

# NYSDEC Chronic Wasting Disease Surveillance Summary 2014-2015

## Summary

With the *Surveillance Plan for Chronic Wasting Disease in New York State 2013-14*, the NYSDEC initiated a revised method for determining CWD testing sample quotas. The new sampling method was informed by the results of an evaluation of potential risks related to CWD introduction and exposure to wild white-tailed deer in New York. County-level sampling quotas are determined based on an analysis of field survey data collected by regional staff, deer population density estimates, and proximity to states with known CWD occurrences. A point system is used for the sampling quotas, in which each deer sampled is given a point value based on its sex and age. This point system encourages the collection of adult deer to increase their representation in the sample.

DEC staff collected **2,335 hunter-harvested deer**, totaling 4,183.5 points, exceeding the 2014-15 sampling quota of 3000 points by 39.5% and virtually matching last year's point total of 4,179.0. The total number of deer samples collected dropped by 6.9% from the 2013-14 season. However, the number of adult male deer collected increased by 17% since last year. The continued emphasis on collecting adult bucks is because of their high prevalence rates in states with CWD. An **additional 86 clinical suspect** deer were submitted for testing, for a **total of 2421 deer tested**. **CWD was not detected in any deer tested this year.**

In 2013, DEC also began a program to have taxidermists collect retropharyngeal lymph nodes directly to collect more mature bucks and reduce DEC staff processing time. Twenty-seven taxidermists submitted lymph node tissue from 394 deer. Only 4 (1.0%) samples were unsuitable for testing. The process is growing in popularity and we plan to continue this program in future years.

## Sampling

### Clinical suspect deer

In accordance with the general Wildlife Health Program Submission Guidelines, the highest importance was put on retrieving suspect animals year-round; these include deer acting abnormally, thin/emaciated, or easily approached that can be signs of a diseased animal. DEC Field Staff collected 86 clinical deer during 2014; no CWD was detected in these deer.

### Hunter-harvested deer

For sampling apparently normal hunter-harvested deer in 2014, we continued our weighted point system to increase the proportion of older age classes tested. Adult bucks 2.5 years and older were valued at 3 points, adult does 2.5 years and older were 1.5 points, yearling deer of either sex were 1 point and fawns were 0 points and generally not collected as samples.

The statewide goal was 3000 points distributed across the state by county. That goal was set by 1000 points proportioned by population density as determined by deer harvest, 1500 points proportioned by 'risk locations,' and 500 points across the 10 counties bordering Pennsylvania (50 each).

The total statewide sampling quota for hunter-harvested deer during the 2014-15 season was 3,000 points, the same as for the 2013-14 season. Points were allocated among counties based on 1) the accumulations of risks that may contribute to CWD introduction (1500 points); 2) the estimated white-tailed deer population density (1000 points); and 3) adjacency to Pennsylvania where CWD was first detected in 2012 (500 points). The sampling goals for each county are shown on the map in figure 1.

