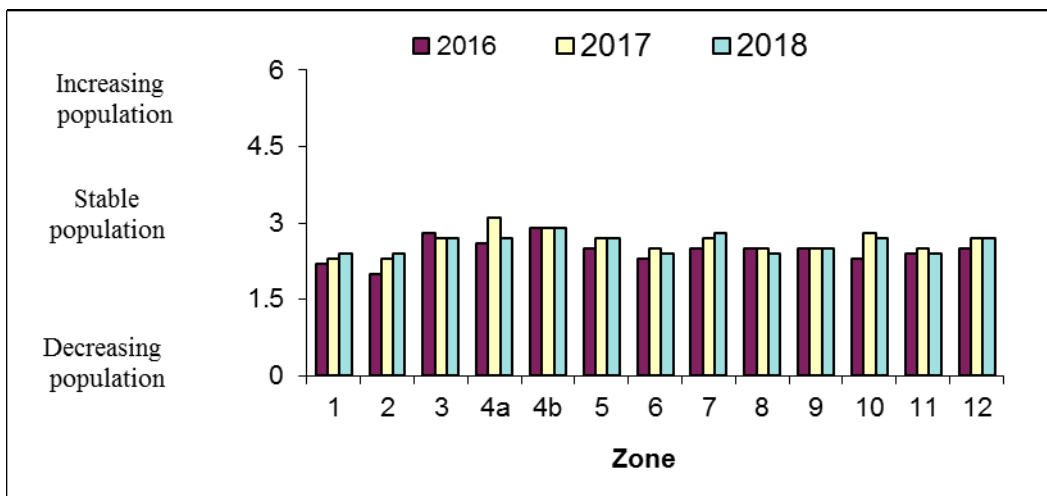


Hunter Perceptions of Population Trends

Similar to hunter surveys from previous years, the 2018 survey also included the question, "How would you describe the status of the deer population from last year to this year?" Hunter perceptions of deer population trends were ranked on a scale of 0 (decreasing population) to 6 (increasing population). Thirty-six percent of the hunters who responded to the survey believed that the population was declining, 48% believed it was stable, and 16% believed it was increasing. DMZs 4B and 7 had the highest average rank (2.9 and 2.8) (Figure 3). In general, hunters perceived that deer populations are relatively stable or have been decreasing slightly in most zones over the past 3 years.

Based on the survey, observations and distribution of predators were similar in 2017 and 2018. Hunters reported 1,775 bear sightings in 116 towns in 2018 at a rate of one bear sighting per 27 days spent afield (2,251 bear sightings in 100 towns in 2017, at a rate of one bear sighting per 27 days spent afield). Hunters reported 2,664 bobcat sightings in 158 towns in 2018 at a rate of one bobcat sighting per 18.1 days spent afield (3,249 bobcat sightings in 151 towns in 2017, at a rate of one bobcat sighting per 18.7 days spent afield). Hunters reported 8,307 coyote sightings in 165 towns in 2018 at a rate of one coyote per 5.8 days spent afield (11,025 coyote sightings in 159 towns in 2017 at a rate of one coyote per 5.5 days spent afield).

Figure 3. Perception of zonal deer population trends (average rank) by Connecticut's deer hunters, 2016-2018.



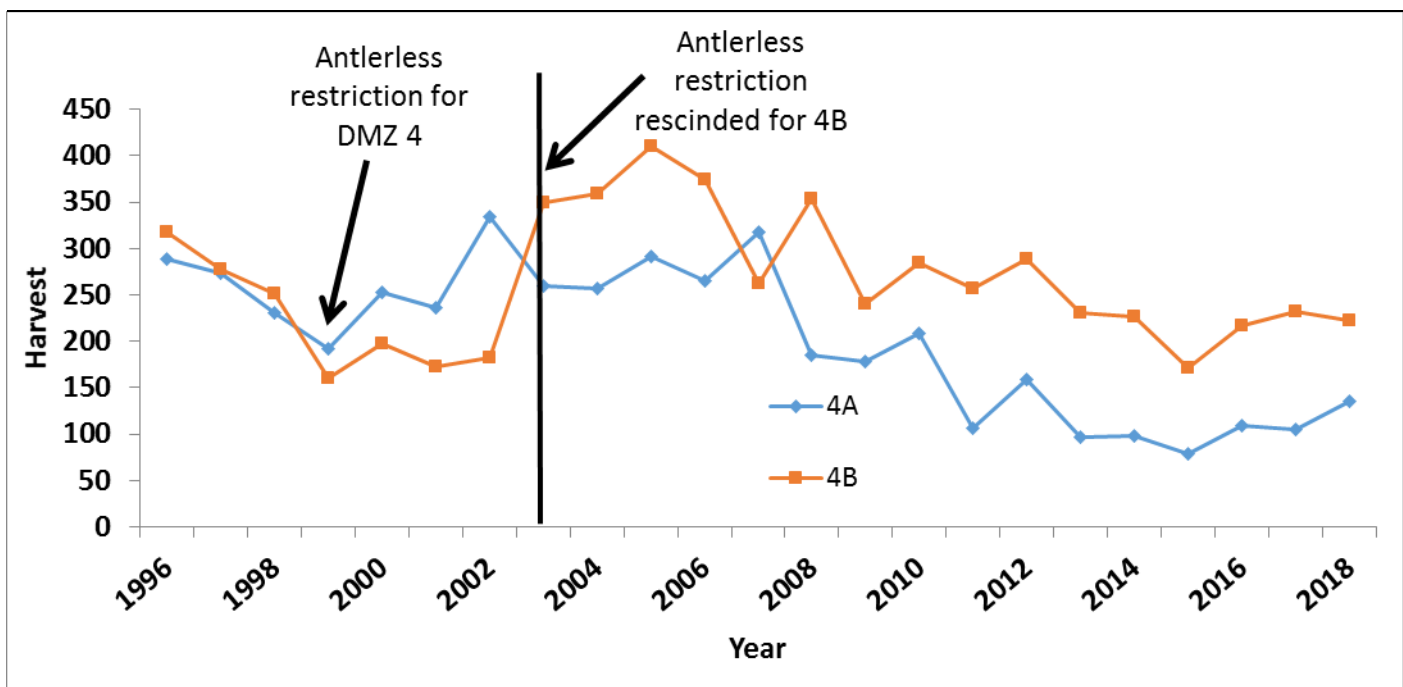
Zonal Deer Management

Deer Management Zones were established because deer populations vary across the state. Management strategies in each zone may vary depending on population status. In DMZ 4, a 4-year decreasing trend beginning in 1996 prompted harvest restrictions on female deer in this zone in 1999. During the shotgun/rifle and muzzleloader seasons, the antlerless-only tag on 2-tag permits was not valid in DMZ 4. This restriction resulted in a decrease in the number of does harvested, allowing the population to stabilize. In 2002, deer populations appeared to be stable in the southern portion, but not in the northern portion of DMZ 4. In 2003, DMZ 4 was split into two zones (4A and 4B), allowing each zone to maintain different management objectives. In DMZ 4A (northern portion), the restriction on the use of antlerless tags was retained, while the use of antlerless tags was again allowed in DMZ 4B (southern portion) (Figure 4).

In DMZ 2, persistently low densities prompted harvest restrictions on female deer in 2016. During shotgun/rifle and muzzleloader seasons, the antlerless-only tag on 2-tag permits is not valid.

Free replacement antlerless tags and either-sex tags (earn-a-buck) were available in DMZs 11 and 12 during the private land archery, shotgun/rifle, and muzzleloader seasons in 2018. Replacement tags were available in these zones because these regions of the state were experiencing more human-deer conflicts and, therefore, had different management objectives than other regions. These programs have resulted in a substantial increase in the harvest of antlerless deer (Figure 8).

Figure 4. Private land shotgun/rifle deer harvest in Deer Management Zones 4A and 4B, 1996-2018.



Insight into Deer Hunter Success Rates by Zone

Shotgun/Rifle Season Success

Annual deer harvest is one of many variables monitored by the Wildlife Division to assess changes in Connecticut's deer population over time for each DMZ. However, without information on hunter distribution and effort by zones, the potential usefulness of these data is limited. To gain insight into hunter distribution and success rates by zone, deer hunters were asked on the hunter survey, "In what zone do you do most of your shotgun/rifle hunting?" The percent of hunters in each DMZ was multiplied by total number of deer permits issued in 2018 to estimate total number of hunters by zone. Total number of hunters and total private land shotgun/rifle deer harvest for each zone were used to estimate deer hunter success rates for each zone (Table 4). In general, higher hunter success rates suggest higher deer density. Of the 13 management zones, most firearms hunting (41%) occurred in four zones (1, 5, 9, and 12). Highest private land deer harvests were reported for DMZs 1, 5, 9, and 12. DMZ 4B had the highest deer harvest per square mile (1.8) and the greatest density of hunters (4.1 per square mile). Hunter success rate was highest in DMZs 4B and 5 (44%), while success in zone 2 was the lowest (18%). The 3-year trend in hunter success rates by zone has increased over the past 3 years (Table 5). Although hunter success has been variable due to the abundance of acorns, many DMZs have continued to produce relatively high hunter success rates over the past 3 years (Table 5).

Table 4. Zonal hunter numbers, harvest, and success rates for private land during the 2018 shotgun/rifle hunting season.

Zone	Zone Hunted Private Land ^A Shotgun/Rifle	% of Hunters Answered Question ^A	Estimated # of Private Land Shotgun/Rifle Hunters	Harvest	Area (sq. miles)	Deer Harvest/Sq. Mile	Hunters/Sq. Mile	% Success Rate
1	158	9.1%	999	328	344.59	1.0	2.9	33%
2	146	8.4%	923	168	410.69	0.4	2.2	18%
3	120	6.9%	759	205	273.33	0.8	2.8	27%
4A	89	5.1%	563	135	213.5	0.6	2.6	24%
4B	79	4.6%	500	222	120.66	1.8	4.1	44%
5	250	14.4%	1,581	699	445.94	1.6	3.5	44%
6	119	6.9%	753	242	260.03	0.9	2.9	32%
7	126	7.3%	797	255	373.08	0.7	2.1	32%
8	75	4.3%	474	160	169.11	0.9	2.8	34%
9	148	8.5%	936	326	279.39	1.2	3.4	35%
10	137	7.9%	867	313	244.36	1.3	3.5	36%
11	140	8.1%	886	206	291.53	0.7	3.0	23%
12	148	8.5%	936	335	358.39	0.9	2.6	36%
Total	1,735	100.0%	10,974	3,594	3,785	0.9	2.9	33%

^A Based on hunter survey question asking hunters which zone they primarily shotgun/rifle hunt in.

Table 5. Zonal comparisons in private land shotgun/rifle harvest, hunter distributions, and success rates, 2016-2018.

