



QDMA's **Whitetail Report 2018**

*An annual report on the status of white-tailed deer -
the foundation of the hunting industry in North America*

Compiled and Written by the QDMA Staff



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NATIONAL HEADQUARTERS

170 Whitetail Way
P.O. Box 160
Bogart, GA 30622

(800) 209-3337 • QDMA.com

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INFORMATION & ASSISTANCE

Members of the media who have questions about the *Whitetail Report*, need additional information, or need expert sources for stories on whitetail biology or management, can contact QDMA's Education & Outreach staff at any time using the information below, or contact the National Office at (800) 209-3337.



KIP ADAMS *Knoxville, Pennsylvania*

- QDMA Director of Conservation
- Certified wildlife biologist
- Certified taxidermist

Bachelor's: Penn State University

Master's: University of New Hampshire

e-mail: kadams@qdma.com

office: (814) 326-4023

cell: (570) 439-5696



MATT ROSS *Saratoga Springs, New York*

- QDMA Assistant Director of Conservation
- Certified wildlife biologist
- Licensed forester

Bachelor's: University of Massachusetts

Master's: University of New Hampshire

e-mail: mross@qdma.com

office: (518) 886-1732

cell: (518) 391-8414

INTRODUCTION

BY KIP ADAMS



White-tailed deer are the most important game species in North America. More hunters pursue whitetails than any other species, and whitetail hunters contribute more financially than any other hunter segment. Collectively speaking, whitetails are the foundation of the entire hunting industry.

That's why I am so excited we can bring you this annual report on the status of whitetail hunting and management programs. We are in a unique position to be able to gather data from state and provincial wildlife agencies, the nation's leading deer researchers, and other sources to provide a true "State of the Whitetail" address for hunters, landowners, natural resource professionals and the media.

So, how are whitetails and deer hunters doing? There are some very positive trends occurring. **Yearling buck harvest rates remain at record low numbers, and the percentage of 3½-year-old and older bucks remains at a third of the total antlered buck harvest.** Hunters are clearly reaping the benefits of more naturally balanced age structures in herds across the whitetail's range.

In addition, **4 percent more antlered bucks (those 1½ years or older) were shot last season than the year before,** and last season's buck harvest was 3 percent above the previous five-year average. This is a very positive sign for deer hunters and managers.

On the contrary, antlerless harvest was down 1 percent from the prior year, and it was 11 percent below the five-year average. **The antlerless harvest has now declined 19 percent in the past decade.** In 1999 hunters harvested more antlerless deer than antlered bucks for the first time in recorded history, and in 2016-17 that harvest trend nearly flip-flopped as hunters shot 2,818,571 antlered bucks and only 2,830,264 antlerless deer. This was a mere difference of 11,693 deer! Regarding the 2016-17 total harvest, 65 percent of deer were shot with a firearm, followed by 23 percent with a bow, 11 percent by muzzle-loader, and 1 percent by other means.

The biggest issues and trends include the continued spread of chronic wasting disease (CWD). **CWD made major headlines in Arkansas, Michigan and Montana in 2017.** Last year state wildlife agencies collected approximately 100,000 CWD samples. This was nearly double the number collected in 2008, but Missouri was responsible for more than a quarter of the total. Many states, like Wisconsin, are collecting fewer samples today. Crossbows are now legal for the majority of hunters during at least a portion of the archery season in 78 percent of states. This is up from 57 percent in 2012. Trail-cameras with texting capabilities are legal during hunting season in 93 percent of states, while drones are only legal in 38 percent of states. Finally, the U.S. Fish and Wildlife Service claims hunter numbers have declined by over two million from 2011 to 2016, while state wildlife agencies report a nearly identical number of deer hunters in 2007 and 2017.

All of this information and much more is included in the following pages. I hope you enjoy the data, interpretations, and

QDMA's recommendations as you read this report. Each annual report is different as they cover the most pressing issues of that year, so if you enjoy this one be sure to check out the other reports going back to 2009 at QDMA.com.

Here's to a productive 2018 and a great deer season this fall.

Outlook for 2016-17 Deer Season

At the time of writing this Whitetail Report, many 2017-18 deer seasons were still underway, so the statistics highlighted in this report are all from the most recent hunting season that is complete (2016-17). However, some states have already issued press releases on the 2017-18 deer season, and we've included six of the top headlines here as an outlook for the data you'll see in next year's Whitetail Report. If the early results hold true for the other states, 2017 was a good year for many deer hunters.

Illinois – the harvest was up slightly in 2017.

Iowa – preliminary harvest up 5 percent in 2017.

New Hampshire – deer harvest up 15 percent in 2017.

New York – Southern Zone preliminary harvest was up 13 percent in 2017.

Vermont – buck harvest up 8 percent from prior 3-year average.

Wisconsin – harvest down slightly in 2017.

PREVIOUS EDITIONS OF THE WHITETAIL REPORT



In various sections of this report, you will find references to previous editions of the *Whitetail Report*, which has been published annually since 2009. Every edition of the *Whitetail Report* is available as a free PDF on QDMA.com under the "About" menu.

ABOUT THE DEER HARVEST DATA IN THIS REPORT

The 2017-18 deer season is closed or nearing so for states and provinces across the whitetail's range, and biologists will be crunching data in the coming months to assess the outcome of this past season. For the 2018 Whitetail Report, QDMA compared harvest data from the three most recent seasons available 2014-15, 2015-16, and 2016-17. We acquired some harvest data from all 37 states in the Midwest, Northeast and Southeast (see map), from nine of 11 states in the West, and from six of eight Canadian provinces. To allow comparisons across years we analyzed data from the 37 states in the Midwest,

Northeast, and Southeast and also included data from the West and Canada in the harvest table. In future years we will also conduct analyses on data from these latter two regions as it's available. Finally, some western states' harvest data included both whitetails and mule deer. Therefore, we chose to separate harvest data from the West from the total of other regions.

The following data are from each state and provincial wildlife agency. Agencies use different techniques to collect this data, and some collect more data than others. Analyses among agencies may not always compare "apples to apples," but

each provided their best possible data. Also, analyses across years should provide valid comparisons for individual agencies. An important note about the "per square mile" figures presented in the following pages is that some jurisdictions use total area for these statistics while others use deer habitat (and some differ on what is included in deer habitat). Therefore, we calculated per square mile estimates using each state/province's total area excluding water bodies. This allows estimates to be very comparable across years for a given state/province, but not always across states or provinces.

ANTLERED BUCK HARVEST



John Lanier, brother of QDMA Regional Director James Lanier, killed this mature Wisconsin buck during the rut. The property is in its third year as part of a QDM Cooperative.

The total buck harvest was 2,818,571 and that was 4 percent higher than in 2015. More antlered bucks (those 1½ years or older) were shot in 19 of 37 states (51 percent) in the 2016-17 deer season than during the 2015-16 season. Eleven of 13 states in the Northeast, six of 13 states in the Midwest, and only four of 11 states in the Southeast shot more bucks in 2016 than 2015. Midwest and Northeast hunters shot a similar percentage of bucks as the prior year, while Southeast hunters shot 8 percent more.