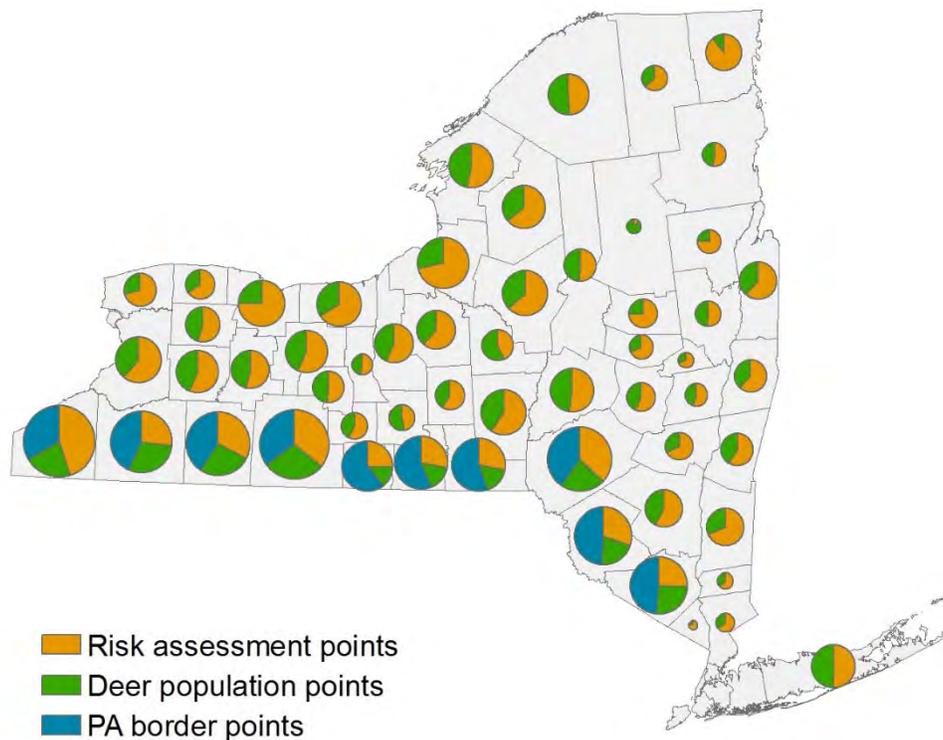


Figure 1. Sampling Goals by County

Including clinically suspect deer, a total of 2421 deer were sampled during the 2014-15 season. The number of hunter-harvested deer decreased this year by 6.9% from last year's total of 2,509 (Table 1). Although the number of females and yearling males collected decreased by a total of 15.0%, the number of adult males increased by 17.1%. The increase in the collection of adult buck samples is a trend that has continued from last year and was anticipated due to the continued expansion of the Taxidermy Partnership Program. Adult bucks are valuable samples because they have the highest prevalence rates in states with CWD. This is likely due to their large home ranges and behaviors during the rut. CWD was not detected in any sample collected.

Sampling was conducted at the Wildlife Health Unit for deer heads from Regions 1-5 and 7, Rome Check Station for Region 6, and John White Game Farm for deer heads from Regions 8-9. Field staff collected deer heads from meat processors and taxidermists. As in previous years, deer were collected through all seasons, with the majority being collected during the Archery season (Table 2).

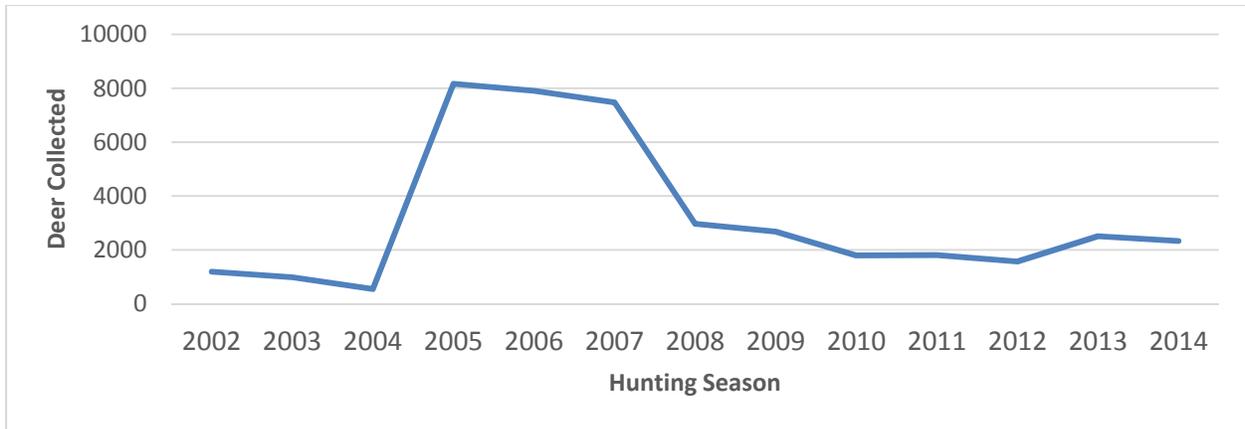


Figure 2. Total number of deer sampled per year (2006-2013)

All data were entered in the CWD Surveillance Database at WHU directly from Deer Kill Reports. Reports for running point totals by county were generated from the CWD database and distributed frequently to field staff to help them reach the county sample quotas (Table 3). County totals were met or exceeded for 87% of counties (excluding Region 2). By Region, sample quotas were exceeded for Regions 2, 3, 4, 5, 6, 7, 8, and 9.

