

# 2011 Connecticut Deer Program Summary



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## Introduction

This booklet is the 31st 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 2011, 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 (2005), increased bag limits in specific deer management zones (2009), and allowing the use of crossbows during January (2010). The replacement antlerless tag program, which was initiated in 1995, allows hunters in deer management zones (DMZs) 11 and 12 to harvest additional antlerless deer, with the goal of increasing the harvest of does. In 2003, hunting over bait was permitted in DMZs 11 and 12 during all seasons on private land. Use of bait in areas where hunter access to private land is limited will increase 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. In 2009, hunters were issued 1 additional antlerless tag in DMZ 7 and 2 additional antlerless tags in DMZs 11 and 12 with their shotgun/rifle and muzzleloader permits. In 2010, hunters were allowed to use crossbows in January. In developed areas where firearms hunting is not feasible, the 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](http://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.

Residents of the town of Redding developed a Web site (<http://BeSafeRedding.org>) to facilitate a process whereby willing landowners are matched up with hunters that are committed to removing deer from private land at no cost to the landowner. The mission is to get Redding residents to work together for the purpose of reducing tick-related diseases and deer-vehicle accidents that result from deer overabundance and reducing deer impacts to the forest understory to facilitate the return of native bird and wildlife species. At the request of the town, Redding and the Wildlife Division initiated a special research project in March 2011 to develop a town-wide management plan. The final report will be completed in 2012. The town of Newtown is working on a similar mission.

## Hunter Notes

In 2010, use of revolvers for deer hunting was authorized during the Landowner and 3-week shotgun/rifle deer seasons on private land (greater than 10 acres). Private land shotgun/rifle hunters hunting in DMZ 7 were given 1 additional antlerless tag, and hunters hunting in DMZs 11 and 12 were given 2 additional antlerless tags when they purchased their permits to encourage harvest of female deer. Other programmatic changes include streamlining of the state land deer lottery system. Be sure to check the DEEP Web site at [www.ct.gov/deep/hunting](http://www.ct.gov/deep/hunting) for more details.

During the 2012 deer hunting season, hunters will no longer be required to register their deer at a check station during the first 4 days of the shotgun-rifle deer hunting season (Nov 14-17). **In 2012, hunters will be able to register their deer during the entire deer hunting season using the on-line and telephone reporting system and will not be required to bring deer to a check station.** Check stations will remain open for obtaining replacement tags for DMZs 11 and 12, and during the first 4 days of the shotgun-rifle season, to accommodate those hunters who may not have been informed of the new changes.

Information on dates and locations of hunter education courses can be obtained by calling the DEEP Wildlife Division's Franklin office (860-642-7239) or Sessions Woods office (860-675-8130), or on the DEEP Web site ([www.ct.gov/deep/hunting](http://www.ct.gov/deep/hunting)). Licenses and permits to fish, hunt, and trap in Connecticut can be purchased on-line by going to Connecticut's Online Sportsmen Licensing System at [www.ct.gov/deep/sportsmenlicensing](http://www.ct.gov/deep/sportsmenlicensing).

Regulations were enacted in October 2005 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 ([www.ct.gov/deep/lib/deep/regulations/26/26-55-4.pdf](http://www.ct.gov/deep/lib/deep/regulations/26/26-55-4.pdf)) and an updated list of states where CWD has been documented can be found on the DEEP Web site at [www.ct.gov/deep/hunting](http://www.ct.gov/deep/hunting).

## 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 any harvest data from 2009 onward to earlier years (2008 or earlier). During the 2011 hunting season, 12,897 deer were legally harvested and reported (Table 1). This represents a 5.9% increase from the 2010 harvest. Private land archery and muzzleloader hunters showed the greatest increase in harvest (15.4% and 10.2%) compared to 2010.

**Table 1. Deer harvested during Connecticut's regulated hunting seasons, 2010-2011.**

Season	Harvest 2010	Harvest 2011	3-year Average Harvest (2008-2010)	% of Total 2011	% Change from 2010 to 2011	% Change 3-year Average to 2011
<b>Archery</b>						
State Land	653	575	627	4.5%	-11.9%	-8.3%
Private Land	4,017	4,636	3,705	35.9%	15.4%	25.1%
Replacement Antlerless <sup>A, B</sup>	248	305	340	2.4%	23.0%	-10.3%
Either-sex Tag <sup>A, B</sup>	93	122	77	0.9%	31.2%	58.4%
January <sup>B</sup>	164	291	209	2.3%	77.4%	39.0%
Replacement Antlerless <sup>A, B</sup>	18	24	38	0.2%	41.2%	-37.4%
Either-sex Tag <sup>A, B</sup>	0	1	1	0.0%	NA	0.0%
Crossbow <sup>B</sup>	58	111		0.9%		
Subtotal	4,670	5,211	4,332	40.4%	11.6%	20.3%
<b>Muzzleloader</b>						
State Land	161	164	155	1.3%	1.9%	5.6%
Private Land	870	959	721	7.4%	10.2%	32.9%
Replacement Antlerless <sup>A, C</sup>	5	4	13	0.0%	-20.0%	-69.2%
Either-sex Tag <sup>A, C</sup>	9	7	4	0.1%	-22.2%	61.5%
Subtotal	1,031	1,123	877	8.7%	8.9%	28.1%
<b>Shotgun/Rifle</b>						
State Land A <sup>C</sup>	691	639	715	5.0%	-7.5%	-10.6%
State Land B <sup>C</sup>	129	129	167	1.0%	0.0%	-22.9%
Private Land	4,362	4,599	4,954	35.7%	3.6%	-7.2%
Replacement Antlerless <sup>A, D</sup>	36	31	71	0.2%	-13.9%	-56.3%
Either-sex Tag <sup>A, D</sup>	42	62	18	0.5%	47.6%	244.4%
Revolver <sup>D</sup>	11	22		0.2%		
Subtotal	5,260	5,367	5,836	41.6%	2.0%	-8.0%
<b>Youth Hunting Day<sup>D</sup></b>	116	86	67	0.7%	-25.9%	28.4%
<b>Landowner</b>	1,222	1,196	1,154	9.3%	-2.1%	3.6%
<b>Total</b>	<b>12,183</b>	<b>12,897</b>	12,213	100.0%	5.9%	5.6%

<sup>A</sup> Replacement antlerless and either-sex tags were available in zones 11 and 12 only.

<sup>B</sup> Included as part of private land archery total.

<sup>C</sup> Included as part of private land muzzleloader total.

<sup>D</sup> Included as part of private land shotgun/rifle total.

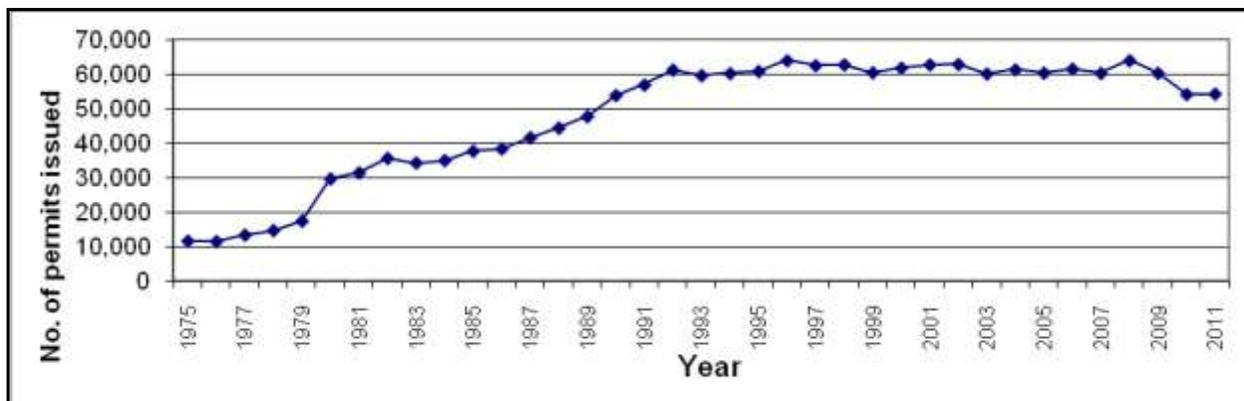
In 2011, 1,943 deer were harvested during the first four days of the shotgun/rifle season, a 26% decrease from 2010 (2,637). A higher harvest was expected in 2011 due to the lack of acorns; however, weather was influential during those first four days. With the use of check stations, telephone, and the Internet for reporting harvest, the reported shotgun/rifle harvest was 5,367 deer in 2011, a 2% increase from 2010 (5,260). Hunter success during the 2011 shotgun/rifle season was likely influenced by warm temperatures (reducing success) and the lack of acorns (increasing success) (Figure 8). In 2011, the landowner harvest was 1,196, just short of the 2010 landowner harvest (1,222). 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 antlerless and either-sex replacement tag harvest was greater in 2011 (556) than 2010 (450). Deer harvested under the replacement antlerless and either-sex tag program (556) contributed to 17% of the total deer harvest on private land in DMZs 11 and 12. Shotgun/rifle and archery hunters accounted for 41.6% and 40.4% of all deer taken in 2011. Landowners and muzzleloader hunters accounted for 9.3% and 8.7% of all deer taken in 2011. Harvest varied considerably by season and town (Appendix 1). A Junior Hunter Training Day was established in 2003 for youth hunters and was increased to two days in 2009. Youth hunters continue to take advantage of the Junior Hunter Training Days for deer, which occur on the two Saturdays prior to opening day. The 3-year average harvest for the Junior Hunter Training Days is 67 deer.

## 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 1992-2009 (Figure 1). Since the implementation of the online license system and an increase in fees, permit issuance has declined (2010 and 2011) 10% from the previous (2007-2009) 3-year average (61,518) (Table 2). Deer permit issuance in 2011 was similar to 2010 and likely is reflective of a hunter's ability to purchase a license or permit at the last minute instead of prior to the season and also possibly due to the increased cost. Issuance for state land A permits had the greatest one-year decline (5.7%), followed by state land muzzleloader permits (4.3%). Overall, shotgun/rifle hunters purchased the largest percentage of permits (43.7%), followed by archery hunters (25.2%), muzzleloader hunters (22.6%), and landowners (8.5%). 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 second year of authorizing the use of revolvers for deer hunting, 795 hunters took advantage of this new opportunity, a 44.5% increase in issuance over the first year (550).

**Figure 1. Total deer permit issuance in Connecticut, 1975-2011.**



**Table 2. Deer hunting permits issued in Connecticut for all regulated hunting seasons, 2009-2011.**

Season	Permits 2009	Permits 2010	Permits 2011	3-year Average Permits 2008-2010	% of Total 2011	% Change 2010 to 2011	% Change 3-year Avg. to 2011
<b>Archery</b>	14,046	13,276	13,725	13,552	25.2%	3.4%	1.3%
<b>Muzzleloader</b>							
State Land	5,094	4,325	4,141	5,127	7.6%	-4.3%	-19.2%
Private Land	8,186	7,531	8,152	8,411	15.0%	8.2%	-3.1%
Subtotal	13,280	11,856	12,293	13,538	22.6%	3.7%	-9.2%
<b>Shotgun/Rifle</b>							
State Land A*	5,629	5,556	5,237	5,709	9.6%	-5.7%	-8.3%
State Land B*	4,329	2,650	2,577	4,003	4.7%	-2.8%	-35.6%
Private Land	17,332	16,151	15,937	17,320	29.3%	-1.3%	-8.0%
Subtotal	27,290	24,357	23,751	27,032	43.7%	-2.5%	-12.1%
<b>Revolver<sup>A</sup></b>	NA	550	795	1,007	1.5%	44.5%	
<b>Landowner</b>	5,771	4,755	4,598	5,442	8.5%	-3.3%	-15.5%
<b>Total</b>	<b>60,387</b>	<b>54,244</b>	<b>54,367</b>	<b>59,564</b>	<b>100.0%</b>	<b>0.2%</b>	<b>-8.7%</b>

\*Includes controlled hunt permits.

<sup>A</sup> Not included in total permits

NA = Not available

## 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. Hunter success in 2009 (33.6%), 2010 (35.2%), and 2011 (38.0%) exceeded the previous record high set in 2003 (27.8%). It is assumed that this success rate is more reflective of actual success rates, due to a more convenient method of reporting harvested deer. Success rates for the remaining seasons varied slightly from 2010 to 2011. Compared to the 3-year average, success rates in 2011 increased slightly for all hunting seasons (except State Land A). In 2011, archery hunters had the highest annual success rate (38.0%), followed by private land shotgun/rifle hunters (28.9%) and landowners (26.0%). Success rate for the combined muzzleloader seasons was 9.1%. Lower success rates are expected because the muzzleloader season occurs after the shotgun/rifle deer hunting seasons.

## Archery Statistics

Excluding the landowner season, just under half (45%) of the deer taken during the hunting seasons was harvested by a bowhunter. A record bow harvest was recorded in 2011, and it is the first time that the bow harvest was almost equal to the gun harvest. Sixty-eight percent (3,553 – 3,056 private, 497 state) of the total archery harvest was taken during the early archery season (September 15 to November 15); 14% (759 – 712 private, 47 state) was taken during the 3-week shotgun/rifle season (open in all zones on private land and state land bowhunting-only areas); 12% (608 – 577 private, 31 state) was taken during the muzzleloader season (December 7 to December 31); and 6% (291) was taken during the January season open in DMZs 11 and 12 on private land only (January 1-31, 2012). 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 killed their deer. On the day in which hunters harvested their deer, the number of deer observed per hour was 1.08 and the average number of deer seen on that day was 3.2. Number of fawns/doe was 0.53, while number of bucks/doe was 0.45.