Overall, Texas shot the most bucks (399,487) and Rhode Island shot the fewest (951). Texas typically leads this category, but hunters from the Lonestar State shot fewer bucks per square mile (1.5) than the national average (1.6). Michigan, Pennsylvania and South Carolina more than doubled the national average and shot 3.3 to 3.5 bucks PSM, while North Dakota shot the fewest at 0.3 PSM.

Comparing the 2016 buck harvest to the previous five-year average shows a balanced harvest. Nineteen of 37 states (51 percent) shot more bucks in 2016 than their prior five-year average, and the overall buck harvest was up 3 percent. The Northeast's 2016 buck harvest was 1 percent above its five-year average, and the Midwest's



and Southeast's were both 3 percent above their five-year averages. Notables include Texas, Vermont and Delaware shot significantly more bucks in 2016 as compared to their five-year averages, while Florida, Mississippi and West Virginia shot significantly fewer.

Top-5 States

Antlered Buck Harvest

State	2016 Harvest
Texas	399,487
Michigan	196,487
Wisconsin	156,920
Pennsylvania	149,460
Georgia	134,456

Top-5 States

Antlered Buck Harvest Per Square Mile

State	2016 Harvest PSM
Michigan	3.5
Pennsylvania	3.3
South Carolina	3.3
Maryland	3.1
Wisconsin	2.9

Top-5 States

With Greatest Antlered Buck Harvest Increase 2016 vs. Five-Year Average

State	% Increase
Texas	+28
Vermont	+23
Delaware	+18
Pennsylvania	+15
New Jersey	+14

6 States

With Greatest Antlered Buck Harvest Decrease 2016 vs. Five-Year Average

State	% Decrease
Florida	-22
Mississippi	-13
West Virginia	-12
Virginia	-9
South Carolina	-8
South Dakota	-8

ESTIMATED BUCK HARVEST

Antlered Bucks 1½ Years and Older

State/Province	2014	2015	2016	% Change 2015-16	2016 Bucks PSM**	2011-15 avg	% Change 2016 to 5yr avg
Alabama	98,712	103,877	103,445	0	2.0	110,778	-7
Arkansas	89,617	90,655	94,794	5	1.8	90,729	4
Florida	64,223	61,492	57,403	-7	1.1	73,802	-22
Georgia	149,498	142,346	134,456	-6	2.3	138,501	-3
Louisiana	82,541	84,416	78,831	-7	1.8	84,133	-6
Mississippi	104,665	109,732	100,158	-9	2.1	114,695	-13
North Carolina	73,439	82,144	76,206	-7	1.6	80,608	-5
Oklahoma	51,775	51,495	62,595	22	0.9	56,836	10
South Carolina	99,946	101,435	99,678	-2	3.3	108,289	-8
Tennessee	95,470	78,821	85,977	9	2.1	88,622	-3
Texas	325,008	290,590	399,487	37	1.5	311,875	28
Southeast Total	1,234,894	1,197,003	1,293,030	8	1.7	1,258,867	3
Connecticut	4,894	4,574	6,092	33	1.3	5,489	11
Delaware	4,067	4,218	4,729	12	2.4	4,016	18
Maine	15,986	14,907	16,711	12	0.5	15,214	10
Maryland	28,281	29,855	30,326	2	3.1	30,769	-1
Massachusetts	6,419	5,814	7,043	21	0.9	6,269	12
New Hampshire	6,743	6,153	6,629	8	0.7	6,655	0
New Jersey	17,412	15,290	19,889	30	2.7	17,508	14
New York	108,604	99,572	107,006	7	2.3	110,377	-3
Pennsylvania	119,260	137,580	149,460	9	3.3	130,504	15
Rhode Island	922	762	951	25	0.9	962	-1
Vermont	7,954	8,330	9,995	20	1.1	8,112	23
Virginia	88,311	103,522	89,675	-13	2.3	98,782	-9
West Virginia	51,205	81,219	62,862	-23	2.6	71,332	-12
Northeast Total	460,058	511,796	511,368	0	2.2	505,990	1
Illinois	60,721	67,193	65,534	-2	1.2	65,175	1
Indiana	45,686	50,379	51,783	3	1.4	47,792	8
Iowa	44,540	46,889	45,379	-3	0.8	45,003	1
Kansas	42,178	42,434	42,287	0	0.5	42,839	-1
Kentucky	66,080	75,720	71,041	-6	1.8	67,935	5
Michigan	178,228	191,608	196,233	2	3.5	201,665	-3
Minnesota	81,036	98,318	100,921	3	1.3	89,971	12
Missouri	114,250	122,524	128,173	5	1.9	115,234	11
Nebraska	25,082	28,505	27,241	-4	0.4	28,291	-4
North Dakota	18,266	20,300	22,660	12	0.3	20,925	8
Ohio	68,515	79,176	78,132	-1	1.9	76,132	3
South Dakota	26,704	30,700	27,869	-9	0.4	30,170	-8
Wisconsin	143,397	152,701	156,920	3	2.9	151,226	4
Midwest Total	914,683	1,006,447	1,014,173	1	1.3	982,358	3
3 Region Total	2,609,635	2,715,246	2,818,571	4	1.6	2,747,216	3
Arizona	*	16,210	7,623	-53	0.1	16,210	-53
California	*	*	32,029	*	0.2	*	*
Colorado	*	26,234	28,769	10	0.3	26,234	10
Idaho	*	18,868	18,498	-2	0.2	18,868	-2
Montana	*	68,242	31,475	-54	0.2	68,242	-54
Nevada	*	*	6,750	*	0.1	*	*
New Mexico	*	10,635	10,756	1	0.1	10,635	1
Oregon	*	*	*	*	*	*	*
Utah	*	*	*	*	*	*	*
Washington	*	10,112	27,929	176	0.4	10,112	176
Wyoming	*	16,662	9,187	-45	0.1	16,662	-45
West Total	166,963	173,016	173,016	4	0.1	*	*
Alberta	*	21,575	22,275	3	0.1	*	*
British Columbia	*	8,600	*	*	*	*	*
Manitoba	*	*	*	*	*	*	*
New Brunswick	*	3,647	4,769	31	0.2	*	*
Nova Scotia	*	5,551	6,523	18	0.3	*	*
Ontario	*	33,661	40,592	21	0.1	*	*
Quebec	*	26,458	31,531	19	0.1	*	*
Saskatchewan	*	16,000	17,253	8	0.1	*	*
Canada Total	115,492	122,943	122,943	6	0.1	*	*

*Data not provided/available **PSM: Per Square Mile in 2016

AGE STRUCTURE OF THE BUCK HARVEST



Top-5 States With Lowest Percentage of Yearling Bucks in Buck Harvest

State	2016 Percentage
Arkansas	5
Mississippi	10
Louisiana	13
Oklahoma	17
Florida	19