Zone	Area (sq. miles)	Deer Harvest/Sq. Mile			Hunters/Sq. Mile			Hunter Success Rate (%)		
		2016	2017	2018	2016	2017	2018	2016	2017	2018
1	344.6	0.9	0.9	1.0	3.2	2.8	2.9	27	31	33
2	410.7	0.3	1.3	0.4	2.7	2.5	2.2	13	17	18
3	273.3	0.8	0.9	0.8	2.6	2.5	2.8	29	37	27
4A	213.5	0.5	0.8	0.6	2.9	2.6	2.6	18	19	24
4B	120.7	1.8	0.8	1.8	5.6	5.1	4.1	32	37	44
5	445.9	1.3	0.8	1.6	3.5	3.6	3.5	35	42	44
6	260.0	0.8	1.0	0.9	3.2	2.9	2.9	26	30	32
7	373.1	0.6	1.0	0.7	2.1	2.2	2.1	29	28	32
8	169.1	0.9	0.9	0.9	3.5	3.6	2.8	26	28	34
9	279.4	1.1	0.9	1.2	4.6	4.3	3.4	23	28	35
10	244.4	1	1.0	1.3	3.2	3.3	3.5	30	39	36
11	291.5	0.7	1.0	0.7	3.1	3.1	3.0	22	21	23
12	358.4	0.9	0.8	0.9	3	3.0	2.6	29	30	36
Total	3,785	0.8	0.9	0.9	3.2	3.1	2.9	26	30	33

Archery Season Success

Based on the number of deer harvested and reported by bowhunters, approximately 1 of 3 (33%) hunters harvested 2 or more deer during the regular archery season. Bowhunter success rates were highest in zones 4B, 5, 11, and 12 (Table 6). In zone 4A, the restriction on the use of antlerless tags during the firearms seasons allowed for the population to increase between 1999 and 2003. In 2003, the zone was split into 4A and 4B, and the antlerless restriction was rescinded in 4B, likely increasing the population and resulting in increased success rates thereafter. In zones 11 and 12, firearms hunting is more limited and the archery season framework is liberal (use of bait, unlimited tags, longer seasons). The archery deer harvest in zone 11 was nearly 2 times higher than the next closest zone, and far higher than all other zones (Table 6).

Table 6. Zonal comparisons of archery season success rates, 2018.

Zones	Zone Hunted Archery^A	% of Hunters Answered Question^A	Estimated # of Archery Hunters	Harvest	Hunter Success Rate %
1	123	4.9%	815	260	31.9
2	148	5.9%	981	172	17.5
3	189	7.6%	1,253	310	24.8
4A	131	5.2%	868	205	23.6
4B	103	4.1%	683	228	33.4
5	241	9.7%	1,597	544	34.1
6	131	5.2%	868	222	25.6
7	280	11.2%	1,856	525	28.3
8	121	4.8%	802	263	32.8
9	165	6.6%	1,093	351	32.1
10	134	5.4%	888	242	27.3
11	479	19.2%	3,174	1,249	39.3
12	251	10.1%	1,663	760	45.7
Total	2,496	100.0%	16,541	5,331	32.2

^A Based on hunter survey question asking hunters which zone they primarily archery hunt in.

Fall Acorn Crop

Acorns are a preferred food for white-tailed deer during fall and winter. Acorn availability influences deer movement patterns and herd health. To interpret changes in harvest rates, herd health, and herd productivity, the Deer Program has been collecting data since 1993 from hunter surveys on abundance of the fall acorn crop. Hunter perceptions of the fall acorn crop were ranked on a scale from 0 (scarce) to 6 (abundant acorns). In 2018, 52.4% of the hunters who responded to the survey ranked the fall acorn crop as scarce, 42.1% as moderate, and 5.4% as abundant. DMZs 3, 6, 7, and 11 had the highest average rank (1.93-2.33), while DMZs 4B, 5, 9, and 10 had the lowest average ranks (1.22-1.42) (Figure 5). On a scale of 0-6, the average rank statewide was 1.70. Two consecutive years of gypsy moth outbreaks (2017 and 2018) caused substantial oak damage that could have long-term implications on acorn production for many areas of Connecticut.

The past 24 years of data on acorn abundance and deer harvest rates suggest that a correlation exists between hunter success and acorn abundance (Figure 6). In 1993, when acorns were abundant, hunter success was one of the lowest recorded, and in 2004, when acorns were scarce, the hunter success rate was the highest. During years with low acorn productivity, deer travel more to access other food sources, such as green fields, increasing their vulnerability to hunters. In 2013 and 2014, the acorn-success pattern was inconsistent and may have been influenced by warm weather during the hunting season. During the 2015 and 2016 seasons, the abundance of acorns and warm weather resulted in lower hunter success rates. During the past couple of years, the lack of acorns has led to increased success rates. On average, the acorn crop statewide has been moderate most years, scarce about every 5 to 6 years, and abundant every 4 years. Extensive gypsy moth damage has resulted in limited acorn productivity and severely impacted many white oak stands, resulting in large areas with dead trees. Depending on the severity of damage that occurs this coming year, it could have a major impact on Connecticut's forested landscape for years to come.

Figure 5. Perception of acorn crops (average rank) by Connecticut's deer hunters, 2015-2018.

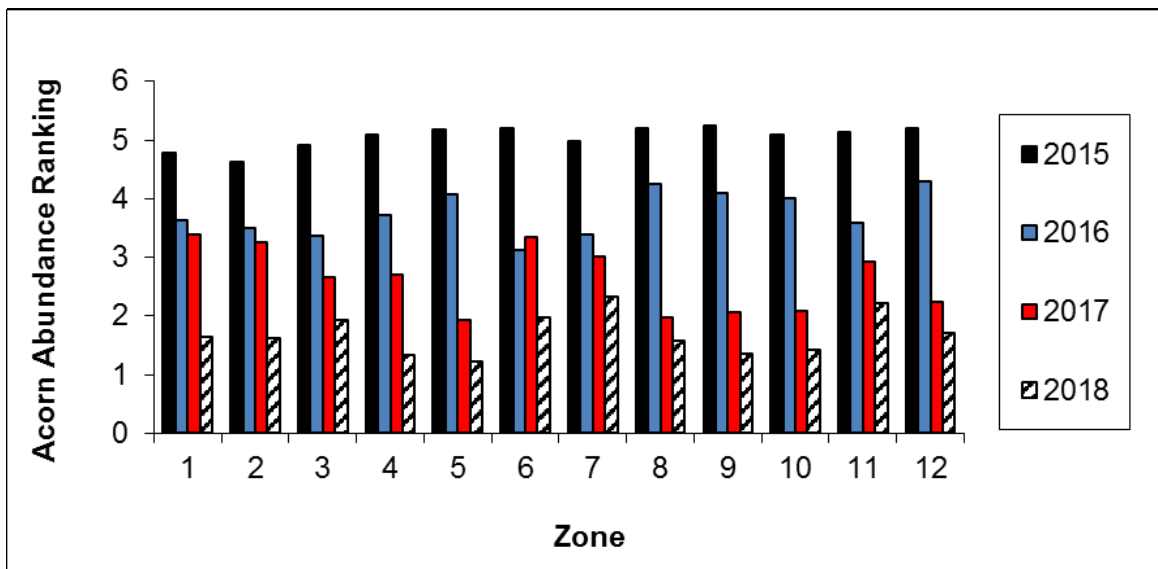
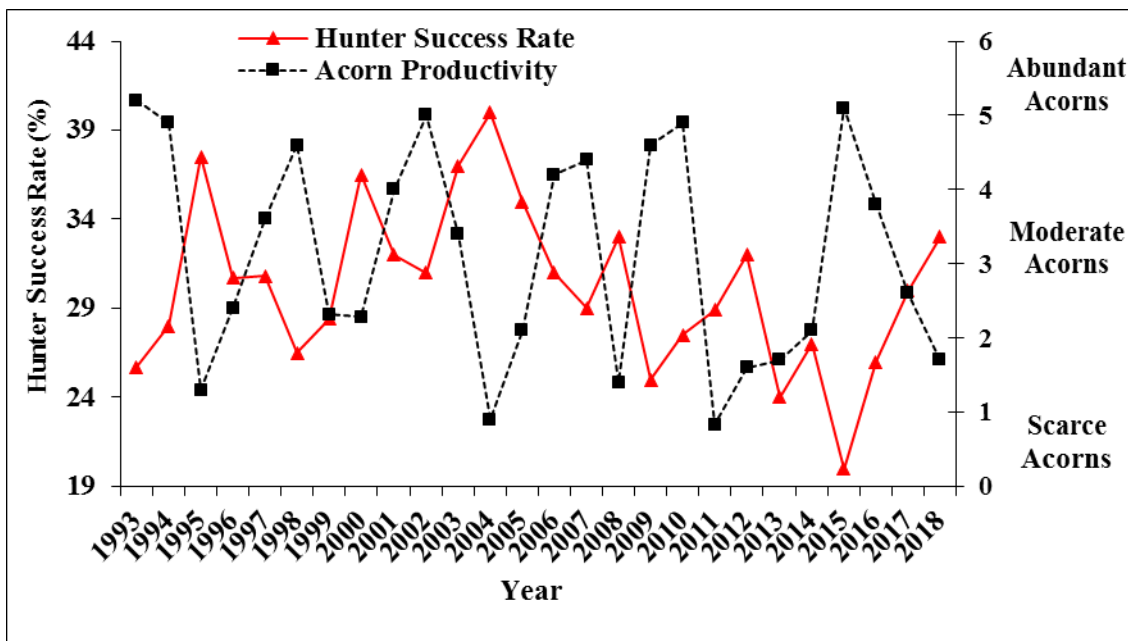


Figure 6. Relationship between private land shotgun/rifle hunter success rates and fall acorn productivity, 1993-2018.



Private Land Deer Harvest

The 2018 private land deer harvest was highest for DMZs 5, 11, and 12 (Table 7). Zonal harvest levels have fluctuated in most zones over the past 11 years and likely reflect differences in weather conditions, snow cover, acorn abundance, and deer densities (Table 7). Highest total deer harvest over the last 11 years has been reported in DMZ 11, likely a result of deer abundance, availability of replacement deer tags, use of bait, and increased access to land for hunting. Total private land deer harvest decreased 5.6% from 2017 to 2018.

Table 7. Private land deer harvest for all seasons (excluding landowner) in each of Connecticut's Deer Management Zones, 2008-2018.