**Table 3. Deer hunter success rates (%) in Connecticut, 2010-2011.**

Season	2010	2011	3-year Avg. Success Rate (2008-2010)	Difference from 2010	Difference from 3-year Avg.
<b>Archery</b>					
Combined <sup>A</sup>	35.2%	38.0%	32.0%	2.8%	6.0%
<b>Muzzleloader</b>					
State Land	3.7%	4.0%	3.1%	0.3%	0.9%
Private Land	11.6%	11.8%	8.8%	0.2%	3.0%
Combined	8.7%	9.1%	6.7%	0.4%	2.5%
<b>Shotgun/Rifle</b>					
State Land A	12.4%	12.2%	12.5%	-0.2%	-0.3%
State Land B	4.9%	5.0%	4.3%	0.1%	0.7%
Private Land	27.5%	28.9%	28.4%	1.4%	0.5%
Combined	21.6%	22.6%	21.6%	1.0%	1.0%
<b>Landowner</b>	<b>25.7%</b>	<b>26.0%</b>	<b>21.5%</b>	<b>0.3%</b>	<b>4.5%</b>
<b>Average<sup>B</sup></b>	<b>22.5%</b>	<b>23.7%</b>	<b>20.6%</b>	<b>1.2%</b>	<b>3.1%</b>

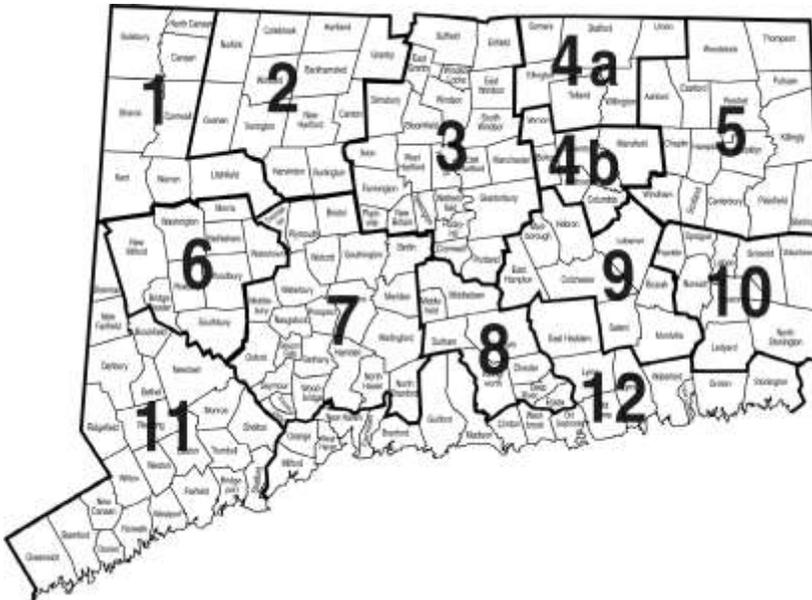
<sup>A</sup> Data available only for state and private land combined.

<sup>B</sup> Average is based on total number of deer harvested/total number of permits issued.

## Connecticut Deer Management Zones

To better manage the statewide deer population, data from hunter surveys, regulated deer harvests, and total deer mortality have been recorded and evaluated by deer management zones (Figure 2). 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, 2011.**

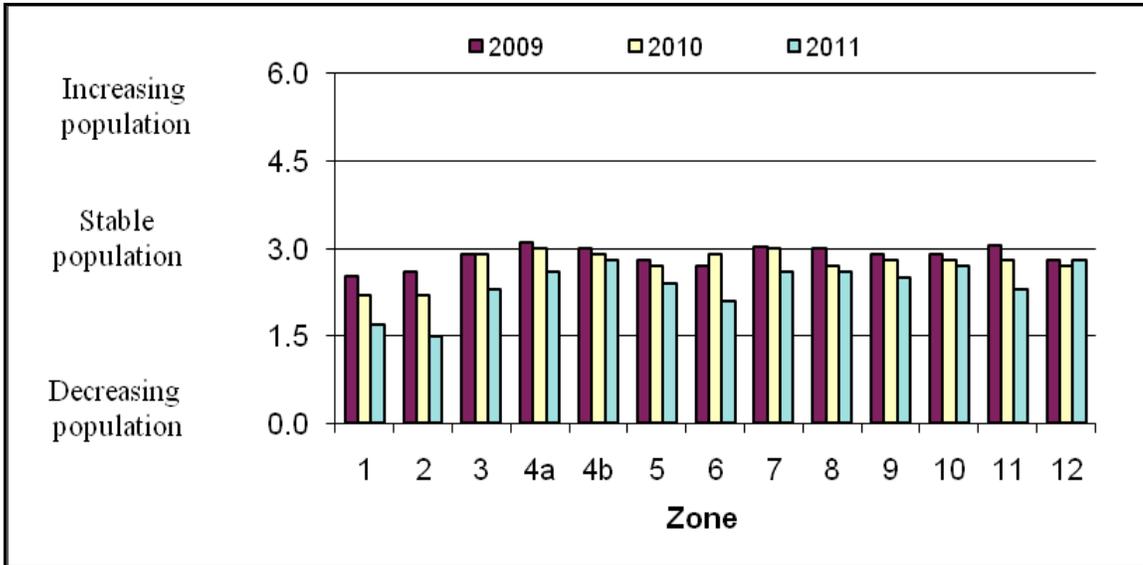


## Hunter Perceptions of Population Trends

In 2011, 8,085 deer hunters were sent an e-mail and asked to complete an on-line hunter survey. A total of 3,544 hunters responded for a 43% response rate, far exceeding response rates from previous years using a mail survey card (10-20%). Similar to hunter surveys from previous years, the survey 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).

population). Forty-two percent of the hunters who responded to the survey believed that the population was declining, 39% believed it was stable, and 17% believed it was increasing (Figure 3). Deer management zones 4B and 12 had the highest average rank (2.8). In general, hunters perceived that populations are relatively stable or have been decreasing slightly in most zones over the past 3 years. Based on the survey, most (67%) hunters believed coyotes were impacting the deer population, while few believed bears (14%) and bobcats (13%) were impacting the population. In DMZs where bears are most prevalent (DMZs 1, 2, 3, 6, and 7), a slightly greater percentage of hunters (24%) believed bears were impacting the deer population.

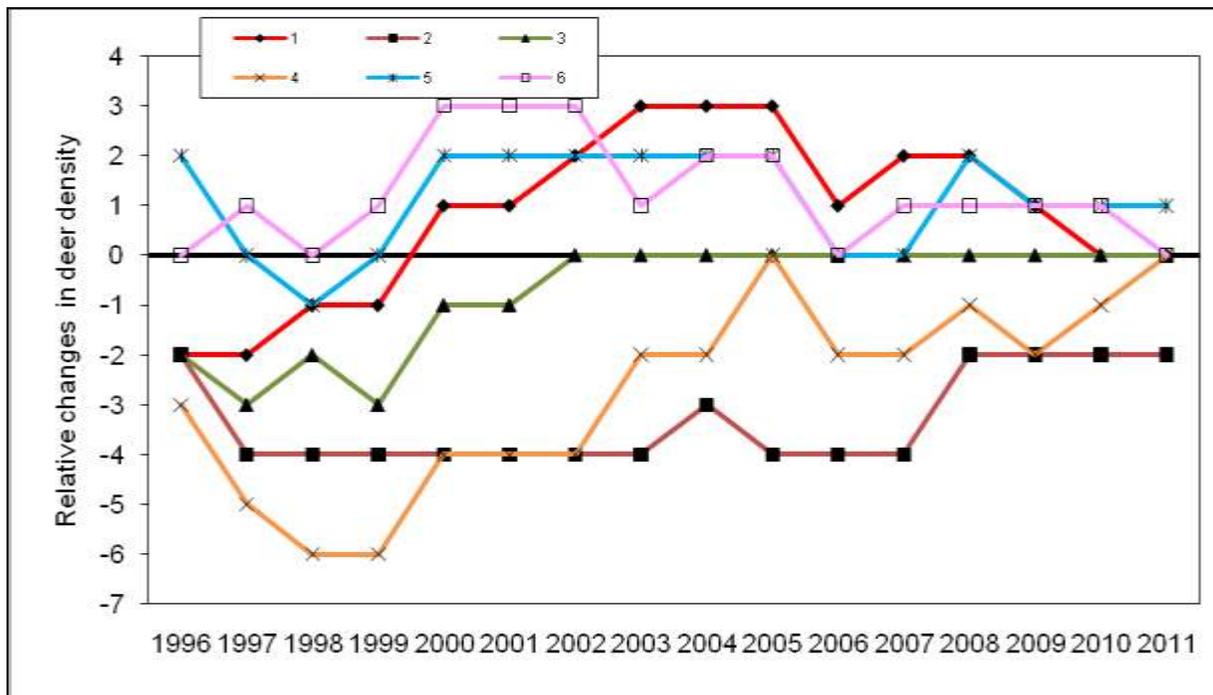
**Figure 3. Perception of zonal deer population trends (average rank) by Connecticut's deer hunters, 2009-2011.**



**Population Trends**

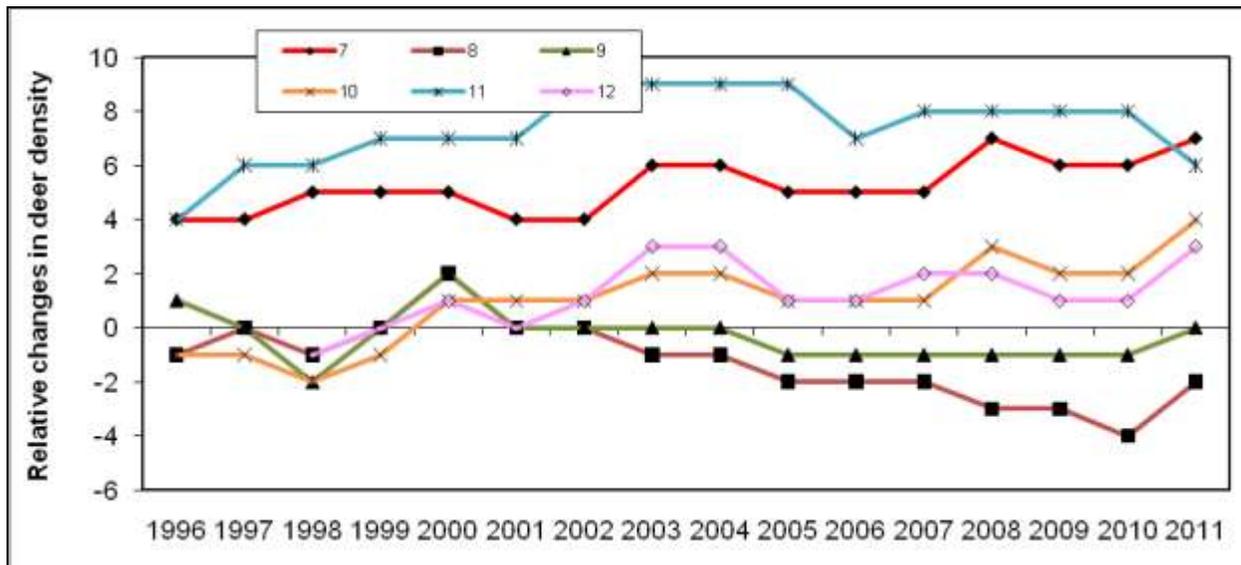
To assess the status of zonal deer populations in Connecticut, hunter perceptions and changes in harvest data (buck harvest/square mile, hunter success, yearling antler beam diameters, total deer mortality/square mile, and roadkills/square mile) were analyzed. This analysis suggests that from 2010 to 2011, populations increased in 6 zones (4, 7, 8, 9, 10, and 12), decreased in 2 zones (6 and 11), and remained stable in the remaining zones (1, 2, 3, and 5; Figures 4 and 5). This assessment of population trends was somewhat different from the perceptions of hunters based on the hunter survey, where many hunters believed the population was declining.

**Figure 4. Trends in Connecticut deer population growth in deer management zones 1-6 from 1996 to 2011.\***



\*Horizontal lines represent a stable population relative to the previous year. Lines that project upwards or downwards represent increasing or decreasing populations when compared to the previous year.

**Figure 5. Trends in Connecticut deer population growth in deer management zones 7-12 from 1996 to 2011.\***



\*Horizontal lines represent a stable population relative to the previous year. Lines that project upwards or downwards represent increasing or decreasing populations when compared to the previous year.