5 States With Highest Percentage of Yearling Bucks in Buck Harvest

State	2016 Percentage
Wisconsin	65
New Hampshire	51
New York	49
Maryland	47
Michigan	47

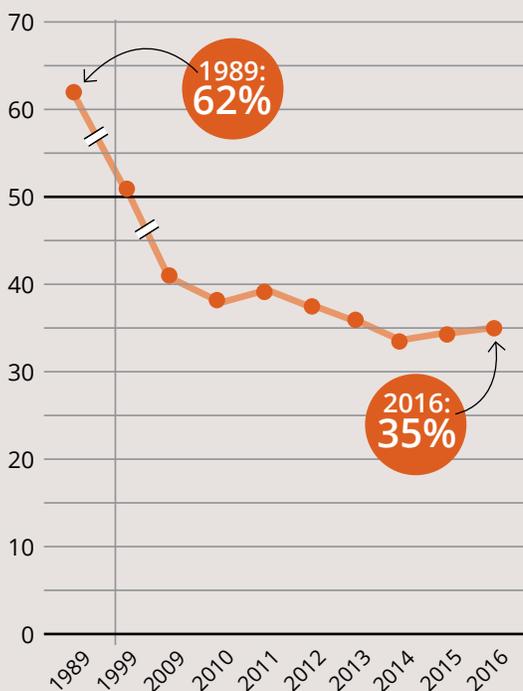
Top-5 States With Highest Percentage of 3½-Plus Bucks in Buck Harvest

State	2016 Percentage
Mississippi	78
Arkansas	77
Louisiana	72
Oklahoma	59
Texas	59

5 States With Lowest Percentage of 3½-Plus Bucks in Buck Harvest

State	2016 Percentage
Rhode Island	7
Tennessee	16
Wisconsin	16
New York	19
Vermont	20

PERCENT YEARLING BUCKS IN THE U.S. BUCK HARVEST



The QDMA also acquired the age structure of the buck harvest data for most states. Twenty-five states and one province reported the percentage of their antlered buck harvest that was 1½ years old, and 22 states and one province reported the percentage that was also 2½ and 3½ years or older. Most states in the Northeast and Southeast collect age data, and about half of the states in the Midwest do. Conversely, no states in the West and few Canadian provinces collect age data.

In 2016, the average percentage of the antlered buck harvest that was 1½ years old was 35 percent, which remains near the lowest national percentage ever reported, although it has increased a percentage point each of the last two years. The fact that only about one in three antlered bucks shot today

is 1½ years old is amazing, and the line graph to the left shows how the yearling percentage of the antlered buck harvest in the U.S. has changed during the past 28 years.

In 2016, Arkansas averaged the fewest yearlings at 5 percent of antlered buck harvest, and Wisconsin reported the most

at 65 percent of antlered buck harvest. Arkansas was the only state in the single digits, and Wisconsin was one of only two states above 50 percent. As a region, the Southeast averaged the fewest yearlings (22 percent), followed by the Midwest (39 percent) and the Northeast (44 percent). Georgia had the largest year-to-year decline in harvest percentage by dropping from 45 to 33 percent yearling bucks.

Wisconsin had the largest year-to-year rise in harvest percentage by increasing from 55 to 65 percent yearling bucks.

Twenty-two of 25 states (88 percent) that we received age structure data from were able to also provide the percentage of bucks 3½ years and older in the harvest; kudos to these states for their data collection efforts. The average percentage of the antlered buck harvest that was 3½ years

and older was 33 percent in 2016. This is similar to the percentage of yearlings and 2½-year-olds harvested, and it's amazing to realize that one of every three antlered bucks shot in the U.S. is at least 3½ years old. This is a testament to how far we've come as hunters and deer managers. This statistic ranged from 7 percent in Rhode Island to 78 percent in Mississippi.

PERCENTAGE OF BUCK HARVEST BY AGE CLASS

State/Province	1½ Years Old			2½ Years Old			3½ and Older		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Alabama***	28	21	20	31	28	24	41	51	56
Arkansas	8	7	5	25	19	18	67	74	77
Florida***	23	17	19	44	45	46	32	38	35
Georgia	30	45	33	31	27	32	39	28	35
Louisiana	17	16	13	16	17	15	67	67	72
Mississippi	13	14	10	13	9	13	74	77	78
North Carolina	40	39	39	36	37	36	24	24	25
Oklahoma	24	25	17	16	15	24	60	60	59
South Carolina	*	*	*	*	*	*	*	*	*
Tennessee	37	37	37	44	43	46	19	20	16
Texas	21	14	23	17	11	18	62	75	59
Southeast Average	24	24	22	27	25	27	49	51	51
Illinois	42	42	39	*	*	*	*	*	*
Indiana	*	*	*	*	*	*	*	*	*
Iowa	*	*	*	*	*	*	*	*	*
Kansas	16	*	*	35	*	*	49	*	*
Kentucky	28	33	30	44	41	41	28	26	29
Michigan	43	44	47	32	29	26	25	27	27
Minnesota	*	*	*	*	*	*	*	*	*
Missouri**	15(40)	24	22	49(36)	41	48	36(24)	35	30
Nebraska	24	30	28	39	35	37	36	35	35
North Dakota	*	*	*	*	*	*	*	*	*
Ohio	45	41	43	35	33	32	20	26	25
South Dakota	*	*	*	*	*	*	*	*	*
Wisconsin	48	55	65	31	28	18	21	17	16
Midwest Average	34	38	39	37	34	34	30	28	27
Connecticut	45	42	*	*	*	*	*	*	*
Delaware	*	*	*	*	*	*	*	*	*
Maine	47	48	*	25	24	*	28	27	*
Maryland	47	51	47	*	*	*	*	*	*
Massachusetts	42	45	44	30	27	26	28	29	30
New Hampshire	46	43	51	29	28	25	25	29	24
New Jersey	46	36	*	45	43	*	9	21	*
New York	48	47	49	34	33	31	18	20	19
Pennsylvania	43	41	44	*	*	*	*	*	*
Rhode Island	36	33	38	38	32	55	26	35	7
Vermont	22	26	34	56	52	46	22	22	20
Virginia	43	46	49	29	28	27	28	26	25
West Virginia	26	*	*	47	*	*	27	*	*
Northeast Average	41	41	44	37	33	35	23	26	21
3-Region Average	33	34	35	34	31	32	34	35	33

*Data not provided/available

**Data from antler-point-restriction counties (non-antler-point-restriction counties)

***Data from check stations and/or DMAP areas

ANTLERLESS HARVEST



Ben Carson, 16, was able to harvest his first deer in 2017 at the QDMA National Youth Hunt.

Antlerless harvests vary widely among states and years due to differences in deer density, productivity, a state's goals (reducing, stabilizing, or increasing the deer population), weather, disease and other factors. However, we can learn much about an agency's management program by comparing the antlerless and antlered buck harvests. Continuing with the analysis of states in the Midwest, Northeast and Southeast, hunters from these regions harvested 2,830,264 antlerless deer in 2016. This was 1 percent below the 2015 antlerless harvest and 11 percent below the five-year average. Overall, Texas topped the list with 322,557 antlerless deer, Alabama followed with 191,555, and Pennsylvania was third with 183,794. The antlerless harvest has now declined 19% since 2007. In fact, in 2016 for the first time since 1998 hunters nearly shot more antlered bucks than antlerless deer.