Zone	Year										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	710	719	703	721	728	558	521	472	573	551	609
2	385	394	320	374	395	356	296	273	294	365	326
3	397	442	481	487	529	491	536	426	516	566	520
4A	293	267	293	276	348	320	275	228	295	330	319
4B	471	434	445	470	547	486	496	357	452	488	471
5	1,488	1,218	1,232	1,400	1,375	1,345	1,163	902	1,062	1,244	1,251
6	489	524	556	500	584	557	490	416	488	528	503
7	584	685	772	797	771	765	747	743	838	880	806
8	360	343	374	473	549	489	398	342	368	423	408
9	693	612	624	718	721	721	685	511	580	701	697
10	640	486	576	632	662	533	546	433	471	606	558
11	2,179	2,088	1,997	2,022	1,923	1,921	1,505	1,321	1,538	1,666	1,440
12	1,040	872	954	1,324	1,370	1,251	1,017	781	916	1,212	1,116
Total	9,955	9,084	9,327	10,194	10,502	10,748	8,675	7,205	8,391	9,560	9,024
% Change	19.5%	-8.7%	2.7%	9.3%	3.0%	2.3%	-19.3%	-16.9%	16.5%	13.9%	-5.6%

Harvest Effort, Observations, and Fawn Recruitment

Hunter observations provide good trend indices into zonal population changes. Observation rates were measured based on number of deer observed per hour of hunting. Fawn recruitment (number of fawns added to fall population) also is an important variable used to understand changes in population growth and deer herd dynamics. Fawn recruitment was measured as number of fawns observed per doe. The most representative samples of fawn to doe ratios are those collected at the start of the hunting season, when fawns are easily identifiable and hunter harvest would have the least impact on observations. Another means of assessing zonal population changes is looking at the number of deer harvested per hour hunted. Observation rates of bucks, does, and fawns were different from previous years, as was the percent of each class harvested (Table 8). Fawns were harvested at a lower rate than they were observed, compared to bucks which were harvested at a greater rate than they were observed (Table 8). Number of deer observed per hour, number of fawns observed per doe, and number of deer harvested per hour varied across years and by zone (Table 9). Deer observed per hour increased in all zones which could have been due to technical issues in 2017, rather than a true change in observation rates.

Table 8. Hunter observations and harvest ratios reported during the first month of the archery season in Connecticut, 2015-2018.

Age-sex	First Month of Archery (Sept. 15-Oct. 15)							
	Observation %				Harvest %			
	2015 ^A	2016	2017 ^A	2018	2015	2016	2017	2018
Bucks	11%	19%	12%	19%	32%	33%	39%	39%
Does	51%	53%	45%	56%	55%	51%	47%	50%
Fawns	38%	28%	43%	25%	13%	16%	14%	11%

^A Caution should be used when evaluating 2015 and 2017 results and comparisons, as technical issues with the harvest reporting system may have eliminated some observational data.

Table 9. Observation rates (deer seen/hour; D/hr), number of fawns per doe (F:D), and number of deer harvested per hour (H/hr) collected at the time harvest was summarized for the first month of the archery season by Deer Management Zone (DMZ) in Connecticut, 2016-2018.

Deer Harvested and Observed/Hour															
Reported on Day of Harvest															
DMZ	First Month of Archery (Sept. 15-Oct. 15)														
	2016				2017				2018				Δ^3	Δ^3	Δ^3
	<i>n</i>	D/hr ¹	F:D	H/hr ²	<i>n</i>	D/hr ^{1,4}	F:D ⁴	H/hr ²	<i>n</i>	D/hr ¹	F:D	H/hr ²	D/hr ¹	F:D ⁴	H/hr
1	74	2.46	0.55	0.34	57	0.7	1.06	0.33	66	1.16	0.56	0.35	0.46	-0.50	0.02
2	59	1.85	0.43	0.33	70	0.41	1.00	0.35	56	1.22	0.46	0.40	0.81	-0.54	0.05
3	105	2.23	0.42	0.40	96	0.75	0.85	0.33	92	1.06	0.39	0.36	0.31	-0.46	0.03
4A	62	1.73	0.72	0.31	70	0.24	1.05	0.35	56	0.92	0.53	0.31	0.68	-0.52	-0.04
4B	99	2.13	0.53	0.35	98	0.65	0.78	0.36	71	1.13	0.64	0.32	0.48	-0.14	-0.04
5	200	2.02	0.61	0.32	201	0.55	0.95	0.33	218	1.02	0.44	0.33	0.47	-0.51	0.00
6	90	2.21	0.41	0.37	55	0.65	0.88	0.33	58	1.13	0.54	0.34	0.48	-0.34	0.01
7	196	2.19	0.58	0.36	187	0.57	1.02	0.36	155	1.01	0.51	0.36	0.44	-0.51	0.00
8	102	1.94	0.51	0.29	87	0.50	0.77	0.3	83	1.10	0.30	0.42	0.6	-0.47	0.12
9	100	2.21	0.46	0.32	85	0.49	0.86	0.37	94	1.05	0.45	0.32	0.56	-0.41	-0.05
10	99	2.20	0.43	0.36	104	0.57	1.16	0.34	73	1.37	0.31	0.35	0.80	-0.85	0.01
11	447	2.25	0.59	0.33	338	0.77	0.89	0.31	251	1.07	0.42	0.33	0.30	-0.47	0.02
12	216	2.39	0.52	0.35	262	0.71	1.17	0.38	201	1.21	0.52	0.34	0.50	-0.65	-0.04

¹ Deer observed per hour hunted based on successful hunters.

² Deer harvested per hour hunted based on successful hunters.

³ Change from 2017 to 2018.

⁴ Caution should be used when evaluating 2017 results and comparisons, as technical issues with the harvest reporting system may have eliminated some observational data.

Deer Harvest Sex Ratios

Removal of female deer is the most efficient means of stabilizing deer population growth. To facilitate stabilization, the Wildlife Division developed permits that encourage the harvest of female deer. All 2-tag permits come with 1 antlerless-only and 1 either-sex deer tag. In 2009, this was increased to 1 either-sex and 2 antlerless deer for hunters in DMZ 7 and 1 either-sex and 3 antlerless deer for hunters in DMZs 11 and 12. Although button bucks are included in the antlerless harvest, this system promotes the removal of female deer (Table 10). In zone 4A, the antlerless-only tag was NOT valid, reducing the bag limit to 1 deer per hunter during the private land firearms season. Overall, deer harvest sex ratios have been similar over the past 3 years (Table 11). Based on observations reported online at the time of harvest, a bias (proportion observed vs. proportion harvested) towards harvest of bucks occurs as the season progresses (Table 8). Selectivity of passing on fawns remains similar (Table 8). In 2018, 48% (5,434) of the total regulated deer harvest (excluding crop damage harvest) was comprised of antlerless deer. A significant proportion of the harvest included adult females, which contributes to population control efforts (Appendix 3).

Table 10. Sex ratios (male:female) and antlered to antlerless ratios of deer harvested in 2018.

	Muzzleloader	Shotgun/Rifle	Archery	Landowner	Crop Damage	Total
Male:Female	1.02:1	1.79:1	1.27:1	1.67:1	1.02:1	1.43:1
Antlered:Antlerless	0.76:1	1.35:1	0.97:1	1.24:1	0.78:1	1.06:1

Table 11. Sex ratios (male:female) of deer harvested during Connecticut's regulated hunting seasons, 2016-2018.

2017		2018		Males per Female			3-year Average
Males	Females	Males	Females	2016	2017	2018	(2016-2018)
7,185	5,032	6,884	4,792	1.3:1	1.4:1	1.4:1	1.4:1

Antler Points and Yearling Fraction

Deer age, nutritional status, and genetics affect the number of antler points on bucks. The yearling fraction of the antlered buck harvest is a common measure of hunting pressure. Intensively hunted herds have yearling fractions of about 70%, while lightly hunted herds have fractions of about 30%. Few yearlings (less than 6%) have 7 or more points and few adults (less than 12%) have less than 5 points, based on the known aged samples in Connecticut. Using antlered bucks with less than 5 points (yearling) and those with 7 or more points (adults) is one way of estimating the yearling fraction of the antlered buck harvest. The statewide yearling/male fraction based on antler points during the shotgun/rifle season was 40% in 2012, 44% in 2013, 45% in 2014, 42% in 2015, 36% in 2016, 39% in 2017, and 39% in 2018. Of all antlered bucks harvested, 8-pointers were the most frequent point category (Figure 7). The number of points on antlered bucks has remained relatively consistent over the past 4 years (Figure 7).

Replacement Tags

The replacement tag system was developed to increase the harvest of female deer. This system is currently in place in DMZs 11 and 12. Since 1998, when archery hunters first had access to replacement tags in DMZ 11, the buck harvest remained relatively stable, while the antlerless harvest in that zone increased nearly 5 times (from 200 to almost 1,000 deer annually and has now declined slightly to just over 700). The buck harvest has steadily increased over the years with the addition of the earn-a-buck program in 2005. The number of roadkills in DMZ 11 has shown a steady decline since 1998 (Figure 8). The ratio of female deer harvested in DMZ 11 increased from 0.9 females per male (1994-1997) to 1.3 females per male (2001-2009), with the past three years averaging around 0.8:1 (Figure 9).

Figure 7. Number of antler points on bucks collected by the telecheck/online reporting system during the shotgun/rifle hunting season in Connecticut, 2015-2018.

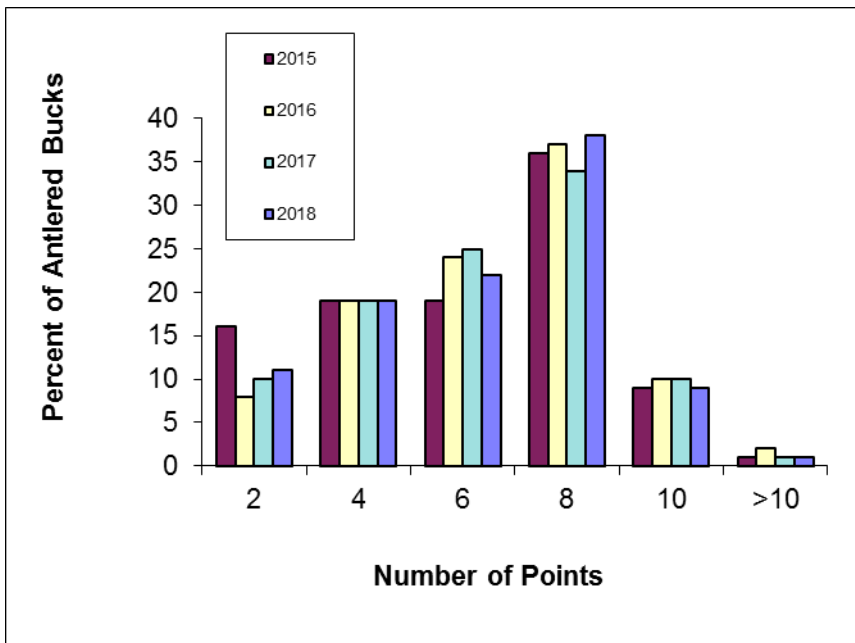


Figure 8. Comparison of trends in roadkills and the antlered and antlerless deer harvests during the archery deer season in Deer Management Zone 11, 1995-2018.