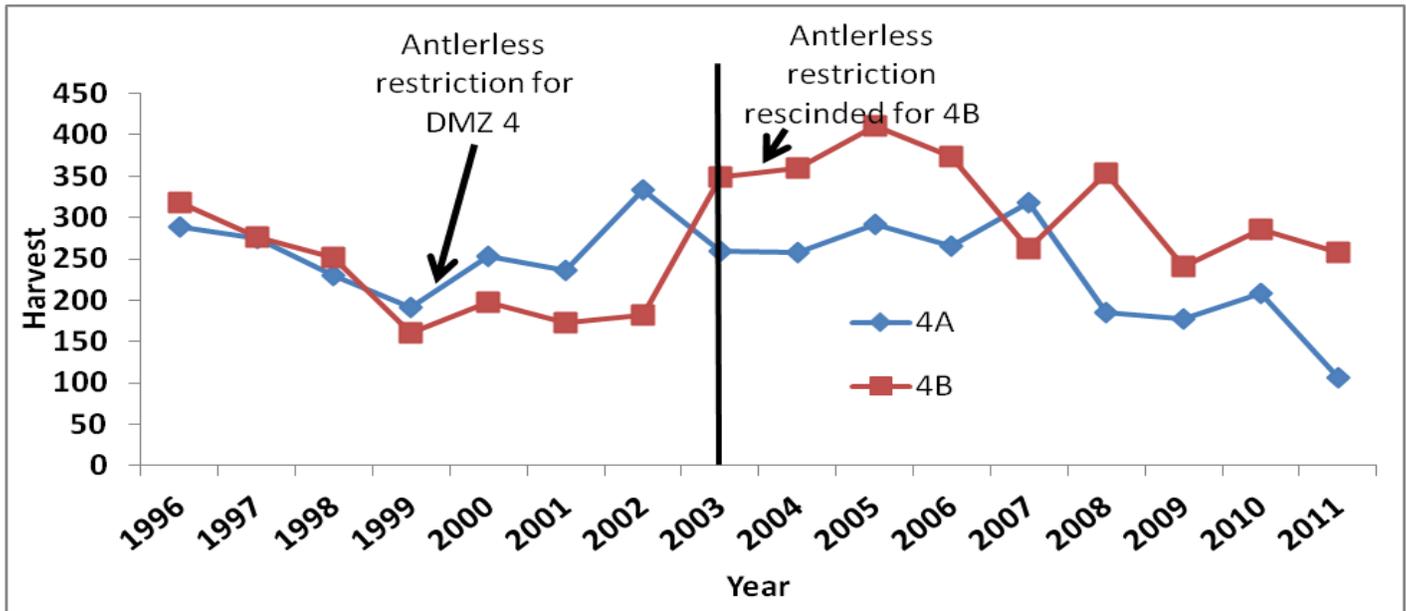
### Zonal Deer Management

Because deer populations vary across the state, Connecticut developed different deer management zones. Management strategies in each zone may vary depending on population growth. In DMZ 4, a 4-year decreasing trend, beginning in 1996, prompted harvest restrictions on female deer in this zone in 1999. During 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 zone 4A (northern portion), the restriction on the use of antlerless tags was retained, while the use of antlerless tags was again allowed in zone 4B (southern portion) (Figure 6).

Free replacement antlerless tags and either-sex tags (bonus buck tags) were available in DMZs 11 and 12 during the private land archery, shotgun/rifle, and muzzleloader seasons in 2011. 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 11).

**Figure 6. Private land shotgun/rifle deer harvest in deer management zones 4A and 4B, 1996-2011.**



## 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 deer management zone. However, without information on hunter distribution and effort by zones, the potential usefulness of this 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 deer hunting?" In 2011, all private land shotgun/rifle deer hunters answered this question on their survey. The percent of hunters in each deer management zone was multiplied by total number of deer permits issued in 2011 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 hunting (43%) occurred in four zones (5, 9, 11, and 12). Highest private land deer harvests were reported for DMZs 5, 9, 10 and 12. Zone 4B had the highest deer harvest per square mile (2.1) and DMZs 8, 9, and 11 had the greatest density of hunters (4.8, 4.9, and 7.6 per square mile). Hunter success rates were highest in zone 4B (45%), likely due to several years of an antlerless tag restriction, while success in zones 4A and 11 were the lowest (12% and 16%). The 3-year trend in hunter success rates declined for 5 of 13 zones (Table 5). Three deer management zones (1, 4B, and 5) have continued to produce relatively high hunter success rates over the past 3 years (Table 5).

### Archery Season Success

Based on the number of deer harvested and reported by bowhunters, 1 of 3 (38%) hunters harvested 2 or more deer during the bowhunting season. Bowhunter success rates were highest in zones 4B, 7, 11, and 12. In zone 4A, the restriction on 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 resulting in higher success rates. In zones 11 and 12, firearms hunting is more limited and the archery season framework is liberal (use of bait, unlimited tags, longer seasons) (Table 6). The archery deer harvest in zone 11 was at least 3 times higher than all other zones.

**Table 4. Zonal hunter numbers, harvest, and success rates for private land during the 2011 shotgun/rifle hunting season.**

<b>Zone</b>	<b>Zone Hunted Private Land<sup>A</sup> Shotgun/Rifle</b>	<b>% of Hunters Answered<sup>A</sup> Question 11</b>	<b>Estimated # of Private Land Shotgun/Rifle Hunters</b>	<b>Harvest</b>	<b>Area (sq. miles)</b>	<b>Deer Harvest/ Sq. Mile</b>	<b>Hunters/ Sq. Mile</b>	<b>Success Rate</b>
<b>1</b>	154	7.98%	1,272	404	344.59	1.2	3.7	32%
<b>2</b>	152	7.88%	1,256	224	410.69	0.5	3.1	18%
<b>3</b>	129	6.69%	1,066	232	273.33	0.8	3.9	22%
<b>4A</b>	107	5.55%	884	107	213.5	0.5	4.1	12%
<b>4B</b>	69	3.58%	570	257	120.66	2.1	4.7	45%
<b>5</b>	239	12.39%	1,975	836	445.94	1.9	4.4	42%
<b>6</b>	129	6.69%	1,066	275	260.03	1.1	4.1	26%
<b>7</b>	124	6.43%	1,024	259	373.08	0.7	2.7	25%
<b>8</b>	99	5.13%	818	255	169.11	1.5	4.8	31%
<b>9</b>	165	8.55%	1,363	469	279.39	1.7	4.9	34%
<b>10</b>	131	6.79%	1,082	407	244.36	1.7	4.4	38%
<b>11</b>	267	13.84%	2,206	359	291.53	1.2	7.6	16%
<b>12</b>	164	8.50%	1,355	515	358.39	1.4	3.8	38%
<b>Total</b>	<b>1,929</b>	<b>100%</b>	<b>15,937</b>	<b>4,599</b>	<b>3,785</b>	<b>1.2</b>	<b>4.2</b>	<b>29%</b>

<sup>A</sup>Based on question on hunter survey asking hunters which zone they primarily hunt in.

**Table 5. Zonal comparisons in private land shotgun/rifle harvest, hunter distributions, and success rates, 2009-2011.**

<b>Zone</b>	<b>Area (sq. miles)</b>	<b>Deer Harvest/Sq. Mile</b>			<b>Hunters/Sq. Mile</b>			<b>Hunter Success Rate %</b>		
		<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>1</b>	344.59	1.2	1.2	1.0	4.2	3.6	3.7	29	33	32
<b>2</b>	410.69	0.6	0.5	1.3	3	2.6	3.1	21	17	18
<b>3</b>	273.33	0.9	0.9	1.1	3.1	2.7	3.9	28	32	22
<b>4A</b>	213.50	0.5	0.6	0.8	3.9	3.5	4.1	14	17	12
<b>4B</b>	120.66	1.9	2.2	0.9	5.8	5.2	4.7	33	43	45
<b>5</b>	445.94	1.6	1.7	0.9	5.6	5.6	4.4	28	31	42
<b>6</b>	260.03	1.3	1.2	1.0	4.5	4.3	4.1	28	29	26
<b>7</b>	373.08	0.6	0.7	0.8	2.6	2.6	2.7	23	27	25
<b>8</b>	169.11	1.2	1.3	0.9	5.4	5.6	4.8	22	23	31
<b>9</b>	279.39	1.4	1.4	1.0	6	5.0	4.9	23	28	34
<b>10</b>	244.36	1.3	1.5	0.9	4.8	5.0	4.4	26	30	38
<b>11</b>	291.53	1.9	1.4	1.4	7.5	7.1	7.6	25	20	16
<b>12</b>	358.39	1.1	1.3	0.8	4.5	4.2	3.8	25	31	38
<b>Total</b>	<b>3,785</b>	<b>1.2</b>	<b>1.2</b>	<b>1.0</b>	<b>4.6</b>	<b>4.3</b>	<b>4.2</b>	<b>25</b>	<b>27</b>	<b>29</b>

**Table 6. Zonal comparisons of archery season success rates, 2011.**

Zones	Zone Hunted Private Land Archery <sup>A</sup>	% of Hunters Answered Question <sup>A</sup>	Estimated # of Archery Hunters	Harvest	Success Rate
1	126	6.1%	832	273	32.8
2	147	7.1%	970	162	16.7
3	129	6.2%	852	250	29.4
4A	110	5.3%	726	220	30.3
4B	52	2.5%	343	183	53.3
5	195	9.4%	1,287	455	35.3
6	112	5.4%	739	173	23.4
7	182	8.8%	1,202	503	41.9
8	92	4.4%	607	200	32.9
9	149	7.2%	984	227	23.1
10	100	4.8%	660	200	30.3
11	483	23.2%	3,189	1,614	50.6
12	202	9.7%	1,334	751	56.3
<b>Total</b>	<b>2,079</b>	<b>100.0%</b>	<b>13,725</b>	<b>5,211</b>	<b>38.0</b>

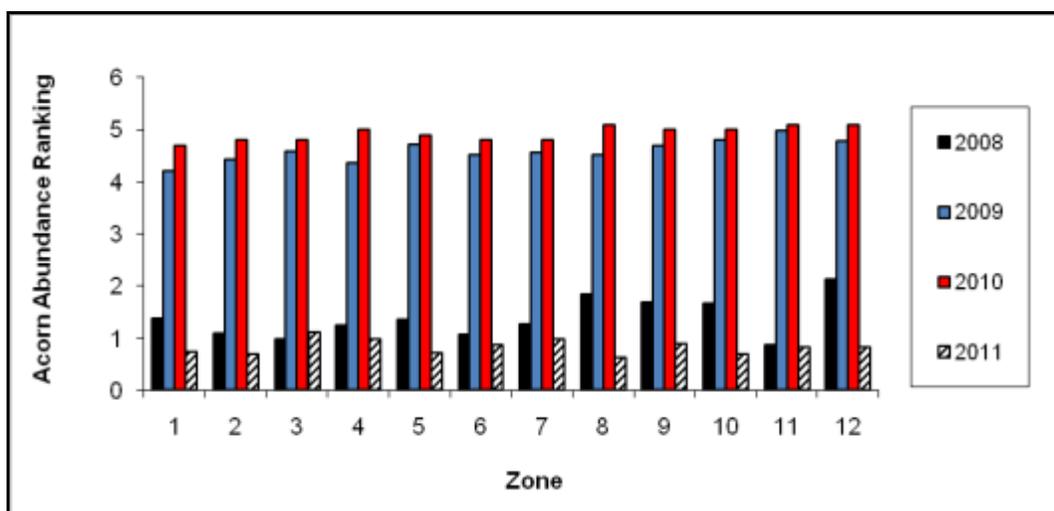
<sup>A</sup>Based on question on hunter survey asking hunters which zone they primarily hunt in.

## Fall Acorn Crop

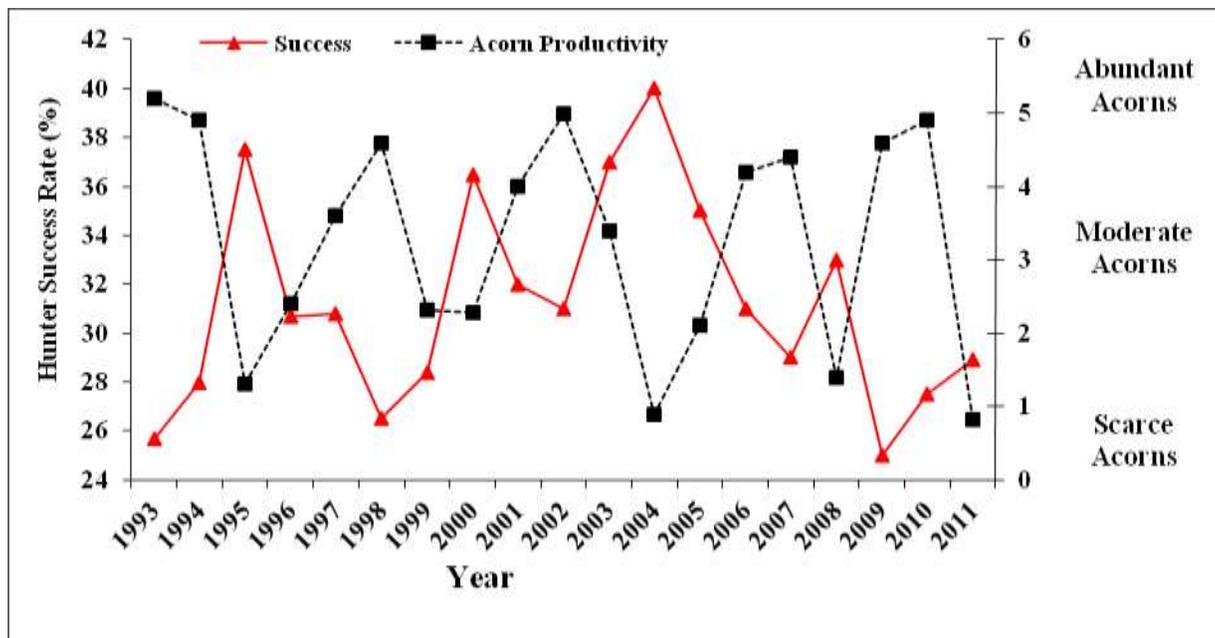
Acorns are a preferred food for white-tailed deer during fall and winter. Acorn availability influences deer movement patterns and herd health. To interpret changes in harvest rates, herd health, and herd productivity, the Deer Program has been collecting data since 1993 on abundance of the fall acorn crop from hunter surveys. Hunter perceptions of the fall acorn crop were ranked on a scale from 0 (scarce) to 6 (abundant acorns). In 2011, 74.4% of the hunters who responded to the survey ranked the fall acorn crop as scarce, 18.9% as moderate, and 4% as abundant. DMZ 3 had the highest average rank (1.1), while DMZ 8 had the lowest average rank (0.6; Figure 7). On a scale of 0-6, the average rank statewide was 0.83.