Maryland harvested the most antlerless deer per square mile (5.7), fol-

lowed by Delaware (5.2), and Pennsylvania (4.1). These are astounding harvest rates. Regionally, the Northeast averaged shooting the most antlerless deer PSM (2.3), followed by the Southeast (1.7) and the Midwest (1.2).

Antlerless harvests were down across the board again as the Midwest shot nearly 1 percent fewer antlerless deer in 2016 than in 2015, while the Northeast and Southeast both shot 2 percent fewer. In total, 19 of 37 states (51 percent) shot fewer antlerless deer in 2016 than the prior year, and 31 of 37 states (84 percent) shot fewer antlerless deer than their five-year average.

Six of 13 (46 percent) Midwest states shot more antlerless deer than antlered bucks, six of 13 (46 percent) Northeastern states shot more antlerless deer, and four of 11 (36 percent) Southeastern states shot more antlerless deer than antlered bucks in 2016. Reduced antlerless harvests are necessary in areas where deer herds have been balanced with the habitat and/or

Top-5 States Antlerless Harvest

State	2016 Harvest
Texas	322,557
Alabama	191,555
Pennsylvania	183,794
Georgia	181,998
Wisconsin	159,854

Top-5 States Antlerless Harvest Per Square Mile

State	2016 Harvest PSM
Maryland	5.7
Delaware	5.2
Pennsylvania	4.1
New Jersey	4.0
Alabama	3.8

States With Lowest Antlerless Harvest Per Square Mile

State	2016 Harvest PSM
Maine	0.2
North Dakota	0.2
South Dakota	0.2
Nebraska	0.3
Kansas	0.5
New Hampshire	0.5
Oklahoma	0.5

Top States Antlerless Deer Per Antlered Buck Harvested

State	2016 Ratio
Delaware	2.1
Alabama	1.9
Maryland	1.8
New Jersey	1.5
Georgia	1.4
Mississippi	1.4

when other mortality factors such as predation or disease are increasing. However, very few states should be harvesting more antlered bucks than antlerless deer on a regular basis.

ESTIMATED ANTLERLESS DEER HARVEST

State/Province	2014	2015	2016	% Change 2015-16	2011-15 average	% Change 2016 to 5yr avg.	2016 Antlerless PSM**	2016 Antlerless per antlered
Alabama	171,288	171,123	191,555	12	172,954	11	3.8	1.9
Arkansas	118,458	122,255	107,276	-12	117,355	-9	2.1	1.1
Florida	38,255	36,497	32,024	-12	42,519	-25	0.6	0.6
Georgia	262,570	220,503	181,998	-17	266,651	-32	3.2	1.4
Louisiana	57,359	68,684	59,469	-13	65,007	-9	1.4	0.8
Mississippi	145,328	144,514	144,622	0	146,752	-1	3.1	1.4
North Carolina	80,190	80,414	73,605	-8	88,416	-17	1.5	1.0
Oklahoma	45,490	36,972	36,428	-1	42,054	-13	0.5	0.6
South Carolina	103,006	93,593	72,637	-22	105,331	-31	2.4	0.7
Tennessee	69,405	88,518	71,650	-19	80,451	-11	1.7	0.8
Texas	265,104	257,247	322,557	25	265,064	22	1.2	0.8
Southeast Total	1,356,453	1,320,320	1,293,821	-2	1,392,556	-7	1.7	1.0
Connecticut	6,500	4,947	4,320	-13	6,467	-33	0.9	0.7
Delaware	10,172	10,463	10,064	-4	9,993	1	5.2	2.1
Maine	6,325	5,418	6,685	23	6,399	4	0.2	0.4
Maryland	58,602	54,167	54,867	1	59,167	-7	5.7	1.8
Massachusetts	4,747	4,240	5,206	23	4,692	11	0.7	0.7
New Hampshire	4,653	4,742	4,047	-15	4,856	-17	0.5	0.6
New Jersey	35,292	26,149	29,357	12	31,649	-7	4.0	1.5
New York	130,068	103,401	106,055	3	120,928	-12	2.2	1.0
Pennsylvania	184,713	178,233	183,794	3	199,899	-8	4.1	1.2
Rhode Island	1,242	891	985	11	1,230	-20	0.9	1.0
Vermont	5,634	4,417	6,225	41	5,154	21	0.7	0.6
Virginia	103,807	107,065	90,986	-15	120,261	-24	2.3	1.0
West Virginia	52,922	57,274	49,467	-14	62,209	-20	2.1	0.8
Northeast Total	604,677	561,407	552,058	-2	632,904	-13	2.3	1.1
Illinois	84,999	88,036	78,769	-11	97,190	-19	1.4	1.2
Indiana	74,387	45,686	67,694	48	73,616	-8	1.9	1.3
Iowa	57,053	58,512	56,018	-4	63,679	-12	1.0	1.2
Kansas	51,761	51,031	41,738	-18	49,808	-16	0.5	1.0
Kentucky	72,818	80,008	69,301	-13	70,084	-1	1.8	1.0
Michigan	144,139	137,073	145,054	6	170,449	-15	2.6	0.7
Minnesota	58,406	61,027	72,292	18	80,169	-10	0.9	0.7
Missouri	142,503	152,042	138,071	-9	161,119	-14	2.0	1.1
Nebraska	17,730	19,537	19,701	1	23,347	-16	0.3	0.7
North Dakota	12,902	12,100	13,195	9	17,851	-26	0.2	0.6
Ohio	107,286	109,159	104,037	-5	122,547	-15	2.5	1.3
South Dakota	14,453	16,000	18,661	17	26,397	-29	0.2	0.7
Wisconsin	158,689	159,034	159,854	1	182,080	-12	3.0	1.0
Midwest Total	997,126	989,245	984,385	0	1,138,335	-14	1.2	1.0
3 Region Total	2,958,256	2,870,972	2,830,264	-1	3,163,795	-11	1.6	1.0
Arizona	*	315	0	-100	*	*	0.0	0.0
California**	*	*	485	*	*	*	0.0	0.0
Colorado***	*	7,771	8,055	4	*	*	0.1	0.3
Idaho	*	11,476	9,657	-16	*	*	0.1	0.5
Montana	*	17,610	18,044	2	*	*	0.1	0.6
Nevada	*	*	1,000	*	*	*	0.0	0.1
New Mexico	*	138	142	3	*	*	0.0	0.0
Oregon	*	*	*	*	*	*	*	*
Utah	*	*	*	*	*	*	*	*
Washington	*	3,398	5,565	64	*	*	0.1	0.2
Wyoming	*	8,089	8,427	4	*	*	0.1	0.9
West Total	*	48,797	51,375	5	*	*	0.0	0.3
Alberta	*	13,500	18,331	36	*	*	0.1	0.8
British Columbia	*	5,700	*	*	*	*	*	*
Manitoba	*	*	*	*	*	*	*	*
New Brunswick	*	714	609	-15	*	*	0.0	0.1
Nova Scotia	*	2,234	1,806	-19	*	*	0.1	0.3
Ontario	*	24,371	24,195	-1	*	*	0.1	0.6
Quebec	*	21,162	21,311	1	*	*	0.0	0.7
Saskatchewan	*	3,500	4,215	20	*	*	0.0	0.0
Canada Total	*	71,181	70,467	-1	*	*	0.0	0.3