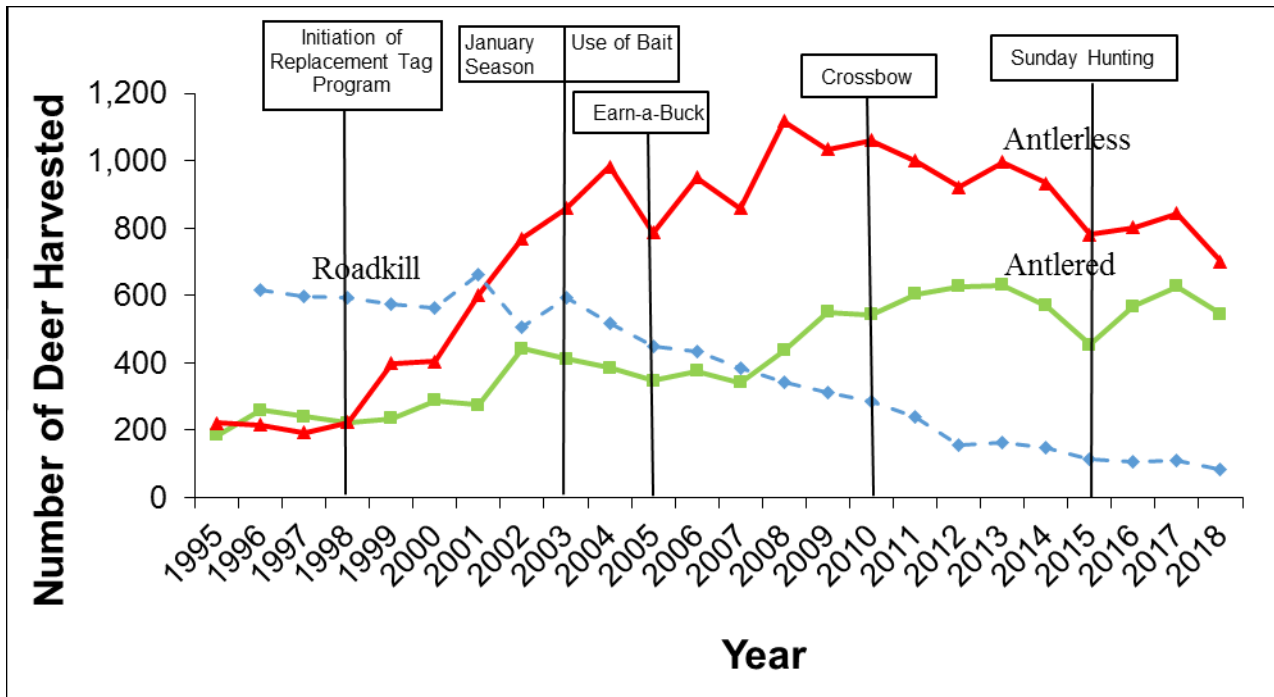
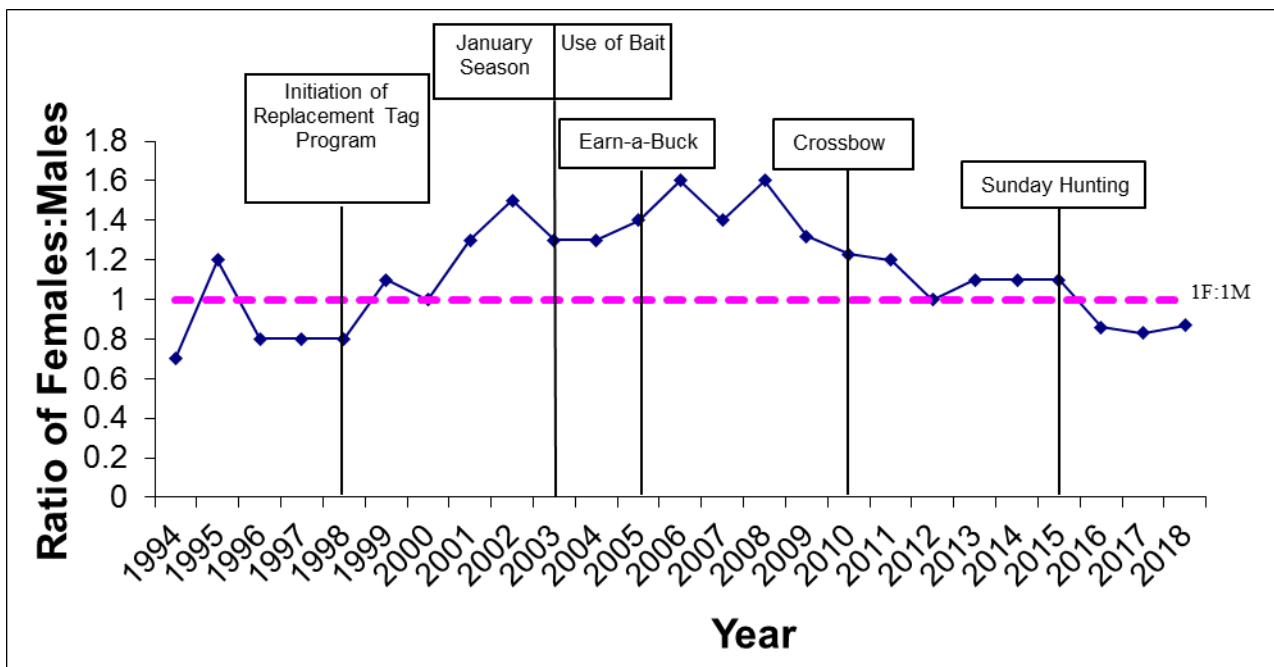


Figure 9. Changes in the sex ratios of harvested deer from Deer Management Zone 11 after implementing various management strategies during the archery season, 1994-2018.



Deer Hunter Expenditures, Effort, Venison Calculations, and Opinions

Deer hunting-related expenditures contribute significantly to Connecticut's economy. Deer permit sales generated \$1,601,187 in 2013, \$1,704,083 in 2014, \$1,687,962 in 2015, \$1,447,074 in 2016, \$1,430,519 in 2017, and \$1,369,436 in 2018 to the Connecticut General Fund. In addition, data collected from the annual deer hunter surveys indicated that Connecticut deer hunters spent an estimated \$6,141,345 on deer hunting-related goods and services in 2018, down from the \$6,801,501 spent in 2017.

In 2018, deer hunters spent a cumulative total of 409,804 days afield. Private and state land shotgun/rifle hunters used the greatest percentage of available hunting days during those seasons (36% and 46% respectively). Although bowhunters used a smaller percentage of available hunting days (24%), the archery season is much longer than the firearms season. Connecticut deer hunters collectively spent more time (36 days per deer taken) but less money (\$541 per deer taken) in 2018 compared to 2017 (32 days at \$563 per deer taken). In 2018, hunters harvested an estimated 567,250 pounds (average 50 lbs. of meat/hunter; 253 tons total) of venison at an estimated value of \$3,828,937 (\$6.75/lb.).

Hunters were asked how satisfied they were with their Connecticut deer hunting experience in 2018. Excluding hunters who had no opinion (about 11%), about a third of hunters were very satisfied with their hunting experience (31%), a third were moderately satisfied (36%), and the remainder were slightly satisfied (16%) or not at all satisfied (17%), similar to 2017.

Subscription Rates for State Land Lottery Permits

In 2018, 889 hunters were selected to hunt during the shotgun and controlled hunt seasons through the state-administered deer lottery program. Lottery permits were allocated at a maximum rate of 1 shotgun permit per 20 acres. In many areas, permit issuance was less than the permit quota established for a given area and many areas were re-designated as no-lottery areas. In 2018, the total number of lottery hunt areas was 15. Fifty-seven percent of all potential lottery permits were issued. No areas reached 100% permit issuance (Table 12). Hunters also should look at harvest levels in the different state land areas when selecting an area to hunt (Appendix 2).

Table 12. Instant award deer lottery selection results by Deer Hunting Lottery Area, 2018.

Deer Hunting Lottery Area	% of Hunting Slots Filled
	2018
26	67
27	27 ^A
28	92
51 (Yale)	63 ^A
52 (Bristol Water Company)	89
53 (Maromas)	83 ^A
54 (Skiff Mt.)	46 ^A
56 (Centennial Watershed State Forest)	67
58 (MDC ^B Nepaug - Valentine)	46
60 (Tankerhoosen)	68
61 (Roraback WMA)	22
62 (Aldo Leopold)	88
63 (Mohawk-Ziegler)	47
64 (MDC ^B Barkhamsted East Block)	50 ^A
67 (MDC ^B Barkhamsted West Block)	57

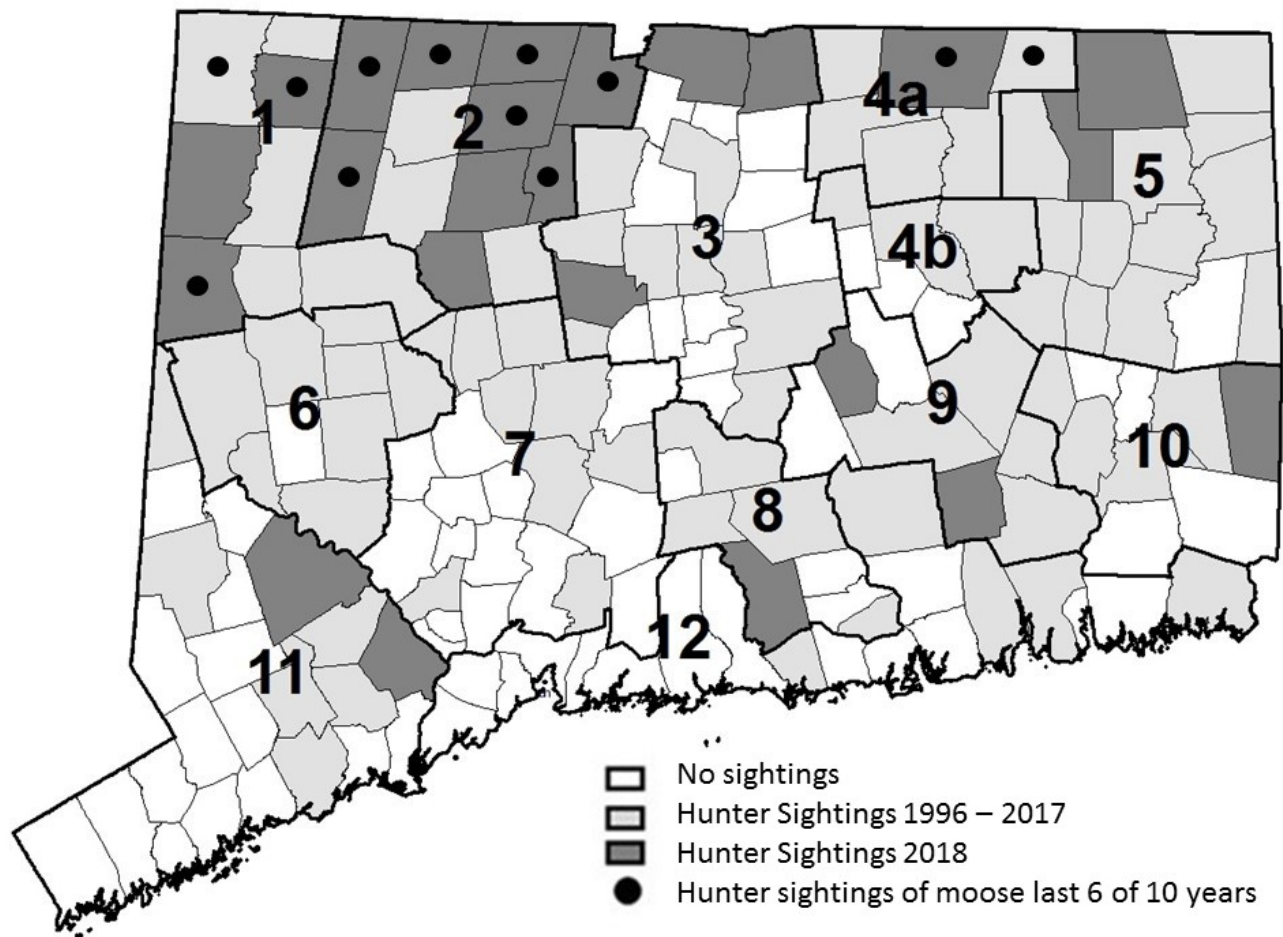
^A Lottery for A season only.