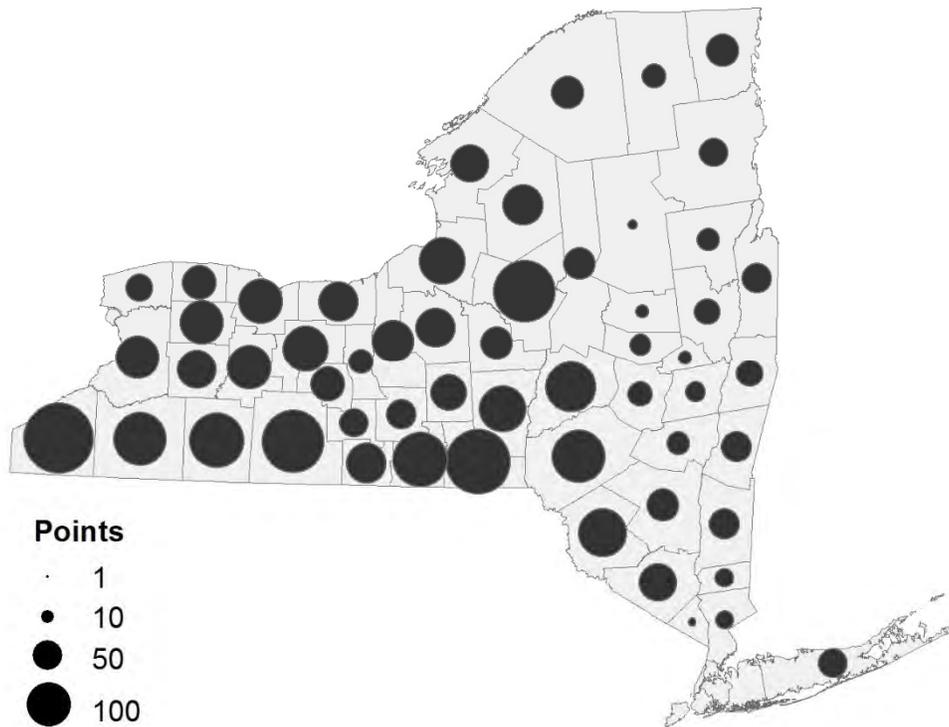


Figure 3. Total points collected by county

In 2014-15, there were 109 meat processors and taxidermists that provided samples, of which 36 had not collected samples in 2013-14. There were 19 collectors in 2013-14 that did not provide samples in 2014-15.

Taxidermists and processors submitted a total of 2335 samples that could be analyzed. Of the 1845 tissue samples submitted by meat processors, 1830 were heads and 15 were lymph nodes. 87% (381/438) of samples submitted by taxidermists were lymph nodes. A small group of businesses operate as both taxidermists and processors. These businesses submitted 52 samples, of which 39 were heads and 13 were lymph nodes.



Figure 4. CWD cooperators among taxidermy and processing operations

### Taxidermy Partnership Program

Taxidermists were queried in the 2012 field survey as to their willingness to provide deer heads and/or collect samples directly. Volunteers also signed up at the 2013 and 2014 NYS Taxidermy Conferences held in Syracuse, NY. DEC also targeted taxidermists in counties bordering Pennsylvania by sending 140 letters in July to these taxidermists to determine if they would like to collect heads or samples and how many they anticipated receiving. The letter also included the CWD Fact Sheet, CWD carcass import regulations, and information on proper disposal of deer carcasses or parts. An enclosed post card was returned to indicate interest in the program.

Starting in 2013, taxidermists were paid \$10 per head or \$15 for packaged tissue samples and lower jaw (for aging by DEC staff). All materials, including an instructional DVD, were provided by DEC. Taxidermists were instructed to freeze heads or tissues that would be collected periodically by regional

DEC staff. The number of taxidermists participating in the program increased from 8 last year to 27 in 2014-15. Taxidermists submitted a total of 394 lymph node samples. Only 7 samples submitted by taxidermists were unsuitable for testing. The taxidermy program appears to be operating efficiently. It has been well received by DEC staff and will be continued in the future.

Improvement was noted this year in incorporating taxidermist samples in to quotas. Communication between DEC field staff and participating taxidermists is important to ensure heads/samples are collected in a timely manner.