*Data not provided/available

**PSM: Per Square Mile in 2016

AGE STRUCTURE OF THE ANTLERLESS HARVEST

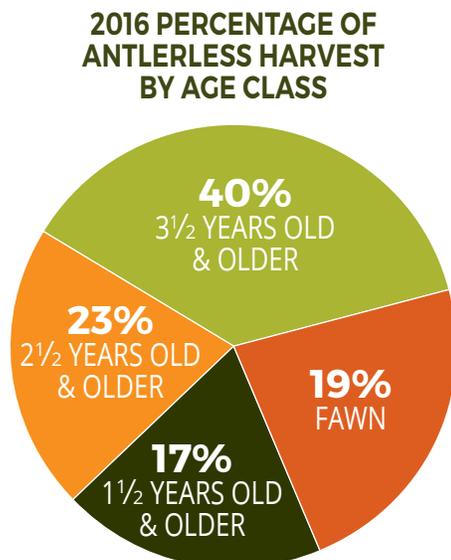


This mature doe was taken by Brooke Grossman on a special-opportunity public land youth hunt in Georgia. QDMA has set an aggressive goal to strengthen partnerships with state and federal agencies to enhance deer herds and habitats on public hunting lands to provide enhanced QDM hunting experiences.

The QDMA also acquired the age structure of the antlerless harvest data for most states. Twenty-three states and two provinces reported the percentage of their antlerless harvest that was approximately half a year old (fawns). Twenty-two states and one province reported the percentage that was 1½ years, and 19 states and one province reported the percentage that was 2½ and 3½ years or older. In 2016, the average antlerless harvest that was a fawn was 19 percent; thus, less than one in five antlerless deer harvested was a fawn. The Southeast averaged the lowest percentage of fawns (12 percent) and the Northeast averaged the most (27 percent of the ant-

lerless harvest). Individually Texas (1 percent) shot the fewest fawns and Ohio (45 percent) shot the most. Texas historically shoots a very small percentage of fawns,

Monitoring the age structure of the harvest is key for deer managers to make wise management decisions including the appropriate number of antlerless deer to harvest annually.



and the 2016 harvest percentage equaled the state's estimate from 2015. Monitoring the percentage of fawns in the antlerless harvest is one method for estimating the fawn recruitment rate, and this statistic is one of the most important pieces of data a deer manager needs when assessing a herd's growth potential and applying a prescribed antlerless harvest.

The accompanying table also includes a state-by-state look at the percentage of the antlerless harvest from 2014 to 2016 that was 1½, 2½ and 3½ years or older. Monitoring how these percentages change over time is valuable, and that's especially true for the 3½-and-older age class. This age class includes mature animals, and they typically are also the most productive

States With Lowest Percentage of Fawns in Antlerless Harvest

State	2016 Percentage
Texas	1
Louisiana	8
Mississippi	8
Oklahoma	8
Arkansas	12
Kentucky	12

Top-5 States With Highest Percentage of Fawns in Antlerless Harvest

State	2016 Percentage
Ohio	45
Pennsylvania	36
Maryland	35
Massachusetts	34
Illinois	32

Top-5 States With Highest Percentage of 3½-Plus in Antlerless Harvest

State	2016 Percentage
Texas	60
Mississippi	57
Oklahoma	56
Arkansas	55
Louisiana	55

individuals and most successful mothers. Nationally, over a third (40 percent) of the antlerless deer shot in 2016 reached the 3½-and-older age class. The Southeast leads the regions with 47 percent of antlerless deer in this age class, and Texas leads all states with 60 percent being 3½ years

and older.

Age structure data is the backbone of deer management programs. Monitoring the age structure of the harvest is key for deer managers to make wise management decisions including the appropriate number of antlerless deer to harvest annually

in each deer management unit. Good age data helps managers avoid under- or over-harvesting deer herds. Many hunters learn how to estimate the age of deer they harvest, and all hunters should provide every piece of data requested by their wildlife agency.

PERCENTAGE OF ANTLERLESS HARVEST BY AGE CLASS

State/Province	Fawn			1½ Years Old			2½ Years Old			3½ and Older		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Alabama	16	15	*	20	18	*	20	18	*	44	49	*
Arkansas	12	7	12	18	17	13	23	21	20	47	55	55
Florida	6	15	18	18	19	14	30	23	25	46	43	42
Georgia	19	23	23	25	23	27	25	24	33	31	30	17
Louisiana	13	11	8	20	20	18	22	22	19	45	47	55
Mississippi	7	7	8	23	20	16	18	19	19	52	54	57
North Carolina	23	14	24	21	23	18	25	27	25	31	36	33
Oklahoma	18	16	8	18	19	17	15	15	27	49	50	56
South Carolina	*	*	*	*	*	*	*	*	*	*	*	*
Tennessee	26	18	*	24	26	*	28	31	*	22	25	*
Texas	7	1	1	18	17	16	22	17	23	53	65	60
Southeast Average	15	13	12	21	20	17	23	22	24	42	45	47
Connecticut	*	20	*	*	*	*	*	*	*	*	*	*
Delaware	*	*	*	*	*	*	*	*	*	*	*	*
Maine	18	21	*	15	17	*	13	*	*	53	*	*
Maryland	31	31	35	24	24	23	*	*	*	*	*	*
Massachusetts	40	35	34	19	13	16	18	18	18	23	34	32
New Hampshire	16	30	29	19	11	21	16	16	10	49	43	40
New Jersey	19	14	*	28	29	*	32	32	*	22	25	*
New York	31	27	26	19	19	19	20	21	19	30	33	36
Pennsylvania	39	37	36	19	18	20	*	*	*	*	*	*
Rhode Island	14	6	19	16	5	6	39	*	55	31	*	20
Vermont	28	18	20	12	16	14	15	14	15	45	52	51
Virginia	24	24	24	21	21	20	23	21	21	32	34	35
West Virginia	15	*	*	19	*	*	28	*	*	38	*	*
Northeast Average	25	24	27	19	17	16	23	20	22	36	37	35
Illinois	33	33	32	*	*	*	*	*	*	*	*	*
Indiana	*	*	*	*	*	*	*	*	*	*	*	*
Iowa	*	*	*	*	*	*	*	*	*	*	*	*
Kansas	15	*	*	13	*	*	38	*	*	34	*	*
Kentucky	25	32	12	20	23	25	32	21	34	23	24	29
Michigan	28	25	26	18	19	18	19	18	17	35	38	38
Minnesota	33	*	*	*	*	*	*	*	*	*	*	*
Missouri	27	34	15	24	18	23	17	16	25	32	32	37
Nebraska	28	22	22	21	26	26	26	25	27	25	27	25
North Dakota	*	*	*	*	*	*	*	*	*	*	*	*
Ohio	42	39	45	16	18	16	22	*	*	20	*	*
South Dakota	*	*	*	*	*	*	*	*	*	*	*	*
Wisconsin	45	36	21	18	21	24	17	20	24	20	23	31
Midwest Average	31	32	24	19	21	21	24	20	24	27	29	31
3 Region Average	23	23	19	20	19	17	23	21	23	39	41	40
Alberta	*	*	*	*	*	*	*	*	*	*	*	*
British Columbia	*	*	*	*	*	*	*	*	*	*	*	*
Manitoba	*	*	*	*	*	*	*	*	*	*	*	*
New Brunswick	*	20	15	*	15	16	*	20	15	*	46	53
Nova Scotia	*	*	*	*	*	*	*	*	*	*	*	*
Ontario	*	*	*	*	*	*	*	*	*	*	*	*
Quebec	*	32	13	*	*	*	*	*	*	*	*	*
Saskatchewan	*	*	*	*	*	*	*	*	*	*	*	*