^B Metropolitan District Commission.

Moose Sightings

An increasing moose population in Massachusetts led to an increased number of moose wandering or dispersing into Connecticut in the early 1990s. In an effort to monitor trends in moose sightings in Connecticut, a question was added to the deer hunter survey in 1996 regarding hunter observations of moose during the fall hunting season. Deer hunters reported 69 moose sightings (103 individuals) in 24 towns in 2018 and 1,167 sightings over the past 22 years (Figure 10). During the 22-year period, moose sightings were reported in 105 different towns. Sightings were reported from 8 to 43 different towns each year. Moose were observed in Barkhamsted, Canaan, Canton, Colebrook, Goshen, Granby, Hartland, Kent, Norfolk, Salisbury, Stafford, and Union for 6 of the last 10 years. Most of the towns where hunters report moose sightings occur along the Connecticut-Massachusetts border. In 2018, an average of 1 moose was observed by hunters for every 507 hunter-days spent in the field, slightly more days than in 2017 when 1 moose was observed for every 458 hunter-days in the field. Currently, Connecticut has no open hunting season for moose.

Figure 10. Moose sightings reported on deer hunter surveys, 1996-2018.



Controlled Deer Hunts

Yale Forest (Area 51): Yale Forest is a 7,700-acre forest located in Eastford and Ashford. The forest is owned and managed by Yale University for research, education, and forest products. Controlled hunts have been implemented on the property since 1984 in an effort to reduce deer impacts on forest regeneration. During the 2018 controlled hunt, 32 deer were harvested.

Bristol Water Company (BWC; Area 52): In 1994, BWC contacted the Wildlife Division and expressed interest in opening 4,500 acres for deer management. In 1995, the Wildlife Division conducted a winter aerial deer survey on BWC lands. After survey results were summarized, BWC requested to participate in the controlled hunt program for the 1996, 1997, and 1998 deer seasons to reduce the local deer population. After 3 years of successfully implementing a deer management program on BWC land, BWC asked to continue participating in the program. During the 2018 controlled hunt, 14 deer were harvested.

Maromas Cooperative Management Area (Area 53): Since 1996, Maromas, a 1,400-acre parcel in Middletown owned by Northeast Utilities (now known as Eversource), has been open to archery, shotgun, and muzzleloader hunting to maintain deer densities at levels compatible with available habitat. During the 2018 controlled hunt, 18 deer were harvested.

Skiff Mountain (Area 54): Skiff Mountain is a 710-acre property in Sharon owned by Northeast Utilities (now known as Eversource). It is open to archery, shotgun, and muzzleloader hunting. During the 2018 controlled hunt, 4 deer were harvested.

Centennial Watershed State Forest (formerly known as Bridgeport Hydraulic Company) (Area 56): The Hemlock Tract has been open to hunting since 1996. In 2005, an additional 1,765 acres were opened to hunting (3,474 total acres). During the 2018 controlled hunt, 68 deer were harvested.

MDC Nepaug Reservoir (Area 58 and 59): In 2007, MDC (Metropolitan District Commission) contacted the Wildlife Division and expressed concern about the impacts of deer on forest regeneration at their Valentine (Area 58, 1,075 acres) and Pine Hill (Area 59, 325 acres) forest blocks. A browse survey indicated that over 95% of forest regeneration was browsed by deer. In 2008, MDC worked with the Wildlife Division to develop a deer management plan for the two forest blocks. In 2009, both Valentine and Pine Hill were opened to hunting for the early archery and shotgun/rifle seasons. During the 2018 controlled hunt, 13 deer were harvested.

Bluff Point Coastal Reserve: Controlled hunts and DEEP deer removals at Bluff Point Coastal Reserve in Groton have been implemented over the past 22 years to reduce and maintain the deer population at about 25 animals. Since the program started in 1996, over 500 deer have been removed from Bluff Point, resulting in improved deer herd health and ecosystem stability. In December 2018, the deer population was estimated to be 44 deer. In February 2019, 18 deer were removed by DEEP personnel. After the March 2019 removal, the population was estimated at 26 deer.

Crop Damage Permits

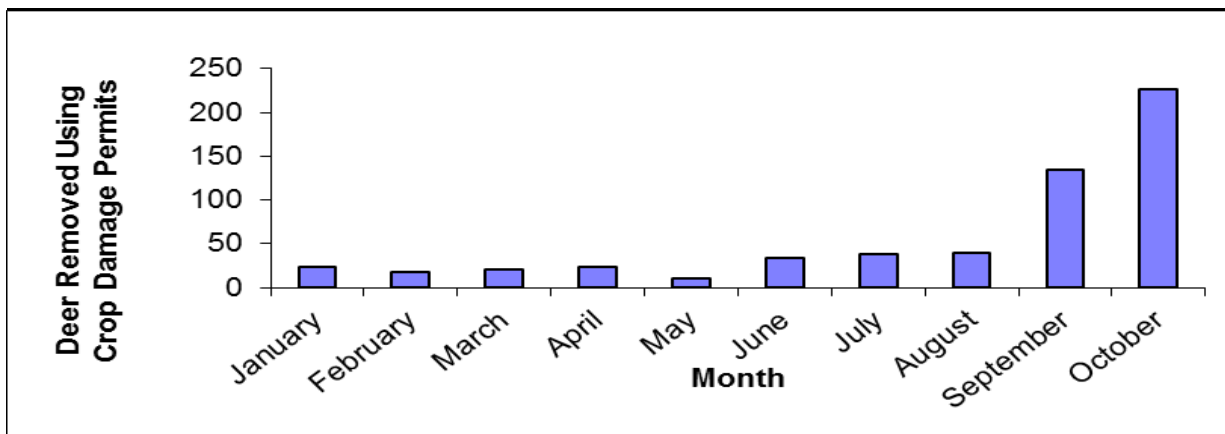
Deer damage is an important economic concern to some commercial agricultural operations. The Wildlife Division's crop damage program regulates the removal of deer on agricultural properties which meet specific criteria and are experiencing deer damage to specific plant commodities. The Division also encourages agriculturists to take advantage of the regulated deer hunting season to aid in the removal of problem deer and to use other methods, such as fencing, to reduce deer damage. In 2015, the crop damage application and deer registration process were streamlined. Crop damage applications can now be obtained from the Department's website (www.ct.gov/deep/wildlife) and filled out electronically. Crop damage shooters are no longer required to mail in paper tags upon removing a deer, but are now required to report their removal online or by telephone. During the 2018 calendar year, 569 deer were taken with crop damage permits (Appendix 6). From 1993 to 2018, annual deer removal with crop damage permits fluctuated between 462 and 946 deer. Deer removals in DMZs 3 and 7 accounted for 25% of deer removed with crop damage permits in 2018. Crop damage removals increased steadily from May to October, with 63% of the annual removals occurring in September and October (Figure 11). Crop damage permits are not valid in November and December.

Non-hunting Deer Mortality

Non-hunting deer mortality, particularly roadkills, represents a significant percentage of annual deer losses in Connecticut. Roadkill data provide important information relative to cultural carrying capacity, population modeling, and, to a lesser extent, deer density and herd sex ratios. In an urban-suburban state like Connecticut, measures of land-use conflicts, such as roadkills, are an important source of data for the formulation of management policies and recommendations.

In 2018, 1,211 non-hunting deer mortalities were reported (Appendix 4). Of those, 608 were killed in deer-vehicle collisions. This equates to an average of 1.7 deer being killed per day on Connecticut roads and highways. Deer-vehicle collisions accounted for 95% of all reported non-hunting mortality (excluding crop damage; 569) in 2018. Based on a 2-year study (2000-2001), for every 1 deer killed by a vehicle and reported to the Wildlife Division, 5 additional deer are killed by vehicles and not reported. Based on this correction factor, it is estimated that the actual number of roadkills in 2018 was 3,648. Nearly 14% (85) of all roadkilled deer reported in Connecticut in 2018 occurred in DMZ 11 (Fairfield County, Figure 2), the rate of which has been declining over the past few years (Appendix 5). The number of roadkills in DMZ 11 has shown a steady decline since implementation of the replacement tag program, extension of the archery season, and legalization of baiting (Figure 8). Non-hunting mortality comprised 9.7% of the total reported deer mortality in Connecticut, including crop damage harvest (Appendix 4).

Figure 11. Crop damage deer removals by month, 2018.



Conclusion

Over the past several decades, deer population size, human land-use practices, and public attitudes toward wildlife have changed considerably. Today, hunters may legally take up to 14 deer (including the January archery season on private land in DMZs 11 and 12) per year if they participate in all hunting seasons, and unlimited deer may be taken in 2 of the 13 Deer Management Zones. Historically, deer permit issuance increased consistently from 11,710 in 1975 to 61,333 in 1992. Since 1992, permit issuance has remained relatively stable, fluctuating between 60,316 and 64,032. In 2008, permit issuance increased to its highest point in history. The cause for this increase is unknown, but may have been attributed to the poor economy, or the green movement where harvesting one's own food may be a desirable means of obtaining quality protein. In 2009, permit issuance declined slightly, likely due to the switch to online license sales. Since 2010, permit issuance has continued to decline annually due to changes in the lottery system and the ability to purchase permits at any time rather than in advance of the hunting season, and a decline in hunter numbers. Permit issuance in recent years is now at the same level as it was in 1988. Over the last 10 years, harvest in most Deer Management Zones has remained relatively stable. However, with increased opportunities and incentives to harvest deer in urban Deer Management Zones 11 and 12, the harvest had more than doubled, but is now beginning to decline, while roadkills have been exhibiting a steady downward trend in those zones. Increased harvest opportunities appear to have stabilized deer populations in many areas of the state.