The past 18 years of data on acorn abundance and deer harvest rates suggest that a correlation exists between hunter success and acorn abundance (Figure 8). In 1993, when acorns were most abundant, hunter success was one of the lowest success rates recorded and in 2004, when acorns were least abundant, 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 2011, the acorn-success pattern was more inconsistent and may have been influenced by the warm weather. On average, the acorn crop statewide has been moderate most years, scarce about every 5-6 years, and abundant every 2 years.

**Figure 7. Perception of acorn crops (average rank) by Connecticut's deer hunters, 2008-2011.**



**Figure 8. Relationship between private land shotgun/rifle hunter success rates and fall acorn productivity, 1993-2011.**



## Private Land Deer Harvest

The 2011 private land deer harvest was highest for deer management zones 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 9 years has been observed in zone 11, likely a result of the availability of replacement deer tags and increased access to land for hunting. Total private land deer harvest increased 9.2% from 2010 to 2011.

## Herd Health

Physical condition of Connecticut’s deer herd has been assessed using trends in dressed weight and antler beam diameter of yearling males. Measuring antler beam diameters (1 inch above the base) of yearling males is one method of assessing deer herd health. This method can be difficult because it requires correctly identifying the age of the animal in the field and correctly using the calipers. Mean antler beam diameters on yearling males are correlated with female productivity, which is related to habitat quality. Yearling males with large antler beam diameters (20.0+ mm) indicate excellent herd health, while small beam diameters (12-15.4 mm) imply poor herd health. Beam diameters of 15.5-17.9 mm and 18.0-19.9 mm imply the herd is in fair to good condition. Mean dressed weight and antler beam diameters for yearling males have shown little variability over the past 13-18 years (Tables 8, 9, and 10), indicating that the health of Connecticut’s deer herd has remained good. Acorn abundance from the previous year explained nearly 50% of the variability in yearling male antler beam measurements. However, acorn abundance explained little of the variability in weights of yearling males.

Mean yearling antler beam measurements in 2011 indicate that the deer herd in most zones was in good condition. Mean beam measurements exceeded 18.0 in 8 of 13 zones (Table 8). Mean antler beam measurements have typically ranged between 17-18 mm (fair to good) over the past 12 years. Minor variations in beam measurements from year to year are due to fluctuations in food availability (i.e., acorns), winter conditions, or other variables.

Average dressed weights of harvested deer decreased for young-of-year males and increased for yearling and adult males from 2010 to 2011 (Table 9). During the first 4 days of the 2011 shotgun/rifle season, 5 bucks weighing 200 pounds or more were brought to check stations. The heaviest bucks were harvested in Lyme (213 lbs.), Warren (213 lbs.), Burlington (210 lbs.), Cornwall (200 lbs.), and Stonington (200 lbs.).

**Table 7. Private land deer harvest for all seasons (excluding landowner) in each of Connecticut's deer management zones, 2001-2011.**

Zone	Year											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
1	936	937	796 <sup>c</sup>	828	811	639	680	710	719	703	721	
2	351	259	373 <sup>b</sup>	383	369	357	323	385	394	320	374	
3	442	478	457	434	413	362	338	397	442	481	487	
4 <sup>a</sup>	662	471										
4A			237 <sup>b</sup>	207	273	218	259	293	267	293	276	
4B			397	445	476	467	329	471	434	445	470	
5	1,651	1,293	1,250 <sup>c</sup>	1,510	1,607	1,348	1,165	1,488	1,218	1,232	1,400	
6	854	746	550 <sup>c</sup>	596	544	511	458	489	524	556	500	
7	524	489	564 <sup>b</sup>	618	473	454	438	584	685	772	797	
8	433	378	463	514	467	398	330	360	343	374	473	
9	1,408	1,197	873 <sup>c</sup>	882	817	757	628	693	612	624	718	
10	713	519	521	664	567	504	504	640	486	576	632	
11	1,562	1,839	2,084 <sup>b</sup>	2,128	1,799	1,898	1,846	2,179	2,088	1,997	2,022	
12	646	636	1,272 <sup>b</sup>	1,330	1,080	976	1,030	1,040	872	954	1,324	
<b>Total</b>	<b>10,182</b>	<b>9,242</b>	<b>9,793</b>	<b>10,485</b>	<b>9,613</b>	<b>8,832</b>	<b>8,328</b>	<b>9,955</b>	<b>9,084</b>	<b>9,327</b>	<b>10,194</b>	
<b>% Change</b>	<b>-10.7%</b>	<b>-9.2%</b>	<b>6.0%</b>	<b>7.1%</b>	<b>-8.3%</b>	<b>-8.1%</b>	<b>-5.7%</b>	<b>19.5%</b>	<b>-8.7%</b>	<b>2.7%</b>	<b>9.2%</b>	

<sup>a</sup> Zone 4 separated into Zones 4A and 4B in 2003.

<sup>b</sup> In 2003 town/towns added to zone.

<sup>c</sup> In 2003 town/towns removed from zone.

**Table 8. Average antler beam diameter (mm) of yearling males in each of Connecticut's deer management zones, 2000-2011.**

Zone	Year											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	17.2	17.7	18.9	17.4	16.8	17.0	16.4	17.3	17.7	18.1	18.0	18.2
2	18.1	16.7	18.1	18.6	16.9	19.2	17.0	18.4	19.4	15.9	17.6	17.6
3	18.7	15.7	18.3	18.2	16.1	19.8	16.4	17.8	18.7	15.6	20.4	17.8
4 <sup>a</sup>	18.7	16.0	17.9									
4A				18.7	16.2	15.8	15.4	17.8	17.5	14.6	18.0	19.0
4B				18.0	18.0	17.8	16.7	16.9	17.9	16.1	18.2	18.7
5	18.2	17.0	17.8	16.4	18.1	15.8	16.3	16.1	17.4	16.4	18.3	18.5
6	18.1	16.3	18.4	18.0	16.9	15.7	17.0	17.6	18.3	15.6	18.5	17.6
7	18.3	16.1	17.9	17.4	17.8	17.5	16.1	17.9	17.3	16.3	18.4	17.2
8	17.4	16.8	17.3	18.6	17.6	20.5	17.5	18.8	17.6	16.5	18.2	18.8
9	17.9	16.5	18.4	17.3	16.7	17.7	17.5	17.9	18.5	16.7	18.2	18.5
10	17.1	16.0	17.9	15.9	17.5	15.5	14.5	16.2	17.4	16.2	17.8	16.5
11	16.8	18.7	17.2	17.9	17.4	15.3	20.3	16.4	18.7	14.7	18.4	19.8
12	17.1	15.7	18.2	17.1	17.1	17.8	16.2	16.4	16.7	17.4	18.9	19.5
<b>Average</b>	<b>17.4</b>	<b>16.9</b>	<b>18.0</b>	<b>17.6</b>	<b>17.2</b>	<b>17.3</b>	<b>16.7</b>	<b>17.1</b>	<b>17.9</b>	<b>16.2</b>	<b>18.4</b>	<b>18.2</b>

<sup>a</sup> Zone 4 separated into zones 4A and 4B in 2003.

**Table 9. Average dressed weights (lbs.) of male deer harvested and brought to check stations during the first four days of the shotgun/rifle hunting season, 2009-2011.**

Zone	Young-of-year			Yearling			Adult		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
1	ND	ND	70.5	108.1	111.8	116.7	134.5	148.2	157.6
2	ND	71.9	ND	105.3	110.3	115.7	177.2	157.1	162.2
3	ND	71.9	ND	93.0	109.4	113.6	140.3	153.8	146.2
4A	ND	ND	ND	91.4	110.8	112.7	136.8	139.0	148.7
4B	62.0	73.1	58.8	96.6	107.4	110.1	134.0	136.2	149.2
5	63.4	69.8	60.7	97.1	112.9	114.1	135.7	143.4	150.3
6	ND	73.7	ND	98.9	109.7	116.0	136.0	145.8	148.7
7	ND	ND	ND	102.4	111.8	106.6	139.6	133.2	144.0
8	60.5	63.7	60.7	99.0	107.9	107.7	138.7	145.4	146.8
9	63.8	72.1	60.7	98.1	109.0	112.8	138.3	140.9	139.9
10	69.7	73.0	61.3	106.8	107.2	109.0	139.6	142.7	156.2
11	59.3	67.6	ND	92.9	105.3	118.4	131.0	138.9	136.0
12	66.9	71.4	53.7	95.7	113.6	116.7	136.7	144.6	148.7
<b>Average</b>	<b>63.6</b>	<b>70.8</b>	<b>60.9</b>	<b>98.9</b>	<b>109.8</b>	<b>113.1</b>	<b>139.9</b>	<b>143.8</b>	<b>148.8</b>

ND = ≤ 5 deer recorded

**Table 10. Yearling male weights and antler beam measurements collected at check stations in Connecticut, 1991-2011.**

DMZ	1 <sup>f</sup>	2 <sup>f</sup>	3	4	5	6	7	8	9	10 <sup>f</sup>	11 <sup>f</sup>	12 <sup>f</sup>
<b>Wgt. Years<sup>a</sup></b>	15	15	15	15	15	15	15	15	15	15	15	13
<b>Wgt. Avg<sup>b</sup></b>	108.8	110.8	108.7	104.6	105.9	107.9	107.3	104.3	105.6	108.4	101.0	103.5
<b>95%CI<sup>c</sup></b>	±1.9	±2.0	±3.6	±2.5	±2.0	±1.7	±2.0	±1.9	±2.1	±1.7	±2.0	±3.7
<b>YAB Years<sup>d</sup></b>	19	19	19	19	19	19	19	19	19	18	16	12
<b>YAB Avg<sup>e</sup></b>	17.5	18.0	18.0	17.3	17.3	17.6	17.4	17.5	17.4	17.0	17.4	17.1
<b>95%CI<sup>c</sup></b>	±0.38	±0.48	±0.73	±0.56	±0.47	±0.49	±0.50	±0.61	±0.38	±0.51	±0.83	±0.56

<sup>a</sup> Total number of years weights were analyzed.

<sup>b</sup> Average of weights collected.

<sup>c</sup> 95% Confident weights and beams will be within the limits listed on any given year

<sup>d</sup> Total number of years Yearling Antler Beams (YAB) were analyzed.

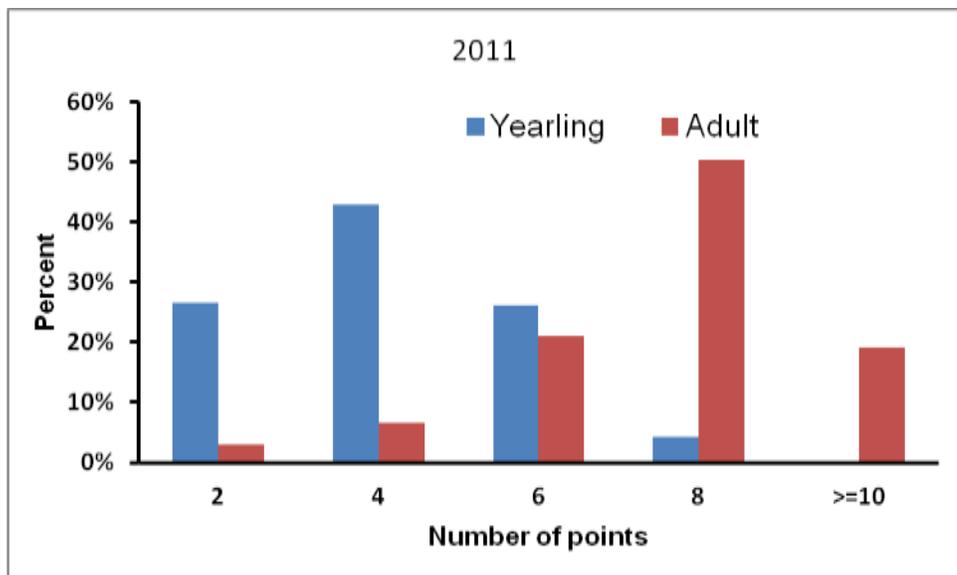
<sup>e</sup> Average size of YAB in millimeters.

<sup>f</sup> Some zones were established or re-delineated.