*Data not provided/available

AGE DATA COLLECTION TECHNIQUES

All states and provinces have some means to estimate the number of deer harvested in their jurisdictions during the hunting season. Some require physical registration at a station, some offer online reporting, and others use telephone reporting (telecheck) or mail-in report cards. Regardless of the technique used, it is important for deer managers to collect biological data such as age, weight, antler parameters, and lactation status from a representative sample of the total harvest. Commonly referred to as check stations or “biocheck” stations, biologists, technicians and conservation officers collect data that is used to assess herd and habitat health. This data is the backbone of many deer management programs.

The age of harvested deer is a critical piece of data for deer managers. It’s also highly sought after by a growing number of deer hunters. Hunters are learning to estimate age and requesting to have their deer aged at unprecedented levels. That’s one reason why the age structure chapters (pages 6-7 and 10-11) are among the most popular chapters in our annual *Whitetail Report*.

However, the age chapters draw skepticism from some hunters and deer managers. Thus, we asked each state and provincial deer project leader how they collect age-structure data in their jurisdiction. Check stations are used less frequently than in prior years, but they are still the predominant way for wildlife agencies to collect age data. Eight of 11 states (73 percent) in the Southeast, and eight of 13 states (62 percent) in the Northeast employ check stations, while only four of 13 states (31 percent) in the Midwest do.

Collecting data from meat processors was the next most popular method, followed by deer management assistance program (DMAP) participants and taxidermists. In these cases, trained wildlife agency personnel visit meat processors and taxidermists or receive the data from DMAP participants to estimate age of the harvests. Regionally, the Southeast used the most collection points, followed by the Northeast and Midwest.

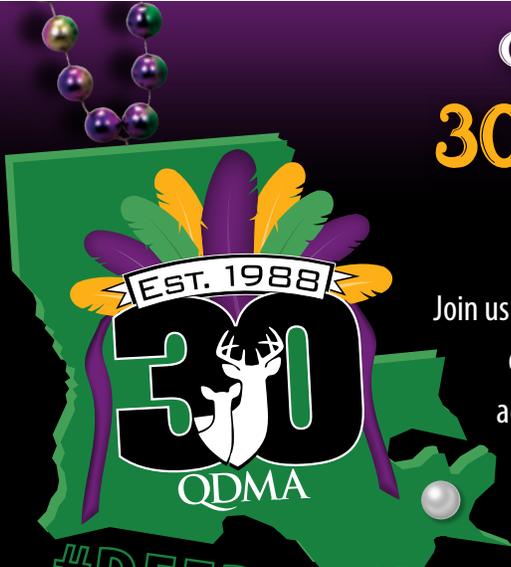
AGE DATA COLLECTION METHODS BY STATE

State/Province	Check				Other
	Stations	Taxidermists	Processors	DMAP	
Alabama	x			x	
Arkansas	x		x	x	
Florida	x			x	
Georgia			x		
Louisiana				x	
Mississippi	x ¹			x	
North Carolina	x	x	x	x	multiple voluntary avenues
Oklahoma	x	x	x	x	optional online submission
South Carolina					None
Tennessee	x		x		
Texas	x	x	x	x	
Southeast Total	8	3	6	8	
Connecticut					
Delaware	x ²				
Maine	x	x	x		roadkill
Maryland			x		
Massachusetts	x				
New Hampshire	x				
New Jersey					None
New York	x		x		
Pennsylvania			x		
Rhode Island	x				
Vermont	x				voluntary submissions
Virginia				x	
West Virginia	x				
Northeast Total	8	1	4	1	
Illinois	x				electronic harvest reporting
Indiana					None
Iowa					None
Kansas					None
Kentucky		x	x		
Michigan	x				
Minnesota	x ³				online registration, phone
Missouri			x		
Nebraska	x				
North Dakota					None
Ohio			x		
South Dakota					None
Wisconsin			x	x	CWD samples
Midwest Total	4	1	4	1	
Arizona					None
California					*
Colorado					None
Idaho					None
Montana					*
Nevada					None
New Mexico					None
Oregon					*
Utah					*
Washington					*
Wyoming					None
West Total	0	0	0	0	
Alberta					None
British Columbia					*
Manitoba					*
New Brunswick	x				
Nova Scotia					*
Ontario					None
Quebec	x ⁴				
Saskatchewan					*
Canada Total	2	0	0	0	