The Wildlife Division continues to conduct research and evaluate the effectiveness of methods to control deer populations, particularly in urban-suburban landscapes. The Division initiated several long-term urban deer studies in residential communities in past years. Reports summarizing findings from these studies are available to communities interested in managing deer in more developed areas of the state, such as Fairfield County. Copies of these reports can be obtained from the DEEP website at www.ct.gov/deep/wildlife, by contacting the Wildlife Division's Deer Program via email at andrew.labonte@ct.gov, or calling the Wildlife Division's Franklin office at 860-418-5921. The Wildlife Division will continue to provide technical assistance on deer control options to interested communities. Future management efforts will continue to focus on deer population stabilization. In areas with overabundant deer populations, landowners will be encouraged to use hunting, where possible, as a management tool. A booklet on *Managing Urban Deer in Connecticut* is available from Wildlife Division offices or online (www.ct.gov/deep/lib/deep/wildlife/pdf_files/game/urbandeer07.pdf) to assist communities in developing effective deer management programs. Another publication, *An Evaluation of Deer Management Options*, was made available in 2009 by the Northeast Deer Technical Committee and can be found on the DEEP website as well (www.ct.gov/deep/lib/deep/wildlife/pdf_files/game/deeroptions.pdf).

As a way of thanking hunters for their support, the DEEP has been holding a special Hunting and Fishing Day in September for the past several years. As a means of exposing a wider range of participants to hunting and fishing, the name was changed to Discover Outdoor Connecticut in 2018. Following is a poster announcing the 2019 event being held at Hammonasset Beach State Park, Meigs Point Nature Center in Madison, Connecticut. For information about the event, visit www.ct.gov/deep/DiscoverOutdoorCT.



Discover Outdoor Connecticut

Join The Force For The Resource!

at HAMMONASSET BEACH STATE PARK IN MADISON

Sunday September 15

10AM
to 4PM

- HAMMONASSET BEACH STATE PARK -

- Live Animals
- Archery Shooting
- Wildlife Watching Tips
- Live Birds of Prey
- Kid's Activities
- Face Painting
- Fly Casting
- Hunting Dog Demos
- Fish & Wildlife Exhibits
- Darting Range
- Nature Centers
- Outdoor Skills
- Hunting and Fishing Tips
- Bird Walks
- Photo Contest
- Boating
- Hiking
- Fly Tying
- Kayaking
- *Much More!!*

**Parking on Site!!
Admission and all
activities are
FREE!**

Interested "Out of State" residents contact andrew.labonte@ct.gov for more info



**Hammonasset Beach State Park
Boston Post Road, Route 1
Madison, CT**

Connecticut Department of Energy and Environmental Protection
www.ct.gov/deep/DiscoverOutdoorCT
860-424-3011; deep.ctwildlife@ct.gov

Appendix 1. Total reported deer harvest and roadkills by town, 2018.

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Andover	28	28	7	9	1	1	0	74
Ansonia	5	2	0	0	0	0	0	7
Ashford	40	102	33	13	2	1	0	191
Avon	12	15	2	2	5	5	1	42
Barkhamsted	15	35	7	3	0	5	0	65
Beacon Falls	8	14	1	0	0	0	0	23
Berlin	31	24	3	7	1	2	0	68
Bethany	35	17	2	8	6	1	0	69
Bethel	42	8	1	1	0	0	1	53
Bethlehem	11	19	3	6	2	3	0	44
Bloomfield	20	11	0	5	0	4	0	40
Bolton	12	20	3	6	6	0	0	47
Bozrah	18	27	17	3	2	0	0	67
Branford	30	3	2	0	1	2	0	38
Bridgeport	0	1	0	0	0	0	0	1
Bridgewater	18	23	3	3	3	1	0	51
Bristol	7	11	1	0	0	7	3	29
Brookfield	41	7	0	1	0	4	0	53
Brooklyn	27	40	11	5	7	0	0	90
Burlington	23	17	4	1	0	1	0	46
Canaan	34	37	7	9	0	4	0	91
Canterbury	40	41	28	2	4	4	0	119
Canton	28	17	6	2	1	2	1	57
Chaplin	19	44	15	0	1	6	2	87
Cheshire	71	29	0	6	18	2	0	126
Chester	20	20	6	3	2	2	0	53
Clinton	28	5	1	1	0	0	0	35
Colchester	47	52	17	11	4	7	0	138
Colebrook	4	19	3	3	0	0	1	30
Columbia	21	25	13	0	23	0	0	82
Cornwall	20	39	8	5	0	3	0	75
Coventry	77	93	9	14	2	7	0	202
Cromwell	11	5	1	0	1	1	0	19
Danbury	77	14	0	3	0	4	0	98
Darien	39	1	0	0	0	11	7	58
Deep River	12	6	3	1	3	0	0	25
Derby	5	0	0	1	0	0	0	6
Durham	36	38	4	4	3	0	0	85
East Granby	9	9	0	1	0	1	0	20
East Haddam	79	96	28	18	3	4	0	228
East Hampton	34	46	9	4	0	1	0	94
East Hartford	11	0	0	0	6	2	0	19
East Haven	15	2	1	0	0	2	0	20
East Lyme	53	28	4	4	6	13	0	108
East Windsor	23	60	15	6	2	1	0	107
Eastford	66	30	1	2	7	10	2	118
Easton	25	26	6	7	2	0	0	66
Ellington	16	21	12	3	0	0	0	52

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Enfield	27	18	0	4	1	13	0	63
Essex	7	0	0	2	0	0	0	9
Fairfield	80	5	0	4	0	2	0	91
Farmington	13	4	0	0	6	11	0	34
Franklin	21	47	4	5	6	0	0	83
Glastonbury	25	34	3	5	29	18	2	116
Goshen	12	22	10	2	0	6	0	52
Granby	16	10	5	4	0	11	0	46
Greenwich	90	3	0	0	1	1	0	95
Griswold	45	80	20	7	20	0	0	172
Groton	55	6	1	2	3	1	1	69
Guilford	80	23	6	6	6	6	0	127
Haddam	41	60	27	7	4	2	0	141
Hamden	21	15	1	5	24	1	0	67
Hampton	27	36	14	7	4	0	0	88
Hartford	2	0	0	0	0	0	0	2
Hartland	3	29	1	7	0	0	0	40
Harwinton	21	37	7	4	10	10	0	89
Hebron	48	48	16	4	0	0	0	116
Kent	37	54	10	11	10	2	0	124
Killingly	45	59	22	10	2	16	0	154
Killingworth	37	37	9	8	0	1	1	93
Lebanon	67	97	31	13	19	0	0	227
Ledyard	38	44	9	4	0	25	0	120
Lisbon	14	19	16	3	0	0	0	52
Litchfield	31	46	12	7	1	10	0	107
Lyme	49	57	11	7	2	0	0	126
Madison	44	17	1	0	0	3	0	65
Manchester	22	10	2	6	1	3	0	44
Mansfield	67	64	13	14	9	13	0	180
Marlborough	21	33	7	3	0	2	0	66
Meriden	13	5	0	2	0	2	0	22
Middlebury	17	15	4	3	0	6	1	46
Middlefield	38	22	2	5	16	0	0	83
Middletown	72	47	8	8	0	1	0	136
Milford	21	2	1	0	3	0	0	27
Monroe	43	10	1	3	0	0	0	57
Montville	80	34	20	14	3	0	0	151
Morris	10	16	4	9	5	4	1	49
Naugatuck	27	16	1	0	0	1	0	45
New Britain	1	0	0	0	0	1	0	2
New Canaan	50	0	0	0	0	11	4	65
New Fairfield	41	17	0	0	0	0	0	58
New Hartford	20	30	3	3	3	9	0	68
New Haven	12	0	0	0	0	1	0	13
New London	1	0	0	0	0	0	0	1
New Milford	64	70	6	8	5	3	0	156
Newington	3	0	0	0	0	0	0	3
Newtown	112	45	3	10	17	26	1	214

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Norfolk	6	14	6	2	0	0	0	28
North Branford	38	13	3	2	0	6	1	63
North Canaan	13	18	4	2	0	4	0	41
North Haven	26	2	0	2	0	1	0	31
North Stonington	32	70	13	12	0	0	0	127
Norwalk	34	0	0	0	0	1	0	35
Norwich	20	33	2	5	0	26	2	88
Old Lyme	68	19	3	9	0	0	0	99
Old Saybrook	18	5	3	1	0	4	1	32
Orange	38	4	0	2	0	4	0	48
Oxford	17	16	5	6	7	6	0	57
Plainfield	58	69	23	6	4	2	0	162
Plainville	5	5	0	1	0	0	0	11
Plymouth	13	17	7	2	1	0	0	40
Pomfret	38	77	23	1	4	0	0	143
Portland	13	21	2	2	0	7	0	45
Preston	32	24	15	8	22	0	0	101
Prospect	28	9	0	2	0	5	0	44
Putnam	17	21	3	5	6	3	0	55
Redding	82	32	0	2	2	0	0	118
Ridgefield	111	30	0	11	0	3	0	155
Rocky Hill	10	10	0	0	7	1	0	28
Roxbury	18	19	3	6	8	2	0	56
Salem	36	51	6	9	3	0	0	105
Salisbury	65	73	8	12	12	7	0	177
Scotland	26	42	11	8	0	2	0	89
Seymour	26	6	2	1	1	5	0	41
Sharon	52	79	9	11	18	15	0	184
Shelton	55	7	0	3	26	2	0	93
Sherman	27	22	2	7	0	1	0	59
Simsbury	35	7	0	1	3	1	0	47
Somers	25	15	4	4	2	5	0	55
South Windsor	33	19	5	4	0	22	0	83
Southbury	31	20	0	2	0	4	0	57
Southington	26	8	3	6	3	1	0	47
Sprague	10	28	5	5	1	0	0	49
Stafford	65	61	27	12	0	5	0	170
Stamford	57	1	0	0	0	0	0	58
Sterling	37	26	17	6	11	0	0	97
Stonington	53	46	5	6	7	4	0	121
Stratford	18	1	1	2	0	3	0	25
Suffield	31	39	5	4	0	3	2	84
Thomaston	8	4	4	2	2	2	1	23
Thompson	65	66	25	15	16	5	0	192
Tolland	52	26	16	2	10	7	0	113
Torrington	10	19	9	2	0	5	1	46
Trumbull	36	1	0	0	0	1	0	38
Union	12	32	11	4	0	4	0	63
Vernon	23	8	2	0	0	8	0	41