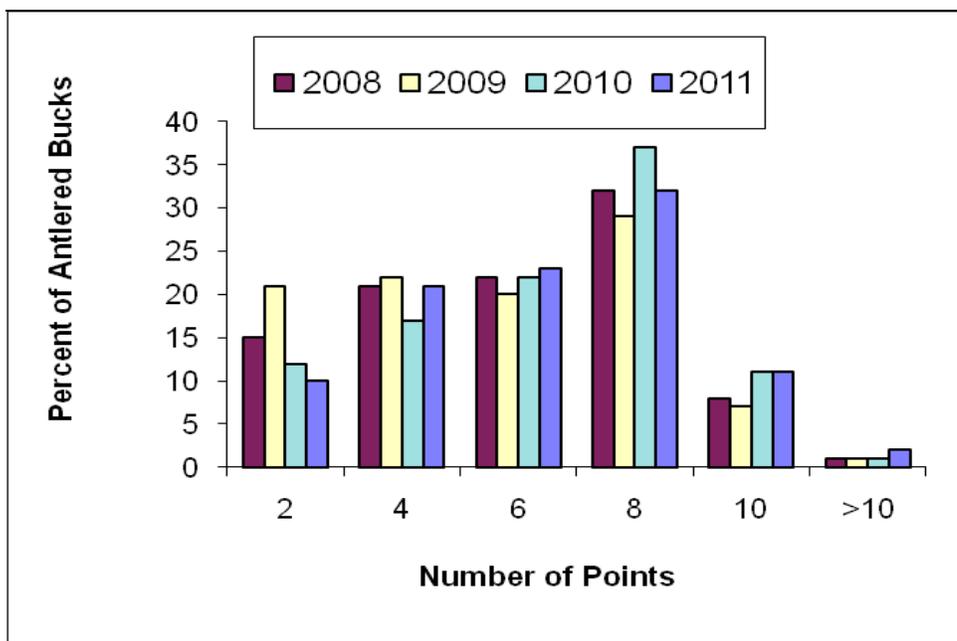
## Antler Points

Deer age, nutritional status, and genetics affect the number of antler points on bucks. The number of antler points on yearling bucks aged at check stations ranged from 1 to 10 in 2011 (Figure 9). Most yearling bucks had 2 (26.5%) or 4 (42.9%) points and 30.6% had 6 or more points in 2011 (Figure 9, Appendix 2). Fewer than 6% of yearlings had 8 or more antler points and fewer than 12% of adults had 4 or less antler points based on the known aged sample (Figures 9). Mean number of antler points on yearling males has fluctuated between 2 and 4 among most zones during the past 12 years (Appendix 3). Of all antlered bucks harvested, 8-pointers were the most frequent point category, followed by 6, 4, and 2 points (Figure 10). Number of points on antlered bucks has remained consistent over the past 4 years (Figure 10).

**Figure 9. Number of antler points on yearling and adult males harvested and brought to check stations during the first four days of the shotgun/rifle deer season, 2011.**



**Figure 10. Antler points of male deer collected at check stations during the shotgun/rifle hunting season in Connecticut, 2011.**



## 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. 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. Although button bucks are included in the antlerless harvest, this system promotes the removal of female deer (Table 11). Overall, deer harvest sex ratios have been similar over the past 3 years (1.1 males per female) (Table 12). Based on observations reported online at the time of harvest, a bias towards harvest of bucks occurs as the season progresses (Table

13). Selectivity towards fawns remains the same (Table 13). In 2011, 53% (6,641) 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 4).

**Table 11. Sex ratios (male:female) and antlered to antlerless ratios of deer harvested in 2011.**

	Muzzleloader	Shotgun/Rifle	Archery	Landowner	Crop Damage	Total
<b>Male:Female</b>	0.76:1	1.58:1	1.00:1	1.43:1	0.80:1	1.18:1
<b>Antlered:Antlerless</b>	0.53:1	1.13:1	0.73:1	1.10:1	0.56:1	0.87:1

**Table 12. Sex ratios (male:female) of deer harvested during Connecticut's regulated hunting seasons, 2008-2011.**

2010		2011		Males per Female				3-year Average
Males	Females	Males	Females	2008	2009	2010	2011	(2008-2010)
7,028	5,850	6,848	5,676	1.1:1	1.1:1	1.2:1	1.2:1	1.1:1

**Table 13. Hunter observations and harvest ratios reported during the archery and shotgun/rifle seasons in Connecticut, 2011.**

	Sept 15- Oct 15				Sept 15 – Nov 15				Nov 16 – Dec 6			
	Obs <sup>1</sup> Total	Obs <sup>1</sup> Percent	Har <sup>2</sup> Total	Har <sup>2</sup> Percent	Obs <sup>1</sup> Total	Obs <sup>1</sup> Percent	Har <sup>2</sup> Total	Har <sup>2</sup> Percent	Obs <sup>1</sup> Total	Obs <sup>1</sup> Percent	Har <sup>2</sup> Total	Har <sup>2</sup> Percent
Bucks	1,303	23%	653	38%	2,768	24%	1,471	42%	3,374	26%	2,748	53%
Does	2,948	51%	809	47%	5,709	49%	1,504	42%	6,527	51%	1,665	32%
Fawns	1,496	26%	257	15%	3,128	27%	564	16%	2,867	22%	816	16%
<b>Total</b>	<b>5,747</b>		<b>1,719</b>		<b>11,605</b>		<b>3,539</b>		<b>12,768</b>		<b>5,229</b>	

<sup>1</sup> Observed  
<sup>2</sup> Harvested

## 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 has remained relatively stable while the antlerless harvest in that zone has increased nearly 5 times (from 200 to almost 1,000 deer annually). The number of roadkills in DMZ 11 has shown a steady decline since 1998 (Figure 11). The ratio of female deer harvested in zone 11 increased from 0.9 females per male (1994-1997) to 1.3 females per male (1998-2011) (Figure 12).

Check stations in DMZs 11 and 12 issued 812 replacement antlerless tags and 104 earn-a-buck tags during the 2011 shotgun/rifle, archery, and muzzleloader deer seasons. Bowhunters reported using 50% of replacement antlerless tags and 100% of replacement either-sex tags. Prior to 2009 and 2010, the previous 3-year average for replacement either-sex tags was about 35.6%.

Figure 11. Comparison of trends in roadkills and the antlered and antlerless deer harvests during the archery deer season in deer management zone 11, 1995-2011.

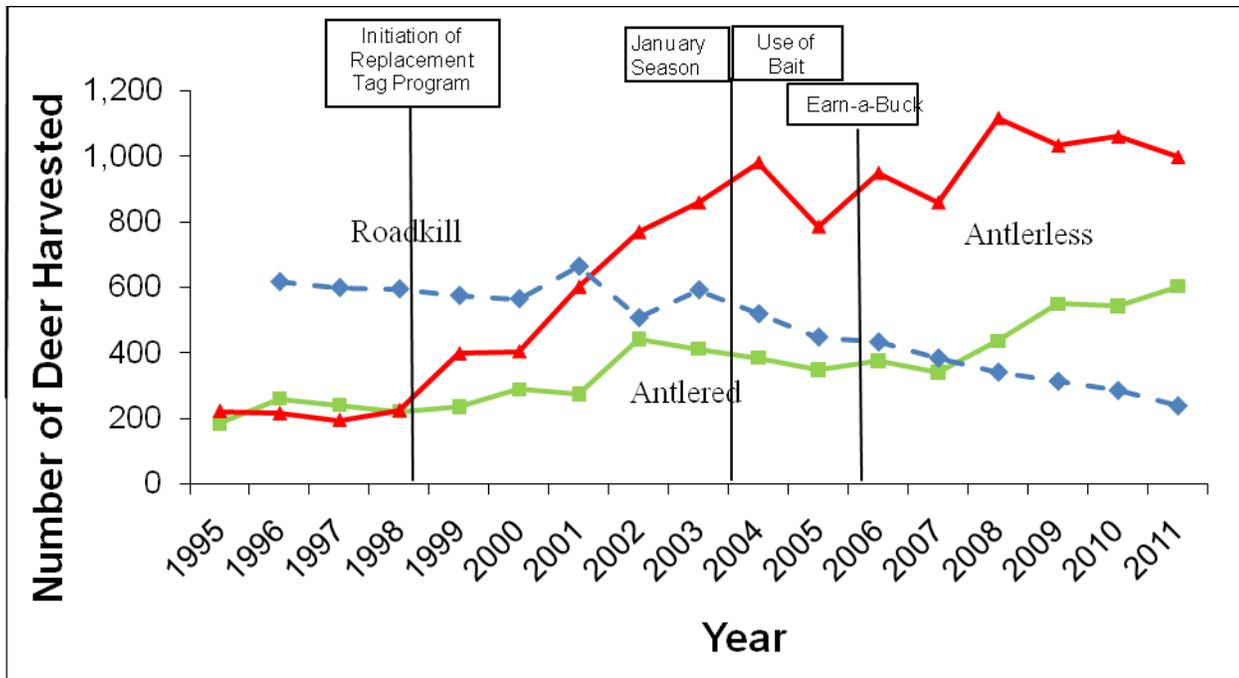
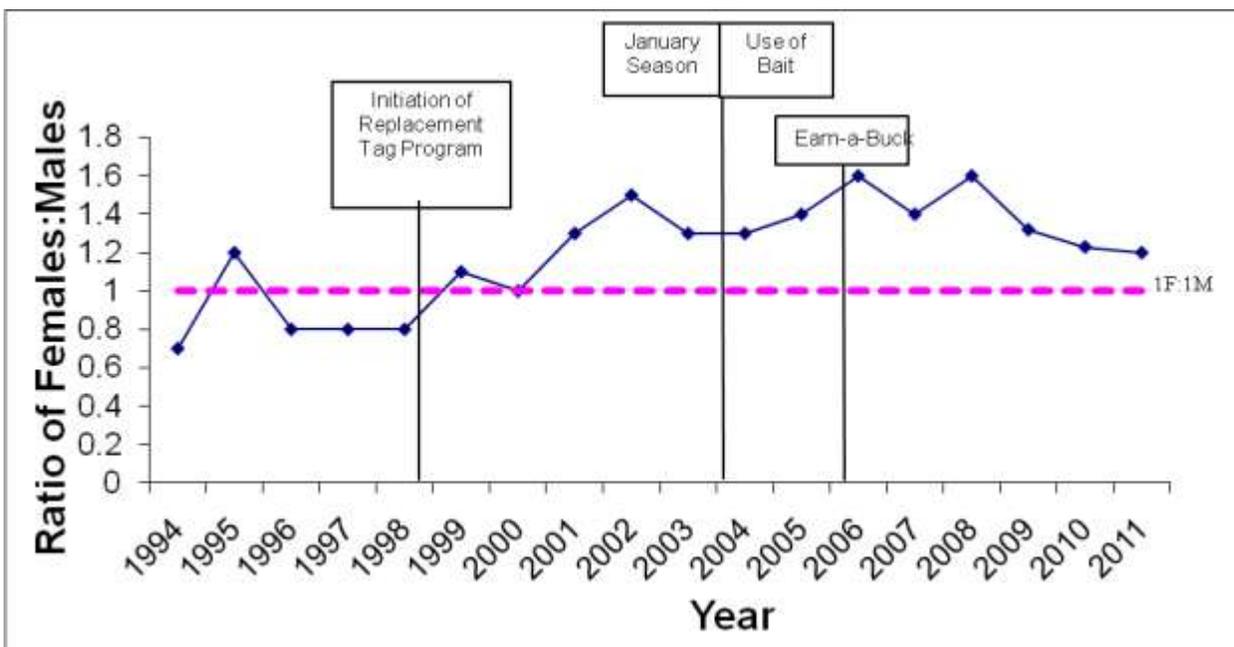


Figure 12. Sex ratios of harvested deer from deer management zone 11 after implementation of the archery antlerless replacement tag program, 1994-2011.



## January Hunter Survey

In February 2011, all hunters that purchased an archery permit in January and provided an e-mail address were contacted via e-mail and requested to complete an on-line January Hunter Survey. A 48% survey response rate was achieved after 2 e-mails were sent. Forty-six percent of hunters who purchased an archery permit in January 2012 hunted in zones 11 and 12 during January, with 26% hunting in January for the first time. Of the first time hunters, 65% used compound bows, while 34% used crossbows. Based on total number of permits sold in January (2,774), it is estimated that 1,276 hunters were afield during the January season. The majority of hunters (62%) spent 4 or more days hunting in January. Of the hunters who purchased an archery permit in January and hunted, 50% expect to use a crossbow during the January 2013 season.

Hunter use of bait during the January season has increased from 48% in 2009 to 72% in 2012. The majority of hunters using bait (79%) believed baiting increased their success rate. Use of automatic feeders to dispense bait was similar in 2011 (38%) and 2012 (33%). Hunters baited with corn (54%), corn and sweet feed (26%), and a combination of various bait types (21%). Twenty-five percent of hunters harvested a deer in January (20% harvested 1 deer and 6% harvested 2 or more deer). The majority of hunters who hunted in January used trail cameras (65%), with an average of 3 cameras per hunter.

## Deer Hunter Expenditures, Effort, and Venison Calculations

Deer hunting-related expenditures contribute significantly to Connecticut's economy. Deer permit sales generated \$1,635,839 in 2010 and \$1,522,180 in 2011 to the Connecticut General Fund. In addition, data collected from the annual deer hunter surveys indicated that Connecticut deer hunters spent an estimated \$9,383,488 on deer hunting-related goods and services in 2011.

In 2011, deer hunters spent a cumulative total of 384,779 days afield. Private and state land shotgun/rifle hunters used the greatest percentage of available hunting days during those seasons (31.7% and 40.0%). Although bowhunters used a smaller percentage of available hunting days (21.6%), the archery season is much longer than the firearms season. Connecticut deer hunters collectively spent slightly less time (30 days per deer taken) and money (\$727 per deer taken) in 2011 compared to 2010 (33 days at \$858 per deer taken). In 2011, hunters harvested an estimated 644,850 pounds (average 50 lbs. of meat/hunter; 288 tons total) of venison at an estimated value of \$4,352,737 (\$6.75/lb).

## 2011 Subscription Rates for State Land Lottery Permits

In 2011, 3,342 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 2011, the total number of lottery hunt areas was 24 during the "A" season and 13 during the "B" season. Fifty-nine percent of all potential lottery permits were issued. Permit issuance reached 100% for 2 of 7 controlled hunt areas (Table 14).

The following example explains how to interpret Table 14. In Deer Lottery Hunting Area (DLHA) 15, 84% of permits were issued. Consequently, DLHA 18 was under-subscribed compared to DLHA 15. The odds of receiving an "A" season permit are greater in areas with low hunter subscription rates. Hunters also should look at harvest levels in the different state land areas when selecting an area to hunt (Appendix 8 and 9).