* Data not provided/available

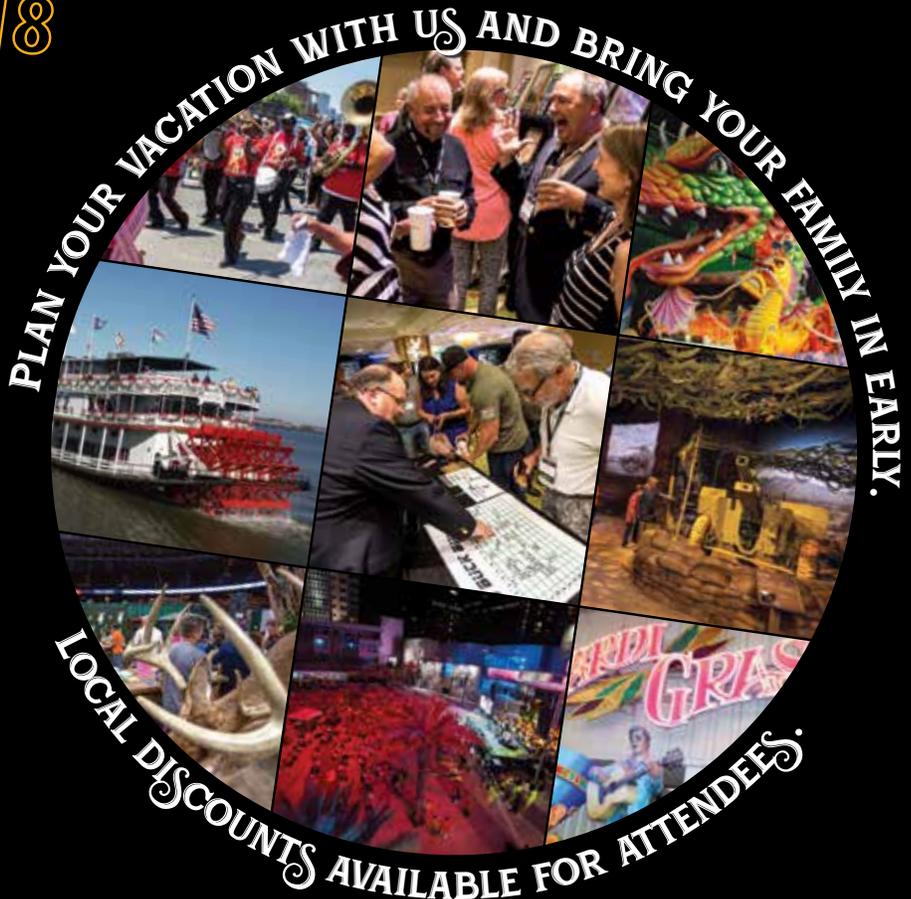
¹ Public lands only ² Collects age data every five years ³ Fawn vs older ⁴ Only for APR project

QDMA'S NATIONAL CONVENTION 30TH ANNIVERSARY JULY 19-22, 2018



#DEERCON18

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DEER HARVEST BY WEAPON TYPE



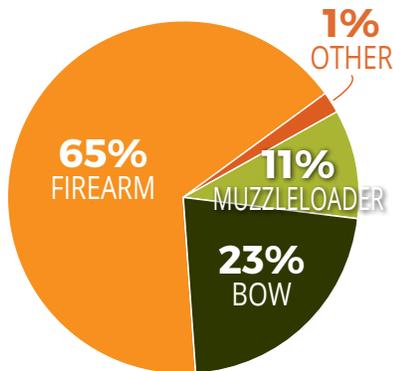
This past October, QDMA partnered with the Scholastic 3D Archery program to host its first National Archery Youth Hunt in Kentucky, introducing six young archers to the thrill of bowhunting.

The average hunter today has much longer seasons and more weapon opportunities than he/she had in the past. To assess how hunters take advantage of these, we surveyed state wildlife agencies to determine the percentage of the total deer harvest taken with a bow/crossbow, rifle/shotgun, muzzleloader, or other weapon (pistol, etc.) during the 2014, 2015 and 2016 seasons.

Nationally, muzzleloader hunters took 11 percent of the total deer harvest, bow/crossbow hunters took 23 percent, and firearm (rifle/shotgun) hunters took 65 percent of the total deer harvest in 2016.

Regionally, bow hunters averaged the highest percentage of the harvest in the Northeast (30 percent). Muzzleloader hunters also averaged their highest percentage in the Northeast (16 percent). Surprisingly, firearm hunters in the Northeast took just over half of the deer (53 percent). In the Southeast, firearms reign supreme as three of four deer taken in 2016 (76 percent) were with a rifle or shotgun. Muzzleloading (9 percent) and bowhunting (15 percent) paled in comparison to the firearm harvest. In the

TOTAL 2016 U.S. DEER HARVEST BY WEAPON



Midwest, muzzleloading was least popular at only 7 percent of the harvest, and a firearm harvest of 66 percent was far above the Northeast's and close to the Southeast's.

Individually, New Jersey leads the U.S. in the percentage of total harvest taken by archers (58 percent), Idaho had the highest percentage taken by firearms hunters (94 percent), and Rhode Island tops the list with percentage taken by muzzleloader hunters (45 percent). In Canada, bowhunting was most popular in Quebec (24 percent of harvest), muzzleloading was also most popular in Quebec (16 percent of harvest), and firearms hunting was most popular in New Brunswick (93 percent of harvest).

More hunters take advantage of bows, crossbows and muzzleloaders today and that's great for the future of hunting. More seasons to go afield help even "occasional" hunters stay engaged, and it greatly enhances the opportunities to mentor youth and new hunters. Finally, expanded opportunities help retain aging hunters, and every hunter is critically important to our wildlife management system.

Top States Percentage of Harvest by Bow

State	2016 Percentage
New Jersey	58
Connecticut	50
Ohio	45
Massachusetts	42
Illinois	37
Kansas	37
Michigan	37

Top-5 States Percentage of Harvest by Rifle/Shotgun

State	2016 Percentage
Idaho	94
Wyoming	93
Montana	92
Maine	89
South Carolina	89

Top-5 States Percentage of Harvest by Muzzleloader

State	2016 Percentage
Rhode Island	45
Virginia	27
New Hampshire	23
Tennessee	23
Massachusetts	22