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Voluntown	31	58	14	12	6	0	0	121
Wallingford	51	35	2	9	14	7	1	119
Warren	9	19	5	5	5	2	0	45
Washington	22	37	6	6	22	7	0	100
Waterbury	13	3	0	3	0	0	0	19
Waterford	94	36	5	4	0	0	0	139
Watertown	31	21	6	3	0	1	0	62
West Haven	10	15	3	3	0	5	0	36
West Hartford	1	0	0	0	0	0	0	1
Westbrook	12	0	0	1	0	0	0	13
Weston	44	17	0	0	0	0	0	61
Westport	10	0	0	0	0	1	0	11
Wethersfield	0	2	1	0	2	0	0	5
Willington	35	37	16	4	0	5	0	97
Wilton	92	18	0	5	0	4	0	119
Winchester	14	11	4	3	0	2	0	34
Windham	31	30	7	6	3	0	1	78
Windsor	7	5	4	0	5	8	0	29
Windsor Locks	1	0	0	0	0	1	0	2
Wolcott	7	7	0	2	0	1	1	18
Woodbridge	27	8	0	0	0	20	0	55
Woodbury	15	32	5	3	2	10	0	67
Woodstock	51	102	31	11	0	1	0	196
Total	5,331	4,298	1,009	706	569	608	40	12,561

Appendix 2. Deer harvest on State hunting areas, including Deer Lottery Hunting Areas (DLHA), 2018

Fall Archery	Muzzleloader	Lottery Area #	No-Lottery Code	<ul style="list-style-type: none"> ● Hunting Permitted ▲ Designated Deer Bowhunting Only Area (▲ areas are open during shotgun and muzzleloader) ▲/● Some Sections open to Archery ONLY AB (No-Lottery A and B) B (No-Lottery B only) ○ Daily/Season Permit Required * Special Conditions ■ Harvest/mi² ≥ 10 	Square miles	Fall Archery	Muzzleloader	Lottery	No Lottery	Total Harvest	Harvest/mi ²
▲		62	308	Aldo Leopold WMA	0.87	0	2	6	0	8	9.2
●	●		AB 201	Algonquin SF	1.04	1	1	0	0	2	1.9
●	●		AB 202	American Legion SF	1.62	1	1	0	3	5	3.1
●	●		AB 272	Assekonk Swamp WMA	1.07	2	1	0	5	8	7.5
●	●		AB 244	Babcock Pond WMA	2.36	2	1	0	2	5	2.1
▲			203	Barber Pond WMA	0.11	1	0	0	1	2	18.2
●	●		AB 273	Barn Island WMA	1.58	1	0	0	4	5	3.2
●	●		AB 274	Bartlett Brook WMA	1.10	2	0	0	5	7	6.4
▲			275	Bear Hill WMA	0.57	2	0	0	0	2	3.5
▲			276	Beaver Brook SP	0.56	4	0	0	0	4	7.1
▲			309	Bennett's Pond SP	0.72	3	0	0	0	3	4.2
▲			277	Bigelow Hollow SP	0.80	2	0	0	0	2	2.5
▲			245	Bishops Swamp WMA	1.18	5	0	1	0	6	5.1
▲			337	Black Pond WMA	0.11	1	0	0	0	1	9.1
▲			204	Black Rock Lake (state and federally owned)	0.62	1	0	0	0	1	1.6
▲			205	Bloomfield Flood Control Area (Site 1)	0.51	4	1	0	0	5	9.8
		52	329	Bristol Water Company	6.75	0	0	14	0	14	2.1
▲/●	●	27A	B 207	Camp Columbia SF	0.94	2	1	1	0	4	4.3
▲			208	Cedar Swamp WMA	0.43	0	0	0	1	1	2.3
○		56	310	Centennial Watershed SF	6.77	35	0	33	0	68	10.0
●	●		AB 209	Centennial Watershed SF (Canaan Block)	0.23	2	0	0	2	4	17.4
▲			311	Centennial Watershed SF (formerly Bpt. Hydr.) -Shelton	0.16	0	0	0	0	0	0.0
▲			310	Centennial Watershed SF -Monroe Parcel (Hattertown)	0.05	0	0	0	0	0	0.0
▲/●	●		AB 246	Cockaponset SF	26.85	35	10	0	59	104	3.9
▲			313	Collis P. Huntington SP	1.61	5	0	0	0	5	3.1
▲			247	Cromwell Meadows WMA	0.79	3	0	0	0	3	3.8
▲			210	CT Light & Power (borders Newgate WMA)	0.32	3	0	1	0	4	12.5
▲			248	Durham Meadows WMA	0.80	0	0	0	0	0	0.0
▲			315	East Swamp WMA	0.10	2	0	0	0	2	20.0
▲			211	East Twin Lakes Water Access Area	0.15	2	0	0	1	3	20.0
●	●		AB 249	Eightmile River WMA	0.48	0	1	0	0	1	2.1
●	●		AB 250	Ellithorpe Flood Control Area	0.64	1	0	1	0	2	3.1
▲			332	Enders SF (Worthen Parcel ONLY)	0.55	4	0	0	0	4	7.3
●	●		AB 278	Franklin Swamp WMA	1.07	4	0	0	2	6	5.6
▲			316	George C. Waldo SP	0.23	1	0	0	0	1	4.3

Fall Archery	Muzzleloader	Lottery Area #	No-Lottery	Code	<ul style="list-style-type: none"> ● Hunting Permitted ▲ Designated Deer Bowhunting Only Area (▲ areas are open during shotgun and muzzleloader) ▲/● Some Sections open to Archery ONLY AB (No-Lottery A and B) B (No-Lottery B only) ○ Daily/Season Permit Required * Special Conditions Harvest/mi² greater than 10 	Square miles	Fall Archery	Muzzleloader	Lottery	No Lottery	Total Harvest	Harvest/mi ²
●	●		AB	213	Goshen WMA	1.51	3	1	0	2	6	4.0
▲				318	Great Swamp Flood Control Area	0.53	4	0	0	0	4	7.5
●			AB	214	Hancock Brook Lake (federally owned)	1.10	0	0	0	1	1	0.9
○				280	Harkness Memorial SP ▲ (Verkade Property)	0.44	14	0	0	1	15	34.1
▲				251	Higganum Meadows WMA (off Clarkhurst Road)	0.40	0	0	0	0	0	0.0
▲				252	Higganum Reservoir	0.23	0	0	0	0	0	0.0
▲				215	Housatonic River WMA	0.87	3	0	0	0	3	3.4
●	●		AB	216	Housatonic SF	17.63	3	4	0	20	27	1.5
▲				217	John Minetto SP	1.12	1	0	0	0	1	0.9
▲				281	Killingly Pond SP	0.27	2	0	0	0	2	7.4
●	●		AB	253	Kollar WMA	1.40	9	1	0	2	12	8.6
●	●		AB	254	Larson Lot WMA	0.38	0	0	0	2	2	5.3
▲				282	Lebanon Coop Mgmt. Area	0.33	4	0	0	0	4	12.1
▲				283	Little River Fish and Wildlife Area	0.08	2	0	1	0	3	37.5
▲				218	Mad River Dam Flood Control Area	0.70	0	0	0	0	0	0.0
▲				255	Mansfield Hollow Lake (excluding SP)	3.14	8	0	0	1	9	2.9
▲				256	Mansfield State-Leased Field Trial Area	0.37	1	0	0	0	1	2.7
●	●		AB	219	Mattatuck SF	7.02	4	4	0	10	18	2.6
●	●		AB	220	MDC – Colebrook Reservoir/Hogback Dam	6.50	0	2	0	1	3	0.5
▲				221	MDC – Greenwoods Pond	0.31	1	0	0	0	1	3.2
▲		64A		343	MDC Barkhamsted Res. - Barkhamsted Block	6.69	0	0	12	1	13	1.9
		67A		346	MDC Barkhamsted Res - Barkhamsted West Block	5.78	1	0	23	2	26	4.5
		58B		330	MDC Nepaug Reservoir - Valentine/Pine Hill Block	2.32	1	0	13	0	14	6.0
▲		66		345	MDC Sweetheart Mnt. Block	0.78	3	0	0	0	3	3.8
●	●		AB	339	Meadow Brook WMA	0.42	0	0	0	0	0	0.0
▲				338	Menunketesuck Pond WMA (formerly Chapmans Pond)	0.26	3	0	0	0	3	11.5
●	●		AB	257	Meshomasic SF	14.22	14	6	0	33	53	3.7
▲				258	Messerschmidt WMA	0.72	2	1	0	0	3	4.2
●	●		AB	259	Millers Pond	0.41	1	0	0	3	4	9.8
▲				341	Mohawk SF - Clark Pond Tract	0.19	0	0	0	0	0	0.0
●	●	63		342	Mohawk SF - Ziegler/Johnson Tract	0.51	1	0	0	0	1	2.0
●	●		AB	285	Mohegan SF	1.50	0	0	0	0	0	0.0
▲				260	Mono Pond	0.45	1	0	0	0	1	2.2
▲				222	Mount Riga SP	0.47	5	0	0	0	5	10.6
●	●		AB	223	Nassahegon SF	1.30	5	1	0	0	6	4.6
▲/●	●		AB	286	Natchaug SF	7.93	20	5	0	56	81	10.2
●	●		AB	261	Nathan Hale SF Mgmt. Area	2.27	9	0	0	11	20	8.8
●	●		AB	319	Naugatuck SF	21.15	14	3	0	20	37	1.7
▲				320	Naugatuck SF (Great Hill Block)	0.37	4	0	0	0	4	10.8