## Moose Sightings

An increasing moose population in Massachusetts has led to an increased number of moose wandering or dispersing into Connecticut. 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 48 moose sightings in 19 towns in 2011 and 530 sightings over the past 16 years (Figure 13). During the 16-year period, moose sightings were reported in 66 different towns. Sightings were reported from 9 to 22 different towns each year. Moose sighting reports from 7 towns were reported in 9 of the last 16 years. Moose were observed in Barkhamsted, Colebrook, Hartland, Stafford, and Union for 12 of the last 16 years. Most towns where hunters report moose sightings occur along the Connecticut-Massachusetts border. In 2011, an average of 1 moose was observed by hunters for every 1,073 hunter-days spent in the field, similar to the number of days spent hunting to observe a moose in 2010, when 1 moose was observed for every 1,027 hunter-days in the field. Currently, Connecticut has no open hunting season for moose.

**Table 14. Deer lottery selection results by Deer Hunting Lottery Area (DHLA), 2008-2011.**

Deer Hunting Lottery Area	% of Hunting Slots Filled			
	2008	2009	2010	2011
1 <sup>a,d</sup>	64	54	NL	NL
2 <sup>a</sup>	77	74	43	38
3 <sup>a,d</sup>	54	32	NL	NL
4 <sup>a,d</sup>	37	30	NL	NL
5 <sup>a,d</sup>	74	63	NL	NL
6 <sup>a</sup>	100	82	36	39
7	100	85	47	44
8	100	89	50	48
9	100	87	50	58
10 <sup>a</sup>	100	100	60	55
11 <sup>d</sup>	66	57	78	72
12 <sup>d</sup>	60	53	80	69
13 <sup>a</sup>	98	81	52	54
14 <sup>a,d</sup>	52	50	42	45
15 <sup>a,d</sup>	75	77	100	84
16 <sup>d</sup>	77	63	NL	NL
17 <sup>a,d</sup>	32	31	NL	NL
18	76	72	46	43
19 <sup>a,d</sup>	22	25	NL	NL
20 <sup>a,d</sup>	58	61	NL	NL
21 <sup>a,d</sup>	28	30	NL	NL
22 <sup>a</sup>	72	74	32	26
23 <sup>a,d</sup>	40	42	NL	NL
24 <sup>a</sup>	80	69	45	26
25 <sup>a,d</sup>	40	29	NL	NL
26	100	100	100	100
27	100	77	41	52
28	NA	NA	100	100
51 (Yale)	68	60	48	44
52 (Bristol Water Co.)	100	100	100	100
53 (Maromas)	100	100	52	53
54 (Skiff Mt.)	50	76	41	50
56 (BHC-CWSF)	100	100	100	100
57 <sup>d,e</sup> (MDC Colebrook)	23	34	NL	NL
58 <sup>b</sup> (MDC Valentine)	NA	100	93	64
59 <sup>c</sup> (MDC Pine Hill)	NA	100	69	47

<sup>a</sup> Based on "A" season only. "B" season is a "No-Lottery" option.

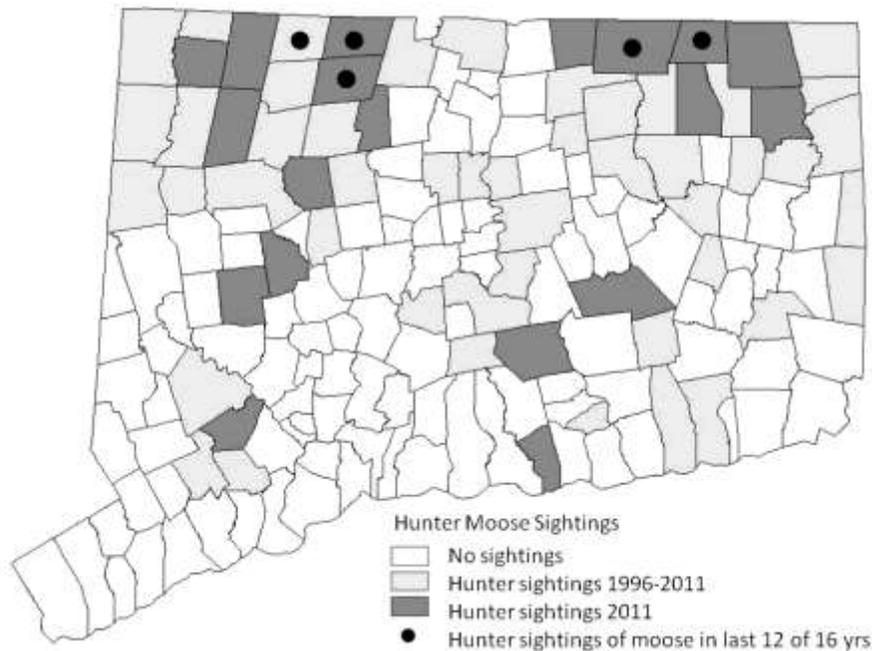
<sup>b</sup> Valentine Area

<sup>c</sup> Pine Hill Area

<sup>d</sup> Based on "A" season only through 2008. In 2009 "B" season became a "No-lottery" option.

<sup>e</sup> Entire area became "No-lottery" in 2010.

**Figure 13. Moose sightings reported on deer hunter surveys, 1996-2011.**



## 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 2011 controlled hunt, 38 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 requested to continue participating in the program. During the 2011 controlled hunt, 20 deer were harvested.

**Maromas Cooperative Management Area (Area 53):** Since 1996, Maromas, a 1,400-acre parcel in Middletown owned by Northeast Utilities, has been open to shotgun and muzzleloader hunting to maintain deer densities at levels compatible with available habitat. During the 2011 controlled hunt, 19 deer were harvested.

**Skiff Mountain (Area 54):** Skiff Mountain is a 710-acre property in Sharon owned by Northeast Utilities. It is open to shotgun and muzzleloader hunting. During the 2011 controlled hunt, 11 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 2011 controlled hunt, 37 deer were harvested during the archery season and an additional 49 deer were harvested during the firearms season.

**MDC Colebrook Reservoir/Hogback Dam (Area 57):** This 4,159-acre parcel in Colebrook was opened to hunting in 1999. During the 2011 controlled hunt, 1 deer was harvested.

**MDC Nepaug Reservoir (Area 58 and 59):** In 2007, MDC 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 2011 controlled hunt, 11 deer were harvested.

**Devil's Den:** The Nature Conservancy owns this 1,660-acre property in Weston and Redding. In 2011, 21 deer were removed.

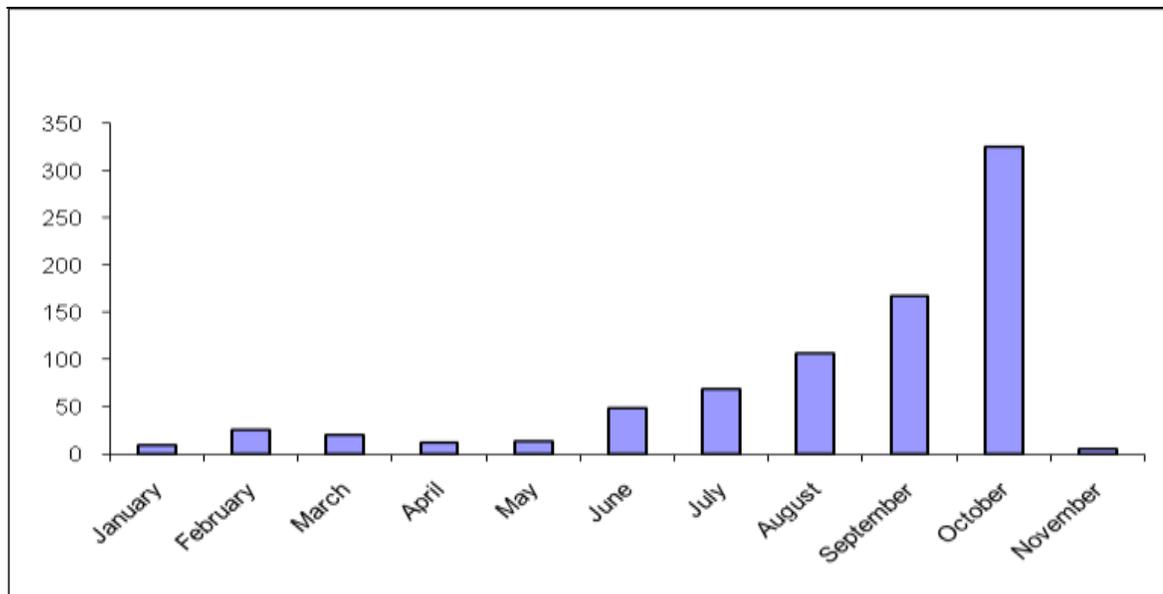
**Bluff Point:** Controlled hunts and DEEP deer removals at Bluff Point Coastal Reserve in Groton have been implemented over the past 17 years to reduce and maintain the deer population at about 25 animals. Since the program started in 1996, 558 deer have been removed from Bluff Point, resulting in improved deer herd health and ecosystem stability. In December 2011, the deer population was estimated to be 43 deer. In February 2012, 17 deer were removed by DEEP personnel. After the February 2011 removal, the population was estimated at 26 deer.

**Greenwich:** Greenwich Audubon initiated a deer management program to reduce the deer population and restore the biological health of this 285-acre sanctuary located in northern Greenwich. In 2011, hunters from Greenwich Sportsmen's and Landowners Association harvested 23 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 that meet specific criteria and are experiencing verifiable 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. During the 2011 calendar year, 804 deer were taken with crop damage permits (Appendix 5). From 1993-2011, annual deer harvest with crop damage permits has fluctuated between 543 and 946 deer. Harvest in DMZ 7 accounted for 15.3% of deer removed with crop damage permits in 2011, different from last year when the majority came from DMZ 11. Crop damage harvest increased steadily from May to October, with 61% of the annual harvest occurring in September and October (Figure 14). Crop damage permits are not valid in November and December; however, 5 deer were harvested with special jacklight permits in November.

**Figure 14. Crop damage harvest by month, 2011.**



## 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 2011, 1,769 non-hunting deer mortalities were reported (Appendix 6). Of those, 1,683 were killed in deer-vehicle collisions. This equates to an average of 4.6 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) in 2011. 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 2011 was 10,098. Nearly 14% (238) of all reported roadkilled deer in Connecticut occurred in DMZ 11 (Fairfield County, Figure 2) in 2011, much lower than in years past (Appendix 7). The number of roadkills in DMZ 11 has shown a steady decline since the implementation of the replacement tag program, extension of the archery season, and the legalization of baiting (Figure 11). Non-hunting mortality comprised 11.6% of the total reported deer mortality in Connecticut, including crop damage harvest (Appendix 6).

## Disease Testing of White-tailed Deer

Over the past 9 years, the Wildlife Division has focused much effort on conducting surveillance for chronic wasting disease (CWD) in deer. CWD is one of a group of diseases called transmissible spongiform encephalopathies (TSE), or prion diseases, that are inevitably fatal to members of the deer family. CWD is closely related to, but different from, other TSEs in other species, such as scrapie in sheep.

CWD was first recognized as a disease in 1967 in captive mule deer at a wildlife research facility in Fort Collins, Colorado. The disease was first diagnosed in free-ranging elk, mule deer, and white-tailed deer in Colorado and Wyoming in 1981, 1985, and 1990, respectively. To date, CWD has been diagnosed in captive cervid facilities in Alberta, Colorado, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New York, Oklahoma, Saskatchewan, South Dakota, and Wisconsin and in free-ranging cervids in Alberta, Colorado, Kansas, Illinois, Maryland, Minnesota, Nebraska, New Mexico, New York, North Dakota, South Dakota, Saskatchewan, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

In 2002, concerns about CWD entering Connecticut prompted the enactment of emergency regulations restricting the movement of live animals into the state. In 2003, the DEEP began its first intensive CWD surveillance program. From 2003 to 2010, a total of 4,374 samples has been collected from hunter harvested and roadkilled deer and tested at either the University of Connecticut's Department of Pathobiology and Veterinary Science or the Wisconsin Veterinary Diagnostic Laboratory, and all tested negative for CWD. In 2011, an additional 565 samples were tested – 252 from high-risk areas along the New York border and 313 from the remainder of the state. All samples were negative for CWD. Due to lack of funding, CWD testing of deer during the 2012 hunting season will be discontinued. However, deer displaying symptoms associated with CWD, such as emaciation, abnormal behavior, and loss of bodily functions, will continue to be tested.

## Conclusion

Over the past 31 years, deer population size, human land-use practices, and public attitudes toward wildlife have changed considerably. Today, hunters may legally take up to 14 deer per year if they participate in all hunting seasons, and additional deer may be taken in 2 of the 13 deer management zones. Historically, permit issuance has 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 be attributed to the poor economy, 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 increased cost of permits. In 2010 and 2011, permit issuance declined again to levels similar to those 20 years ago. This decline may be due to increased costs and the ability to purchase permits at any time. 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 has more than doubled, while roadkills have been exhibiting a steady downward trend. Increased harvest efforts 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. To obtain copies of these reports, check the DEEP Web site ([www.ct.gov/deep](http://www.ct.gov/deep)), or contact the Wildlife Division's Deer Program via e-mail at [deep.franklinwildlife@ct.gov](mailto:deep.franklinwildlife@ct.gov) or call 860-642-7239. 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 on-line ([www.ct.gov/dep/lib/dep/wildlife/pdf\\_files/game/urbandeer07.pdf](http://www.ct.gov/dep/lib/dep/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 Web site as well ([www.ct.gov/dep/lib/dep/wildlife/pdf\\_files/game/deeroptions.pdf](http://www.ct.gov/dep/lib/dep/wildlife/pdf_files/game/deeroptions.pdf)).