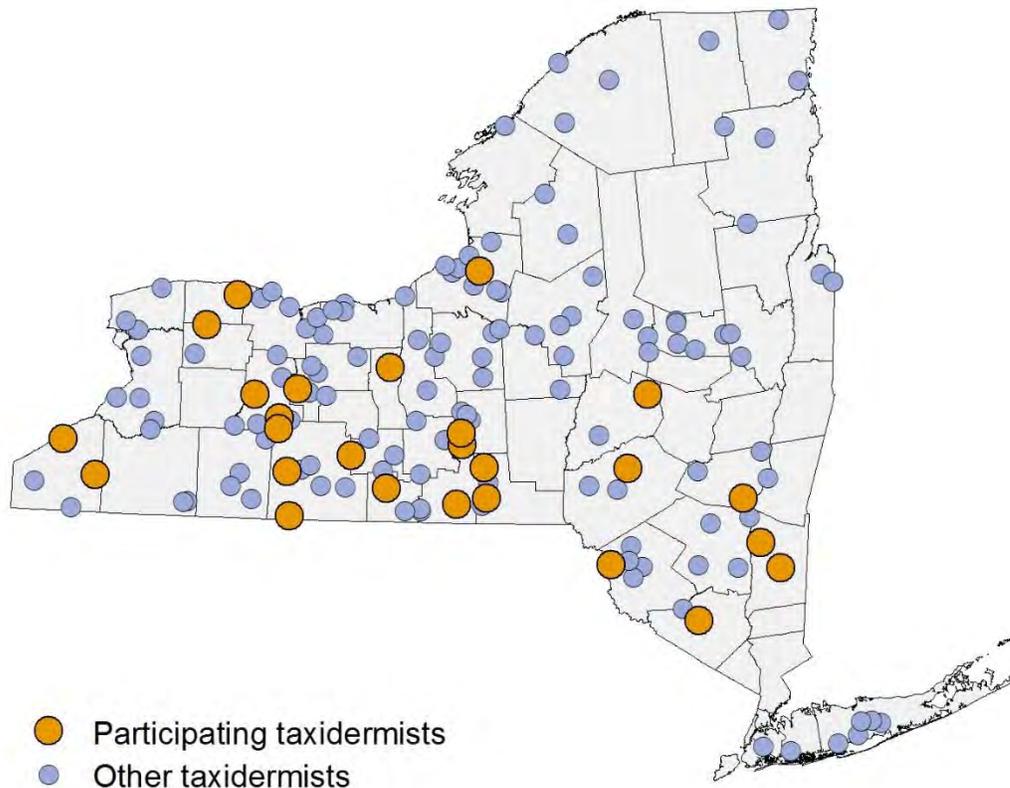


Figure 5. Taxidermists participating in CWD program

## Payments

If collectors participated in 2012 and 2013, they were not required to complete an additional W-9 form for tax certification purposes. New collectors had to submit a W-9 and a voucher. Some regions scanned and emailed forms to WHU to speed up the processing. There were relatively few errors this as regional staff were familiar with paperwork and processing. Taxidermists collecting tissues also must submit a lower jaw from the deer to be aged by DEC staff. Regional staff checking completion of forms in the field is critical for timely processing. Delays in payment are a product of the process involving timely submission of vouchers, mail delays, completion of testing, results communication, DEC fiscal processing, and the Office of Management and Budget, Office of the State Comptroller.

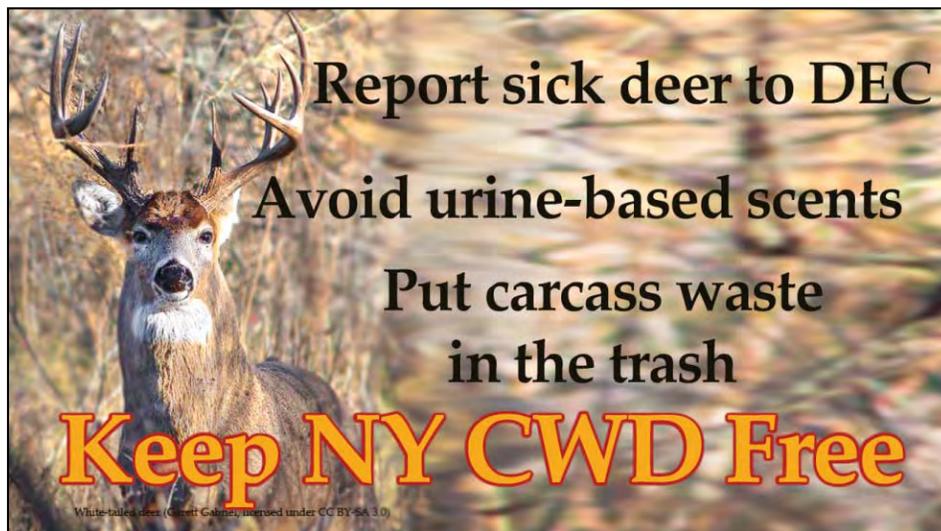
## Outreach

Considerable outreach and education efforts were continued in 2014. The CWD Sampling video is now available on DVD and DEC's YouTube page (<https://www.youtube.com/watch?v=Owvpv30uIOvk>).