Fall Archery	Muzzleloader	Lottery Area #	No-Lottery	Code	<ul style="list-style-type: none"> ● Hunting Permitted ▲ Designated Deer Bowhunting Only Area (▲ areas are open during shotgun and muzzleloader) ▲/● Some Sections open to Archery ONLY AB (No-Lottery A and B) B (No-Lottery B only) ○ Daily/Season Permit Required * Special Conditions Harvest/mi² greater than 10 	Square miles	Fall Archery	Muzzleloader	Lottery	No Lottery	Total Harvest	Harvest/mi ²
*	●	28		321	Naugatuck SF* (Quillinan Reservoir Block)	0.90	2	0	3	1	6	6.7
▲/●	●		AB	287	Nehantic SF	7.91	6	4	0	19	29	3.7
●	●		AB	224	Nepaug SF	2.10	0	0	0	5	5	2.4
▲				225	Newgate WMA	0.70	4	0	0	0	4	5.7
●	●		AB	288	Nipmuck SF	14.40	15	3	0	12	30	2.1
▲				227	Northfield Brook Lake (federally owned)	0.31	3	0	0	0	3	9.7
▲				289	Nott Island	0.13	0	0	0	0	0	0.0
●	●	53A	B	263	NU-Maromas Coop WMA	2.48	9	1	8	1	19	7.7
●	●	54A	B	228	NU-Skiff Mtn. Coop WMA	1.13	2	0	1	1	4	3.5
*	●		AB	264	Nye Holman SF	1.20	3	0	1	2	6	5.0
▲/●	●		AB	290	Pachaug SF	40.84	40	15	0	86	141	3.5
●	●		AB	229	Paugnut SF	2.70	0	0	0	7	7	2.6
▲/●	●		AB	322	Paugussett SF	3.04	3	1	0	4	8	2.6
●	●		AB	291	Pease Brook WMA	0.33	2	0	0	0	2	6.1
●	●		AB	230	Peoples SF	4.60	2	1	1	2	6	1.3
▲				292	Pomeroy SP	0.32	4	0	0	0	4	12.5
●	●		AB	324	Pootatuck SF	1.72	1	0	0	4	5	2.9
●	●		AB	293	Quaddick SF	0.90	2	4	0	1	7	7.8
●	●		AB	294	Quinebaug River WMA	0.88	3	0	0	3	6	6.8
▲				295	Quinebaug River WMA (Aspinook Pond)	0.03	1	0	0	0	1	33.3
▲				326	Quinnipiac River SP	0.53	10	0	0	0	10	18.9
●	●		AB	296	Red Cedar Lake (Camp Mooween)	0.93	0	0	0	1	1	1.1
●	●		AB	231	Robbins Swamp WMA	2.45	4	1	0	0	5	2.0
●	●	61		232	Roraback WMA	3.10	6	2	3	0	11	3.5
●	●		AB	297	Rose Hill WMA	1.08	7	0	0	9	16	14.8
▲				298	Ross Marsh WMA	0.45	0	0	0	0	0	0.0
▲				299	Ross Pond SP	0.58	2	0	0	0	2	3.4
▲				267	Salmon River Cove and Haddam Neck	0.19	2	0	0	1	3	15.8
●	●		AB	300	Salmon River SF (including Holbrook Pond)	10.90	10	3	0	27	40	3.7
▲				268	Scantic River SP	0.92	3	0	0	0	3	3.3
●	●			301	Selden Neck SP (Selden Island)	0.88	2	2	0	0	4	4.5
○				233	Sessions Woods WMA	1.20	1	0	0	0	1	0.8
●	●		AB	269	Shenipsit SF	11.85	12	8	0	25	45	3.8
●	●		AB	333	Silvio O. Conte NWR - Salmon River Div. (federal land)	0.41	0	0	0	0	0	0.0
▲				234	Simsbury WMA	0.57	9	0	0	0	9	15.8
●	●		AB	302	Spignesi WMA	0.82	1	0	0	6	7	8.5
▲				235	Sucker Brook Flood Control Area	0.24	0	0	0	1	1	4.2
▲				236	Suffield WMA	0.30	1	0	0	0	1	3.3
●	●		AB	303	Sugarbrook Field Trial Area	0.31	1	0	0	1	2	6.5

Fall Archery	Muzzleloader	Lottery Area #	No-Lottery	Code	<ul style="list-style-type: none"> ● Hunting Permitted ▲ Designated Deer Bowhunting Only Area (▲ areas are open during shotgun and muzzleloader) ▲/● Some Sections open to Archery ONLY AB (No-Lottery A and B) B (No-Lottery B only) ○ Daily/Season Permit Required * Special Conditions ■ Harvest/mi2 greater than 10 	Square miles	Fall Archery	Muzzleloader	Lottery	No Lottery	Total Harvest	Harvest/mi ²
▲				237	Sunnybrook SP (west of Newfield Rd.)	0.69	0	1	0	0	1	1.4
●	●		AB	304	Talbot WMA	0.79	3	1	0	4	8	10.1
●	●	60		334	Tankerhoosen WMA	0.78	6	0	5	0	11	14.1
▲				238	Thomaston Dam (federally owned)	1.33	0	0	0	0	0	0.0
●	●		AB	239	Topsmead SF (north and west of Rte. 118)	0.28	0	0	0	0	0	0.0
○	○	26		327	Trout Brook Valley SP	0.47	1	1	4	0	6	12.8
●	●		AB	240	Tunxis SF	15.88	3	6	2	14	25	1.6
●	●		AB	270	Wangunk Meadows (off Rte. 17a)	1.00	0	0	0	3	3	3.0
●	●		AB	305	West Thompson Dam (federal land)	1.71	10	0	0	2	12	7.0
▲				241	Whiting River Flood Control Area	0.29	1	0	0	0	1	3.4
▲				242	Wood Creek Flood Control Area	0.17	1	0	0	0	1	5.9
▲				328	Wooster Mountain SP	0.69	5	0	0	0	5	7.2
●	●		AB	271	Wopowog WMA	0.73	0	0	0	3	3	4.1
●	●		AB	243	Wyantenock SF	6.38	2	4	0	12	18	2.8
		51A		306	Yale Forest (owned by Yale University)	12.03	1	1	32	1	35	2.9
●	●		AB	307	Zemko Pond WMA	0.71	2	0	0	4	6	8.5

*Caution should be used when evaluating harvest on individual properties as errors can occur in the reporting process.

Appendix 3. Sex ratios (male:female) of deer harvested during Connecticut's regulated hunting seasons, 2016-2018.

Season	2016		2017		2018		3-year Average (2016-2018)		Males per Female			
	Males	Females	Males	Females	Males	Females	Males	Females	2016	2017	2018	
Archery												
State Land	358	305	294	305	287	210	313	273	1.17	0.96	1.37	
Private Land	2,425	2,000	2,782	2,000	2,567	2,030	2,591	2,010	1.21	1.39	1.26	
Subtotal	2,783	2,305	3,076	2,305	2,854	2,240	2,904	2,283	1.21	1.33	1.27	
Muzzleloader												
State Land	38	37	68	64	65	43	57	48	1.03	1.06	1.51	
Private Land	243	325	316	352	291	307	283	328	0.75	0.90	0.95	
Subtotal	281	362	384	416	356	350	340	376	0.78	0.92	1.02	
Shotgun/Rifle												
State Land	457	179	528	179	495	209	493	189	2.55	2.95	2.37	
Private Land	1,989	1,187	2,250	1,187	2,260	1,334	2,166	1,236	1.68	1.90	1.69	
Subtotal	2,446	1,366	2,778	1,366	2,755	1,543	2,660	1,425	1.79	2.03	1.79	
Landowner												
	582	287	685	389	631	378	633	351	2.03	1.76	1.67	
Total	6,092	4,320	6,923	4,476	6,596	4,511	6,537	4,436	1.41	1.55	1.46	

Appendix 4. Non-hunting deer mortality reported in Connecticut, 2005-2018.

Cause of Death	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Road	2,667	2,029	1,967	2,190	1,902	1,456	1,683	1,177	1,211	1,081	749	619	687	608
Dog	3	3	4	3	1	1	0	2	0	5	0	0	2	2
Unknown	183	117	162	72	92	49	82	58	89	59	62	49	43	31
Illegal	2	3	1	9	3	10	4	6	4	2	2	0	2	1
Crop Damage	842	755	667	883	780	715	804	864	831	812	464	462	560	569
Total	3,697	2,907	2,801	3,157	2,778	2,231	2,573	2,108	2,135	1,959	1,277	1,130	1,294	1,211
Non-hunting: Harvest	1:3.4	1:3.4	1:3.9	1:4.0	1:4.2	1:5.5	1:5.0	1:6.7	1:5.9	1:6.8	1:7.4	1:9.4	1:9.3	1:9.3
% Mortality*	22.6	19.3	20.2	20.0	19.1	11.1	11.6	13.5	14.5	14.6	12.2	9.5	9.7	9.7
% of Harvest	29.2	29.2	25.3	24.9	23.6	12.4	14.0	14.7	17.0	16.1	14.0	10.6	10.7	10.7

* Crop damage harvest is included under non-hunting mortality.

Appendix 5. Frequency of deer roadkills in each of Connecticut's Deer Management Zones, a 5-year comparison, 2014-2018.

Zone						Five-year		Habitat	Roadkills/Sq. Mile		
	2014	2015	2016	2017	2018	Total	Zonal %	(sq. miles)	2016	2017	2018
1	70	18	26	41	47	202	5.4	344.1	0.08	0.12	0.14
2	55	44	46	57	51	253	6.8	409.85	0.11	0.14	0.12
3	125	112	89	107	81	514	13.7	272.1	0.33	0.39	0.30
4A	42	28	32	17	26	145	3.9	213.1	0.15	0.08	0.12
4B	41	30	37	21	29	158	4.2	120.0	0.31	0.18	0.24
5	84	49	37	66	41	277	7.4	444.9	0.08	0.15	0.09
6	52	36	33	50	53	224	6.0	259.1	0.13	0.19	0.20
7	99	119	74	100	79	471	12.6	370.9	0.20	0.27	0.21
8	9	15	11	11	6	52	1.4	167.6	0.07	0.07	0.04
9	83	29	15	3	10	140	3.7	277.8	0.05	0.01	0.04
10	70	61	35	50	51	267	7.1	243.6	0.14	0.21	0.21
11	150	116	105	109	85	565	15.1	290.76	0.36	0.37	0.29
12	99	92	79	55	49	374	10.0	356.4	0.22	0.15	0.14
Total	1,081	749	619	687	608	3,744	100.0	3,770.2	0.16*	0.18*	0.16*

* These numbers are averages, not totals.

Appendix 6. Deer removed using crop damage permits in Connecticut's Deer Management Zones, 2006-2018.

Zone	Year												
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	64	58	59	55	45	37	67	44	39	32	37	38	46
2	18	17	17	12	19	17	25	15	16	15	20	18	14
3	71	49	76	101	70	99	70	97	99	30	58	85	71
4A	14	21	21	6	4	10	15	16	8	10	8	3	12
4B	32	33	51	33	39	28	41	56	55	24	13	23	41
5	95	68	119	95	57	93	87	88	77	55	37	45	66
6	77	54	90	58	78	56	74	62	89	49	41	49	47
7	69	89	114	93	88	123	127	118	110	72	60	77	74
8	47	33	42	33	32	28	36	40	41	11	11	23	28
9	48	30	69	79	55	56	56	77	65	35	40	18	31
10	66	51	82	76	75	104	90	83	90	53	53	82	55
11	109	116	111	106	118	93	113	91	79	45	57	55	53
12	45	48	32	33	35	60	63	44	43	30	27	44	31
Total	755	667	883	780	715	804	864	831	812	464	462	560	569