**Appendix 1. Total deer harvest and reported roadkilled deer by town, 2011.**

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Andover	30	32	7	8	0	11	0	88
Ansonia	10	5	0	1	0	0	0	16
Ashford	41	106	35	18	3	10	0	213
Avon	10	12	3	3	0	11	0	39
Barkhamsted	23	18	5	7	0	6	0	59
Beacon Falls	8	21	1	4	1	0	0	35
Berlin	19	23	8	9	4	2	0	65
Bethany	38	24	6	12	5	0	0	85
Bethel	51	19	2	12	2	2	0	88
Bethlehem	7	19	1	4	0	3	0	34
Bloomfield	27	9	0	3	0	0	1	40
Bolton	12	26	4	6	11	20	0	79
Bozrah	17	36	18	7	6	7	0	91
Branford	12	8	0	2	6	3	0	31
Bridgeport	0	0	0	0	0	0	1	1
Bridgewater	17	31	4	3	1	4	0	60
Bristol	9	1	0	4	0	8	0	22
Brookfield	76	8	0	10	0	13	0	107
Brooklyn	20	51	16	11	5	16	0	119
Burlington	9	25	0	7	0	10	0	51
Canaan	17	21	2	5	8	4	0	57
Canterbury	28	71	40	21	1	11	1	173
Canton	22	18	3	4	1	12	0	60
Chaplin	31	38	9	14	0	8	0	100
Cheshire	44	26	2	5	47	23	2	149
Chester	15	15	3	3	0	1	0	37
Clinton	25	12	0	4	1	0	0	42
Colchester	41	80	29	8	11	56	1	226
Colebrook	2	5	5	0	0	1	0	13
Columbia	27	51	14	6	5	9	0	112
Cornwall	24	46	9	3	1	6	0	89
Coventry	60	89	13	20	9	27	3	221
Cromwell	3	8	2	0	7	7	0	27
Danbury	65	18	0	4	0	7	0	94
Darien	69	3	0	0	0	13	5	90
Deep River	10	9	3	6	7	2	0	37
Derby	5	1	0	0	0	1	0	7
Durham	29	45	2	13	1	0	0	90
East Granby	6	4	1	2	0	8	0	21
East Haddam	106	137	52	30	1	14	1	341
East Hampton	24	81	15	8	6	18	0	152
East Hartford	7	2	0	0	3	8	0	20
East Haven	16	2	0	1	0	0	0	19
East Lyme	37	57	4	13	8	19	0	138
East Windsor	17	20	4	3	1	6	0	51
Eastford	20	68	8	7	0	4	0	107

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Easton	84	54	3	7	10	19	3	180
Ellington	19	8	14	3	0	6	4	54
Enfield	23	20	5	5	0	3	0	56
Essex	4	4	0	4	0	0	0	12
Fairfield	66	7	0	2	0	18	2	95
Farmington	9	10	0	1	5	22	0	47
Franklin	16	43	11	5	5	4	0	84
Glastonbury	43	52	4	14	57	31	1	202
Goshen	8	35	13	6	1	2	0	65
Granby	7	23	13	3	0	5	1	52
Greenwich	106	0	0	1	0	0	0	107
Griswold	26	79	29	16	39	3	0	192
Groton	51	10	6	1	10	19	0	97
Guilford	63	38	7	9	17	21	4	159
Haddam	40	89	25	21	0	3	0	178
Hamden	19	11	0	3	29	1	0	63
Hampton	28	46	27	11	7	7	0	126
Hartford	0	1	0	0	0	2	0	3
Hartland	7	14	2	1	0	0	0	24
Harwinton	31	32	6	3	8	14	0	94
Hebron	35	62	15	9	8	27	0	156
Kent	29	46	6	8	9	10	0	108
Killingly	25	58	29	15	4	29	0	160
Killingworth	42	53	5	20	0	3	0	123
Lebanon	39	139	48	19	20	28	0	293
Ledyard	28	34	9	5	1	39	0	116
Lisbon	19	21	26	6	0	6	0	78
Litchfield	38	65	18	15	2	21	1	160
Lyme	59	68	18	20	6	2	0	173
Madison	28	11	5	1	0	33	0	78
Manchester	19	11	0	2	0	11	1	44
Mansfield	49	63	9	14	3	39	0	177
Marlborough	23	48	10	9	0	24	1	115
Meriden	9	15	0	0	0	10	1	35
Middlebury	16	8	0	0	0	5	0	29
Middlefield	19	28	5	2	17	0	0	71
Middletown	41	59	9	14	3	6	0	132
Milford	11	2	0	1	1	8	1	24
Monroe	70	6	1	2	0	1	0	80
Montville	29	46	12	15	0	28	0	130
Morris	11	17	3	4	3	7	0	45
Naugatuck	18	16	0	3	0	3	1	41
New Britain	0	0	0	0	0	4	0	4
New Canaan	89	0	0	0	0	26	4	119
New Fairfield	36	11	2	6	0	4	0	59
New Hartford	23	21	7	3	4	9	0	67
New Haven	10	1	0	0	0	3	0	14

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
New London	3	1	0	0	0	0	0	4
New Milford	50	66	9	23	8	2	0	158
Newington	1	0	0	0	0	1	1	3
Newtown	151	74	4	15	11	14	1	270
Norfolk	11	14	6	3	0	3	0	37
North Branford	61	6	1	2	1	62	2	135
North Canaan	11	7	3	2	0	7	0	30
North Haven	10	5	0	0	0	1	1	17
North Stonington	26	92	11	21	14	7	0	171
Norwalk	24	1	0	1	0	4	0	30
Norwich	27	57	7	5	2	17	2	117
Old Lyme	79	31	5	7	0	12	0	134
Old Saybrook	19	2	0	0	0	3	0	24
Orange	60	4	0	0	0	5	3	72
Oxford	28	45	3	2	3	8	1	90
Plainfield	48	68	22	24	5	20	0	187
Plainville	4	4	0	1	0	1	0	10
Plymouth	11	19	12	1	0	5	0	48
Pomfret	37	97	17	17	16	14	0	198
Portland	18	37	3	3	3	21	0	85
Preston	20	33	13	9	24	2	0	101
Prospect	28	10	1	6	0	10	0	55
Putnam	23	24	9	3	0	14	0	73
Redding	162	66	1	14	24	7	0	274
Ridgefield	177	27	0	9	0	56	9	278
Rocky Hill	1	5	0	0	8	3	0	17
Roxbury	19	29	3	6	5	3	0	65
Salem	19	38	6	7	5	11	0	86
Salisbury	93	66	16	19	11	15	2	222
Scotland	19	48	17	16	6	12	0	118
Seymour	32	10	2	4	0	0	0	48
Sharon	52	98	17	30	1	18	1	217
Shelton	60	12	2	5	37	11	0	127
Sherman	24	32	6	17	3	4	0	86
Simsbury	16	11	0	0	0	3	0	30
Somers	17	18	3	8	0	7	0	53
South Windsor	10	12	5	5	5	10	2	54
Southbury	26	29	5	2	10	27	0	94
Southington	28	15	1	1	27	24	1	97
Sprague	5	28	5	5	2	0	0	45
Stafford	64	67	36	15	3	19	1	205
Stamford	61	4	0	1	0	3	1	70
Sterling	20	53	26	15	9	8	0	131
Stonington	52	36	7	12	6	18	1	132
Stratford	10	2	0	0	0	3	0	15
Suffield	25	26	7	4	0	1	0	63
Thomaston	15	4	1	2	2	2	0	26

Town	Archery	Shotgun/Rifle	Landowner	Muzzleloader	Cropkill	Roadkill	Other	Total
Thompson	59	75	26	21	12	15	0	208
Tolland	66	27	14	5	7	26	4	149
Torrington	14	23	5	6	3	3	0	54
Trumbull	29	0	0	0	0	18	6	53
Union	35	53	15	6	0	6	1	116
Vernon	5	5	0	3	0	9	0	22
Voluntown	33	77	24	14	17	1	0	166
Wallingford	37	27	3	8	4	17	1	97
Warren	9	25	2	3	5	1	0	45
Washington	15	37	7	12	18	8	0	97
Waterbury	9	1	0	0	0	6	0	16
Waterford	91	68	12	7	2	4	0	184
Watertown	16	26	5	1	1	2	0	51
West Hartford	2	0	0	0	0	3	0	5
West Haven	18	1	0	0	2	0	0	21
Westbrook	11	17	3	2	0	7	0	40
Weston	79	28	0	1	0	1	0	109
Westport	2	0	0	0	4	0	0	6
Wethersfield	1	2	1	0	4	0	0	8
Willington	19	21	10	7	0	17	0	74
Wilton	123	31	0	9	2	14	1	180
Winchester	5	17	8	2	0	1	0	33
Windham	18	44	6	6	11	12	1	98
Windsor	8	9	2	10	6	2	0	37
Windsor Locks	0	3	0	0	0	4	0	7
Wolcott	16	1	0	4	0	11	0	32
Woodbridge	33	10	1	5	0	15	2	76
Woodbury	12	18	7	7	10	15	1	74
Woodstock	38	103	21	22	14	10	0	194
<b>Totals</b>	<b>5,211</b>	<b>5,068</b>	<b>1,196</b>	<b>1,123</b>	<b>804</b>	<b>1,683</b>	<b>86</b>	<b>15,171</b>

**Appendix 2. Percent of yearling bucks harvested by antler point category, 1986-2011.**

Year	Sample Size	Number of Antler Points on Yearling Bucks									
		1	2	3	4	5	6	7	8	9	10
1986	373	0.8	39.7	13.7	24.4	8.8	8.3	1.6	2.1	0.3	0.3
1987	463	0.2	45.4	14.9	19.7	7.6	8.4	1.5	2.2	0.2	0.0
1988	735	2.3	54.6	11.6	15.5	7.6	5.6	0.7	1.6	0.3	0.3
1989	607	0.8	55.4	14.2	14.8	6.3	4.9	1.3	2.0	0.3	0.0
1990	485	0.4	49.3	14.8	20.4	6.2	5.8	1.0	1.0	0.6	0.4
1991	579	0.0	46.8	14.3	22.1	6.4	7.6	1.0	1.6	0.2	0.0
1992	342	0.3	38.3	13.7	23.4	9.1	10.2	2.6	2.0	0.3	0.0
1993	370	0.3	62.7	14.3	11.9	3.5	4.3	1.6	1.1	0.3	0.0
1994	328	0.6	43.9	14.3	19.8	8.8	9.1	1.5	1.5	0.3	0.0
1995	428	0.7	28.5	13.6	26.2	13.3	11.4	3.5	2.3	0.2	0.2
1996	524	0.8	47.9	13.4	19.5	8.2	7.4	1.5	1.1	0.2	0.0
1997	506	0.4	47.6	11.9	20.4	8.9	7.1	2.6	1.2	0.0	0.0
1998*											
1999	564	0.4	31.2	13.8	28.2	10.5	10.1	2.8	3.0	0.0	0.0
2000	739	0.1	34.4	12.6	24.6	11.9	11.5	3.7	1.2	0.0	0.0
2001	573	0.9	55.0	11.3	18.7	6.5	5.9	0.9	0.9	0.0	0.0
2002	535	3.7	33.1	15.1	26.0	8.0	10.7	2.8	0.6	0.0	0.0
2003	499	0.2	32.0	17.0	25.0	11.6	9.2	3.0	1.4	0.2	0.0
2004	671	1.0	41.0	15.0	22.0	7.0	9.0	2.0	2.0	0.0	0.0
2005	603	3.4	43.1	15.3	20.7	7.6	7.3	1.1	1.9	0.2	0.2
2006	528	2.3	46.2	17.2	17.8	6.8	7.2	2.1	0.4	0.0	0.0
2007	475	4.0	43.2	12.2	21.5	8.4	6.1	2.3	1.3	0.5	0.5
2008	473	1.9	35.3	14.6	21.8	10.1	10.4	3.0	1.9	0.6	0.4
2009	409	3.2	49.1	14.9	17.6	5.6	7.1	1.5	1.0	0.0	0.0
2010	291	0.0	35.7	15.8	22.3	9.3	12.0	3.1	2.4	0.3	0.0
2011	310	0.0	26.5	17.1	25.8	14.5	11.6	2.6	1.6	0.0	0.3
<b>Average</b>	<b>496</b>	<b>1.1</b>	<b>42.6</b>	<b>14.3</b>	<b>21.2</b>	<b>8.5</b>	<b>8.3</b>	<b>2.1</b>	<b>1.6</b>	<b>0.2</b>	<b>0.1</b>

\*No data collected in 1998.