DEC also handed out CWD informational refrigerator magnets (Figure 1) at the New York State Fair Sportsman's education booth. Dr. Krysten Schuler (AHDC) spent a full day each of the 2014 NYS Taxidermists conference in Syracuse and 2014 NY Bowhunters annual meeting in Geneva with an educational display that included presentation of the CWD Sampling DVD and an actual deer head and lymph nodes for hands-on demonstrations. Dr. Schuler gave a presentation on CWD to the NY Bowhunters at their annual meeting and wrote an article on CWD basics for veterinarians for the NYS Veterinary Society magazine.

To reach the general public, DEC provided a press release, had a full page of information in the New York Hunting and Trapping Guidelines, updated and distributed the CWD Fact Sheet, provided a poster to be displayed at license sales vendors, and updated the DEC website.

Figure 1. Magnet distributed at New York State Fair DEC Sportsman's Education booth



**Table 1.** Sex and Age class categories for New York State chronic wasting disease surveillance since 2006. [\* indicates that clinical deer were not included in the sample]. The top table represents actual numbers and the bottom table is percentages.

Sex	Age	2006	2007	2008	2009	2010	2011	2012*	2013*	2014*
F	Adult	1,844	1,967	1,218	857	573	595	553	785	705
	Yearling	846	865	359	285	241	276	173	300	255
	Unknown	245	109	38	34	12	14	0	2	1
M	Adult	1,301	1,313	1,645	479	280	262	318	643	753
	Yearling	3,311	3,029	1,112	941	657	618	525	766	613
	Unknown	272	134	39	62	17	15	0	1	3
U	Adult	29	25	29	11	3	11	1	5	4
	Yearling	42	21	10	7	6	14	2	6	1
	Fawn	1	0	2	0	0	0	0	0	0
	Unknown	16	10	3	3	3	1	0	1	0
<b>Total</b>		7,907	7,473	4,455	2,679	1,792	1,806	1,572	2,509	2,335
<b>Points</b>		11,430.0	11,082.5	8,352.0	4,065.5	2,638.5	2,627.5	2,482.5	4,179.0	4,183.5
<b>Clinicals</b>		107	81	65	32	28	21	90	88	86

Samples collected by sex and age (% of annual totals)

Sex	Age	2006	2007	2008	2009	2010	2011	2012*	2013*	2014
F	Adult	23%	26%	27%	32%	32%	33%	35%	31%	30%
	Yearling	11%	12%	8%	11%	13%	15%	11%	12%	11%
	Unknown	3%	1%	1%	1%	1%	1%	0%	0%	0%
M	Adult	16%	18%	37%	18%	16%	15%	20%	26%	32%
	Yearling	42%	41%	25%	35%	37%	34%	33%	31%	26%
	Unknown	3%	2%	1%	2%	1%	1%	0%	0%	0%
U	Adult	0%	0%	1%	0%	0%	1%	0%	0%	0%
	Yearling	1%	0%	0%	0%	0%	1%	0%	0%	0%
	Fawn	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Unknown	0%	0%	0%	0%	0%	0%	0%	0%	0%

**Table 2:** Deer and associated points by hunting seasons for the 2012-2013 and 2013-2014 collection years.

Season	2012-13		2013-2014		2014-15	
	Deer	Points	Deer	Points	Deer	Points
Archery	864	1325.5	1332	2049	1411	2311
Muzzleloading	190	274.5	184	266	209	323
Off-season	0	0	1	1	0	0
Regular	517	881	964	1817.5	693	1485
Special	0	0	26	41.5	17	30.5
Youth Hunt	1	1.5	2	4	5	11.5
<b>Total</b>	<b>1572</b>	<b>2482.5</b>	<b>2509</b>	<b>4179</b>	<b>2335</b>	<b>4161</b>

**Table 3:** Deer and associated points by county for the 2012-2013 and 2013-2014 collection years.

Region	County	2012-13		2013-2014				2014-15			
		Deer	Points	Deer	Points	Target	% of Target	Deer	Points	Target	% of Target
1	Nassau	0	0	0	0	21	0%	0	0	21	0%
	Suffolk	14	32.5	36	61.5	68	90%	24	47	63	75%
	<b>1 Total</b>	<b>14</b>	<b>32.5</b>	<b>36</b>	<b>61.5</b>	<b>89</b>	<b>69%</b>	<b>24</b>	<b>47</b>	<b>84</b>	<b>56%</b>
2	Bronx	0	0	0	0	1	0%	0	0	1	0%
	Kings	0	0	0	0	1	0%	0	0	1	0%
	New York	0	0	0	0	0	100%	0	0	3	0%
	Queens	0	0	0	0	1	0%	0	0	1	0%
	Richmond	0	0	0	0	1	0%	0	0	1	0%
	<b>2 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0%</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0%</b>
3	Dutchess	26	42	26	45	45	100%	19	51	48	106%
	Orange	22	57	64	99	94	105%	32	74	103	72%
	Putnam	7	10.5	9	19.5	12	163%	9	21.5	11	195%
	Rockland	1	3	2	6	5	120%	2	4.5	4	113%
	Sullivan	20	48	57	151.5	95	159%	44	115.5	102	113%
	Ulster	27	52	32	62	48	129%	22	57	47	121%
	Westchester	12	19.5	7	14	13	108%	10	20.5	14	146%
	<b>3 Total</b>	<b>115</b>	<b>232</b>	<b>197</b>	<b>397</b>	<b>312</b>	<b>127%</b>	<b>138</b>	<b>344</b>	<b>329</b>	<b>105%</b>
4	Albany	20	28.5	15	30	22	136%	17	24.5	20	123%
	Columbia	21	36	27	43	40	108%	29	52	37	141%
	Delaware	41	69	106	238.5	110	217%	53	135.5	124	109%
	Greene	17	29.5	16	33	30	110%	13	31	28	111%
	Montgomery	14	18.5	18	26.5	21	126%	16	27	22	123%
	Otsego	34	50.5	62	114	61	187%	54	124	63	197%
	Rensselaer	22	39	22	41.5	38	109%	28	40	37	108%
	Schenectady	9	12.5	8	10	10	100%	7	12.5	10	125%
	Schoharie	27	46.5	30	45	30	150%	14	35.5	30	118%
	<b>4 Total</b>	<b>205</b>	<b>330</b>	<b>304</b>	<b>581.5</b>	<b>362</b>	<b>161%</b>	<b>231</b>	<b>482</b>	<b>371</b>	<b>130%</b>
5	Clinton	18	27	29	40	41	98%	37	58.5	45	130%
	Essex	31	47.5	25	41.5	20	208%	23	46.5	21	221%
	Franklin	30	38	25	37.5	28	134%	26	33.5	25	134%
	Fulton	5	11	4	8	29	28%	7	11	31	35%
	Hamilton	5	7	7	19	8	238%	4	6.5	9	72%
	Saratoga	21	32.5	21	33	26	127%	18	37	25	148%
	Warren	10	13.5	12	18.5	21	88%	15	29	21	138%
	Washington	32	42	29	49.5	47	105%	25	49	47	104%
	<b>5 Total</b>	<b>152</b>	<b>218.5</b>	<b>152</b>	<b>247</b>	<b>220</b>	<b>112%</b>	<b>155</b>	<b>271</b>	<b>224</b>	<b>121%</b>
6	Herkimer	22	38.5	28	56.5	39	145%	30	55.5	37	150%
	Jefferson	43	62	45	72.5	62	117%	48	76	66	115%
	Lewis	27	51	41	85	57	149%	40	83.5	61	137%
	Oneida	90	139	104	162	63	257%	108	178	68	262%
	St. Lawrence	50	74.5	61	94	76	124%	41	59	57	104%
	<b>6 Total</b>	<b>232</b>	<b>365</b>	<b>279</b>	<b>470</b>	<b>297</b>	<b>158%</b>	<b>267</b>	<b>452</b>	<b>289</b>	<b>156%</b>
7	Broome	37	49	113	179.5	88	204%	109	193	90	214%