**Appendix 3. Mean number of antler points of yearling males by deer management zone, 1999-2011.**

	1	2	3	4	4A	4B	5	6	7	8	9	10	11	12
1999	3.7	3.5	3.8	3.9			3.8	4	3.3	4.3	3.9	4	3	3.8
2000	3.7	3.7	3.6	3.5			4.1	4.2	3.6	2.9	3.6	3.1	3.2	3.2
2001	3.2	3.1	2.6	2.6			3	2.9	3.2	3.6	3	2.9	3.5	2.8
2002	4.0	4.5	3.0	4.0			5.0	3.5	3.8	3.0	3.5	4.0	4.0	4.0
2003	3.1	3.8	3.6		3.8	3.5	3.4	4	3.8	3.8	3.6	3.6	3.2	3.5
2004	3.2	3.1	3.6		3.6	3.3	3.6	3.2	3.1	3.5	3.4	3.7	3.3	3.0
2005	3.2	3.4	3.7		3.2	3.5	3.3	3.2	3.4	3.5	3.3	3.6	2.3	2.9
2006	2.8	2.7	3.1		2.7	2.9	3.0	3.1	3.4	3.9	3.4	3.5	3.3	3.2
2007	3.4	3.5	3.5		3.1	3.1	2.9	4.1	3.5	4.0	3.6	2.7	3.7	2.3
2008	3.3	5.4	4.1		3.2	3.5	3.4	3.9	3.6	3.1	3.6	3.2	4.1	3.1
2009	3.2	3.2	2.3		2.9	3.3	3.0	2.8	2.9	3.1	3.2	2.9	3.0	3.5
2010	3.2	3.9	3.4		3.9	3.6	3.6	3.6	4.0	3.4	3.5	3.8	4.0	4.0
2011	3.8	4.3	4.3		4.00	3.7	3.9	3.8	3.8	4.1	3.5	3.4	4.6	3.8

**Appendix 4. Sex ratios (male:female) of deer harvested during Connecticut's regulated hunting seasons, 2009-2011.**

Season	2008		2009		2011		3-year Average (2007-2009)		Males per Female		
	Males	Females	Males	Females	Males	Females	Males	Females	2009	2010	2011
<b>Archery</b>											
State Land	431	331	386	267	311	259	358	269	1.3:1	1.5:1	1.2:1
Private Land	1,964	1,992	2,032	1,985	2,277	2,337	1,900	1,804	1.0:1	1.0:1	0.9:1
<b>Subtotal</b>	<b>2,395</b>	<b>2,323</b>	<b>2,418</b>	<b>2,252</b>	<b>2,588</b>	<b>2,596</b>	<b>2,258</b>	<b>2,074</b>	<b>1.0:1</b>	<b>1.1:1</b>	<b>1.0:1</b>
<b>Muzzleloader</b>											
						0	0				
State Land	75	85	82	72	86	77	75	78	0.9:1	1.1:1	1.1:1
Private Land	266	483	332	535	398	558	274	446	0.6:1	0.6:1	0.7:1
<b>Subtotal</b>	<b>341</b>	<b>568</b>	<b>414</b>	<b>607</b>	<b>484</b>	<b>635</b>	<b>349</b>	<b>524</b>	<b>0.6:1</b>	<b>0.7:1</b>	<b>0.7:1</b>
<b>Shotgun/Rifle</b>											
						0	0				
State Land A	396	160	446	244	417	188	437	221	2.5:1	2.5:1	2.2:1
State Land B	66	81	66	63	65	53	82	82	0.8:1	1.8:1	1.2:1
Private Land	2,494	1,885	2,632	1,799	2,594	1,715	2,850	2,088	1.3:1	1.1:1	1.5:1
<b>Subtotal</b>	<b>2,956</b>	<b>2,126</b>	<b>3,144</b>	<b>2,106</b>	<b>3,076</b>	<b>1,956</b>	<b>3,369</b>	<b>2,391</b>	<b>1.4:1</b>	<b>1.4:1</b>	<b>1.6:1</b>
<b>Landowner</b>	407	658	751	471	700	489	615	540	0.6:1	0.6:1	1.4:1
<b>Total</b>	<b>6,099</b>	<b>5,675</b>	<b>6,727</b>	<b>5,436</b>	<b>6,848</b>	<b>5,676</b>	<b>6,591</b>	<b>5,529</b>	<b>1.1:1</b>	<b>1.1:1</b>	<b>1.2:1</b>

**Appendix 5. Deer harvested using crop damage permits in Connecticut's deer management zones, 1999-2011.**

Zone	Year												
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>1</b>	160	159	121	103	106	98	82	64	58	59	55	45	37
<b>2</b>	20	16	7	10	16	24	18	18	17	17	12	19	17
<b>3</b>	52	60	59	44	61	109	105	71	49	76	101	70	99
<b>4</b>	34	43	41	40									
<b>4A</b>					17	9	25	14	21	21	6	4	10
<b>4B</b>					35	46	38	32	33	51	33	39	28
<b>5</b>	48	87	75	46	71	124	129	95	68	119	95	57	93
<b>6</b>	146	112	71	73	77	56	82	77	54	90	58	78	56
<b>7</b>	78	44	49	60	78	90	62	69	89	114	93	88	123
<b>8</b>	42	60	39	47	42	53	37	47	33	42	33	32	28
<b>9</b>	64	59	38	27	42	43	53	48	30	69	79	55	56
<b>10</b>	31	54	48	51	45	36	50	66	51	82	76	75	104
<b>11</b>	113	122	110	104	164	159	114	109	116	111	106	118	93
<b>12</b>	50	52	31	28	72	99	47	45	48	32	33	35	60
<b>Total</b>	<b>838</b>	<b>868</b>	<b>689</b>	<b>633</b>	<b>826</b>	<b>946</b>	<b>842</b>	<b>755</b>	<b>667</b>	<b>883</b>	<b>780</b>	<b>715</b>	<b>804</b>

**Appendix 6. Non-hunting deer mortality reported in Connecticut, 1999-2011.**

<b>Cause of Death</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Road	2,674	3,101	3,038	2,434	2,778	2,620	2,667	2,029	1,967	2,190	1,902	1,456	1,683
Dog	6	9	12	6	11	2	3	3	4	3	1	1	0
Unknown	179	175	190	140	217	183	183	117	162	72	92	49	82
Illegal	10	14	21	13	5	6	2	3	1	9	3	10	4
Crop damage	838	868	689	633	831	946	842	755	667	883	780	715	804
<b>Total</b>	<b>3,707</b>	<b>4,167</b>	<b>3,950</b>	<b>3,226</b>	<b>3,842</b>	<b>3,757</b>	<b>3,697</b>	<b>2,907</b>	<b>2,801</b>	<b>3,157</b>	<b>2,778</b>	<b>2,231</b>	<b>2,573</b>
Non-hunting: Harvest	1:3.0	1:3.2	1:3.0	1:3.7	1:3.0	1:3.6	1:3.4	1:3.4	1:3.9	1:4.0	1:4.2	1:8.0	1:7.1
% Mortality*	25.7	24.4	25.7	19.6	23.3	21.7	22.6	19.3	20.2	20.0	19.1	11.1	11.6
% of Harvest	33.6	31.3	33.1	26.9	30.3	27.7	29.2	29.2	25.3	24.9	23.6	12.4	14.0

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

**Appendix 7. Frequency of deer road kills in each of Connecticut's deer management zones, a 5-year comparison, 2007-2011.**

<b>Zone</b>	<b>Five-year</b>					<b>Habitat</b>	<b>Roadkills/Sq. Mile</b>				
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>			<b>Total</b>	<b>Zonal % (sq. miles)</b>	<b>2009</b>	<b>2010</b>
<b>1</b>	86	92	82	69	82	411	4.5	344.1	0.24	0.20	0.24
<b>2</b>	63	80	82	68	66	359	3.9	409.85	0.20	0.17	0.16
<b>3</b>	173	216	204	136	162	891	9.7	272.1	0.75	0.50	0.60
<b>4A</b>	92	113	85	64	81	0	0.0	213.1	0.40	0.30	0.38
<b>4B</b>	137	166	125	100	115	435	4.7	120.0	1.04	0.83	0.96
<b>5</b>	220	245	207	170	190	643	7.0	444.9	0.47	0.38	0.43
<b>6</b>	111	119	88	65	71	1,032	11.2	259.1	0.34	0.25	0.27
<b>7</b>	180	269	192	156	214	454	4.9	370.9	0.52	0.42	0.58
<b>8</b>	32	26	40	10	15	1,011	11.0	167.6	0.24	0.06	0.09
<b>9</b>	211	199	190	154	199	123	1.3	277.8	0.68	0.55	0.72
<b>10</b>	82	89	80	58	79	953	10.4	243.6	0.33	0.24	0.32
<b>11</b>	384	341	313	285	238	388	4.2	290.76	1.08	0.98	0.82
<b>12</b>	196	235	214	121	171	1,561	17.0	356.4	0.60	0.34	0.48
<b>Total</b>	<b>1,967</b>	<b>2,190</b>	<b>1,902</b>	<b>1,456</b>	<b>1,683</b>	<b>937</b>	<b>10.2</b>	<b>3,770.2</b>	<b>0.50*</b>	<b>0.39*</b>	<b>0.45*</b>

\* These numbers are averages, not totals.

**Appendix 8. Deer harvest on state Deer Lottery Hunting Areas (DLHA), 2011.**

<b>DLHA</b>	<b>Shotgun</b>	<b>Muzzleloader</b>	<b>Archery</b>	<b>Total</b>
2	12	2	3	17
6	9	2	10	21
7	4	2	2	8
8	10	1	7	18
9	14	5	15	34
10	59	22	33	114
11	51	5	28	84
12	34	9	23	66
13	19	4	13	36
14	5	1	6	12
15	22	4	32	58
18	42	16	22	80
22	4	4	12	20
24	10	3	4	17
27	5	0	0	5
28	6	1	6	13
51	37	0	0	37
53	13	1	5	19
54	5	1	5	11
56	47	0	37	84
58	6	0	2	8
59	0	0	1	1
<b>Total</b>	<b>414</b>	<b>83</b>	<b>266</b>	<b>763</b>

**Appendix 9. Archery harvest on state areas, 2011.**

Name Of Area	Total Deer	Female	Male	Unknown
Aldo Leopold WMA	3	2	1	
Algonquin State Forest	13	4	9	
American Legion State Forest	2	2		
Babcock Pond WMA	4	2	2	
Barber Pond WMA	2	1	1	
Barn Island WMA	6	4	2	
Bartlett Brook WMA	2		2	
Bear Hill WMA	2	1	1	
Beaver Brook State Park	1	1		
Bennett's Pond State Park	9	1	8	
Bigelow Hollow State Park	3	1	2	
Bishops Swamp WMA	1		1	
Black Rock Lake	2		2	
Bloomfield Flood Control Area (Site 1)	6	3	3	
Bloomfield Flood Control Area (Site 2)	3	2	1	
Cedar Swamp WMA	1	1		
Centennial Watershed SF	33	16	17	
Centennial Watershed SF (Canaan Block)	3	2	1	
Centennial Watershed State Forest (BHC)	4	2	2	
CL&P (borders Newgate WMA)	1	1		
Cockaponset State Forest	33	16	16	1
Collis P Huntington State Park	1	1		
Cromwell Meadows WMA	2	1	1	
Devils Den	1			1
East Swamp	1		1	
East Twin Lakes Water Access Area	5	3	2	
Eight Mile River WMA	4	2	2	
Ellithorpe Flood Control Area	1		1	
Franklin Swamp WMA	2		2	
George C Waldo S.P.	1	1		
Goshen WMA	1		1	
Great Swamp Flood Control Area	1		1	
Hancock Brook Lake	2	2		
Harkness/Verkades	2	1	1	
Higganum Meadows WMA	5	3	2	
Higganum Reservoir	1		1	
Housatonic River WMA	11	6	5	
Housatonic State Forest	4	1	3	
Jim Spignesi WMA	4	1	3	
John Minetto State Park	2		2	
Killingly Pond State Park	1		1	
Kollar WMA	9	6	3	
Mansfield Hollow Lake	11	4	7	
Mansfield State-Leased Field Trial Area	5	2	3	
Mattatuck State Forest	8	4	4	
MDC - Pine Hill Block	1		1	
MDC - Valentine Block	2	2		
MDC Greenwoods	3	1	2	
Meshomasic State Forest	28	13	15	

Name Of Area	Total Deer	Female	Male	Unknown
Messerschmidt WMA	2	1	1	
Mount Riga State Park	4		4	
Nassahegon State Forest	1	1		
Natchaug State Forest	22	7	15	
Nathan Hale State Forest MGMT. Area	13	5	8	
Naugatuck State Forest	11	3	8	
Naugatuck State Forest (Great Hill Block)	4	2	2	
Naugatuck State Forest (Quillinan Reservoir Block)	6	1	5	
Nehantic State Forest	9	2	7	
Nepaug State Forest	1	1		
Newgate WMA	4	2	2	
Nipmuck State Forest	28	12	15	1
Northfield Brook Lake	2		2	
Nott Island	1	1		
NU-Maromas Coop WMA	5		5	
NU-Skiff Mtn. Coop WMA	5	1	4	
Nye Holman State Forest	10	5	5	
Pachaug State Forest	43	23	20	
Paugnut State Forest	4	3	1	
Paugussett State Forest	7	2	5	
Pease Brook WMA	1			1
Peoples State Forest	2		2	
Pomeroy State Park	1	1		
Pootatuck State Forest	2	1	1	
Quaddick State Forest	7	5	2	
Quinebaug River WMA	2	1	1	
Quinnipiac River Marsh	1		1	
Quinnipiac River State Park	6	3	3	
Ragged Rock Creek WMA	3		3	
Red Cedar Lake	1	1		
Robbins Swamp WMA	2	1	1	
Roraback WMA	15	12	3	
Rose Hill WMA	6	2	4	
Ross Marsh WMA	4	2	2	
Salmon River Cove & Haddam Neck	10	3	7	
Salmon River State Forest	21	11	10	
Scantic River State Park	5	4	1	
Selden Island State Park	1		1	
Sessions Woods WMA	1		1	
Shenipsit State Forest	21	11	10	
Simsbury WMA	5	3	2	
Sunnybrook State Park	1		1	
Talbot WMA	7	2	5	
Thomaston Dam	1		1	
Tunxis State Forest	4	2	1	1
West Thompson Dam	2	1	1	
Wooster Mountain State Park	3	2	1	
Wopowog WMA	2	1	1	
Wyantenock State Forest	3	2	1	
<b>Total</b>	<b>575</b>	<b>259</b>	<b>311</b>	<b>5</b>