Region	County	2012-13		2013-2014				2014-15			
		Deer	Points	Deer	Points	Target	% of Target	Deer	Points	Target	% of Target
	Cayuga	35	48.5	44	68	54	126%	53	91	51	178%
	Chenango	36	53	56	78.5	59	133%	64	107.5	67	160%
	Cortland	26	34.5	31	39.5	33	120%	35	69	32	216%
	Madison	25	35.5	37	51.5	38	136%	37	56	35	160%
	Onondaga	41	54.5	49	63	54	117%	56	81	52	156%
	Oswego	57	80.5	85	113.5	97	117%	73	107.5	84	128%
	Tioga	27	41	74	131.5	89	148%	59	141.5	89	159%
	Tompkins	23	30.5	36	54	27	200%	28	47.5	25	190%
	<b>7 Total</b>	<b>307</b>	<b>427</b>	<b>525</b>	<b>779</b>	<b>539</b>	<b>145%</b>	<b>514</b>	<b>894</b>	<b>525</b>	<b>170%</b>
8	Chemung	18	25.5	50	87	82	106%	55	82.5	82	101%
	Genesee	23	35	35	57.5	44	131%	44	95.5	42	227%
	Livingston	20	43.5	30	55	48	115%	47	99.5	50	199%
	Monroe	23	57.5	35	70	68	103%	45	98.5	69	143%
	Ontario	35	66.5	58	98.5	57	173%	70	106	60	177%
	Orleans	12	19	27	42	32	131%	37	61.5	32	192%
	Schuyler	20	28.5	28	40	21	190%	27	45.5	26	175%
	Seneca	11	22.5	20	36	17	212%	20	35	17	206%
	Steuben	50	98	107	189	147	129%	93	181	142	127%
	Wayne	36	51	47	72	62	116%	44	81.5	65	125%
	Yates	24	43.5	24	41.5	31	134%	39	62.5	35	179%
	<b>8 Total</b>	<b>272</b>	<b>490.5</b>	<b>461</b>	<b>788.5</b>	<b>609</b>	<b>129%</b>	<b>521</b>	<b>949</b>	<b>620</b>	<b>153%</b>
9	Allegany	50	77	98	136.5	128	107%	96	143.5	123	117%
	Cattaraugus	50	74.5	104	151	126	120%	92	135.5	115	118%
	Chautauqua	62	88.5	199	358.5	147	244%	148	223	150	149%
	Erie	48	62	60	84.5	67	126%	63	96	68	141%
	Niagara	29	33	48	60.5	39	155%	31	41.5	38	109%
	Wyoming	36	52	44	61	61	100%	54	79.5	60	133%
	<b>9 Total</b>	<b>275</b>	<b>387</b>	<b>553</b>	<b>852</b>	<b>568</b>	<b>150%</b>	<b>484</b>	<b>719</b>	<b>554</b>	<b>130%</b>
	<b>Grand Total</b>	<b>1572</b>	<b>2482.5</b>	<b>2507</b>	<b>4176.5</b>	<b>3000</b>	<b>139%</b>	<b>2334</b>	<b>4158</b>	<b>3003</b>	<b>138%</b>

**Table 4:** Tissue types submitted for testing in sample year 2013-2014. Only 14 samples were unusable and there were several reasons including tissues not available or inappropriate tissue submitted.

<b>Tissue</b>	<b>2013-14</b>		<b>2014-15</b>	
	<b>Deer</b>	<b>Points</b>	<b>Deer</b>	<b>Points</b>
Head	2,313	3,608.5	1,926	2,997.5
Lymph node	194	566.5	409	1,163.5
Obex	1	1	0	0
Tonsil	1	3	0	0
<b>Total</b>	<b>2,509</b>	<b>4,179.0</b>	<b>2,335</b>	<b>4,161.0</b>

**Reasons for unsuitable samples**

<b>Processors</b>	<b>2013-14</b>	<b>2014-15</b>
Lymph nodes destroyed	3	0
No lymph nodes	3	0
Unsuitable tissue	2	0
Salivary gland submitted	3	7
No reason provided	2	0
<b>Taxidermist</b>		
Salivary gland submitted	1	4
<b>TOTAL</b>	<b>14</b>	<b>11</b>

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