PERCENTAGE OF DEER HARVEST BY WEAPON TYPE

State/Province	Bow			Rifle/Shotgun			Muzzleloader			Other		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Alabama	12	16	15	86	82	83	2	2	2	0	0	*
Arkansas	12	10	14	77	74	75	10	11	11	0	4	0
Florida	28	28	28	63	64	62	8	7	9	1	1	1
Georgia	16	18	16	82	79	82	2	3	2	0	0	*
Louisiana	6	8	9	83	81	80	11	11	11	0	0	0
Mississippi	17	17	18	66	69	68	17	14	14	0	0	*
North Carolina	11	7	10	78	79	80	11	10	10	0	4	0
Oklahoma	27	26	26	58	58	62	15	16	12	0	0	*
South Carolina	8	7	9	89	90	89	3	2	3	0	1	<1
Tennessee	13	12	11	59	66	66	27	22	23	0	0	*
Texas	10	9	8	89	90	91	1	1	1	0	0	1
Southeast Total	15	14	15	75	76	76	10	9	9	0	1	<1
Connecticut	48	50	50	36	37	36	7	5	6	10	8	9
Delaware	20	20	20	63	61	62	16	19	17	1	1	1
Maine	9	11	7	86	85	89	5	4	3	0	0	1
Maryland	34	34	34	49	47	51	17	19	15	0	0	*
Massachusetts	43	45	42	37	37	36	20	18	22	0	0	*
New Hampshire	28	29	24	46	48	53	23	19	23	3	0	*
New Jersey	57	57	58	32	32	31	11	11	11	0	0	*
New York	22	24	26	67	63	65	10	9	9	1	4	<1
Pennsylvania	31	31	33	62	62	61	7	7	6	0	0	*
Rhode Island	34	34	31	24	22	23	42	44	45	0	0	0
Vermont	23	27	21	45	52	48	20	11	22	12	10	9
Virginia	14	13	15	61	67	58	25	20	27	0	0	0
West Virginia	21	13	24	74	74	72	5	4	4	0	9	*
Northeast Total	30	30	30	52	53	53	16	15	16	2	2	3
Illinois	39	37	37	59	53	53	2	10	10	0	0	<1
Indiana	29	16	24	51	54	61	20	20	14	1	10	<1
Iowa	21	23	22	68	57	53	11	14	13	0	6	12
Kansas	34	34	37	61	62	60	4	4	3	0	0	<1
Kentucky	15	15	17	74	70	75	11	12	8	0	3	0
Michigan	36	34	37	57	60	48	7	6	15	0	0	*
Minnesota	3	13	12	84	83	83	12	4	5	1	0	*
Missouri	19	18	18	77	78	78	4	4	4	0	0	*
Nebraska	*	9	11	*	82	81	*	7	8	*	2	*
North Dakota	18	21	26	76	78	73	1	1	1	5	0	*
Ohio	46	44	45	42	49	45	12	7	9	0	0	1
South Dakota	13	14	15	85	84	83	2	2	2	0	0	*
Wisconsin	27	17	28	71	70	70	2	2	2	0	11	0
Midwest Total	25	23	25	67	68	66	7	7	7	1	2	3
3 Region Total	23	22	23	65	66	65	11	10	11	1	2	1
Arizona	*	13	8	*	85	87	*	2	1	*	0	5
California	*	*	*	*	*	*	*	*	*	*	*	*
Colorado	*	8	8	*	86	85	*	6	6	*	0	0
Idaho	*	4	4	*	94	94	*	2	2	*	0	0
Montana	*	*	8	*	*	92	*	*	*	*	*	*
Nevada	*	*	5	*	*	85	*	*	10	*	*	0
New Mexico	*	12	14	*	75	73	*	13	13	*	0	0
Oregon	*	*	*	*	*	*	*	*	*	*	*	*
Utah	*	*	*	*	*	*	*	*	*	*	*	*
Washington	*	15	15	*	74	79	*	7	6	*	4	0
Wyoming	*	7	7	*	93	93	*	0	*	*	0	*
West Total	*	10	9	*	85	86	*	5	5	*	1	1
Alberta	*	*	*	*	*	*	*	*	*	*	*	*
British Columbia	*	*	*	*	*	*	*	*	*	*	*	*
Manitoba	*	*	*	*	*	*	*	*	*	*	*	*
New Brunswick	*	4	7	*	96	93	*	0	0	*	0	0
Nova Scotia	*	4	*	*	69	*	*	22	*	*	5	*
Ontario	*	16	18	*	72	71	*	9	8	*	3	3
Quebec	*	2	24	*	61	60	*	16	16	*	21	0
Saskatchewan	*	*	*	*	*	*	*	*	*	*	*	*
Canada Total	*	7	16	*	75	75	*	12	8	*	7	1

*Data not provided/available

CROSSBOW USE

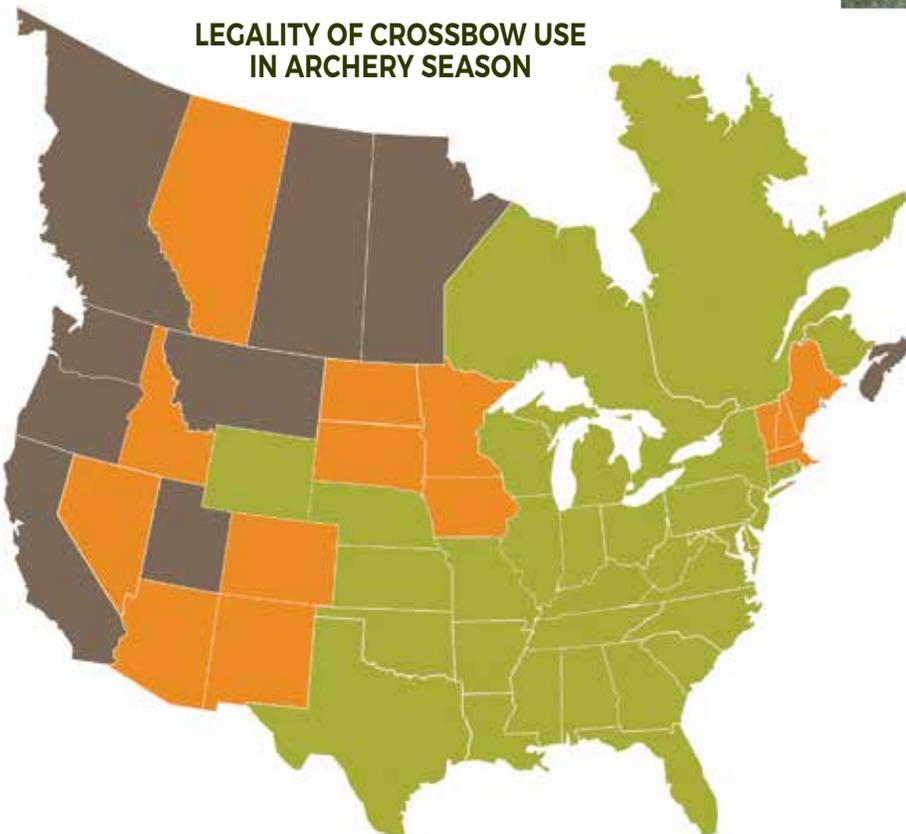


The East Central Ohio Branch uses crossbows for their annual youth hunt to get participants in the field during the early season when deer are less pressured and the temperatures more comfortable.



Crossbows can be a polarizing topic in the archery world, but their use during deer season continues to expand. To gauge the extent of the expansion, we surveyed state and provincial wildlife agencies and asked whether crossbows could be used by all hunters during archery season. We asked the same question for our 2012 *Whitetail Report*, and at that time crossbows were legal in 21 of 37 states (57 percent) in the Midwest, Northeast and Southeast for at least a portion of the archery season. Today, that number has increased to 29 of 37 states (78 percent).

LEGALITY OF CROSSBOW USE IN ARCHERY SEASON



All states in the Southeast allow crossbows during archery season. With the exception of Connecticut and Rhode Island, crossbows aren't permitted in the New England region of the Northeast. All other Northeastern states allow them. Just over half of Midwest states allow them, with the upper Midwest being most restrictive. Since 2012, crossbows can now be used in archery season in Illinois, Kansas, Missouri, New York, Rhode Island, West Virginia and Wisconsin.

QDMA'S RECOMMENDATIONS

The QDMA is dedicated to ensuring the future of white-tailed deer, wildlife habitat and our hunting heritage. As such, we are more interested in managing deer and habitat appropriately and protecting our hunting heritage than debating use of specific weapons. If the use of crossbows positively impacts a deer management program and helps recruit and retain more hunters, then we fully support it.

TRAIL-CAMERAS AND DRONES

Deer hunters today are more willing to take an active role in management to improve a property and their success rate. Modern deer hunters are also incredibly tech-savvy compared to the past and desire to learn about their quarry more than ever before. Some technologies available today have drastically impacted the way many of us spend our time outdoors for the better. They also, in some cases, challenge the concept of fair-chase.

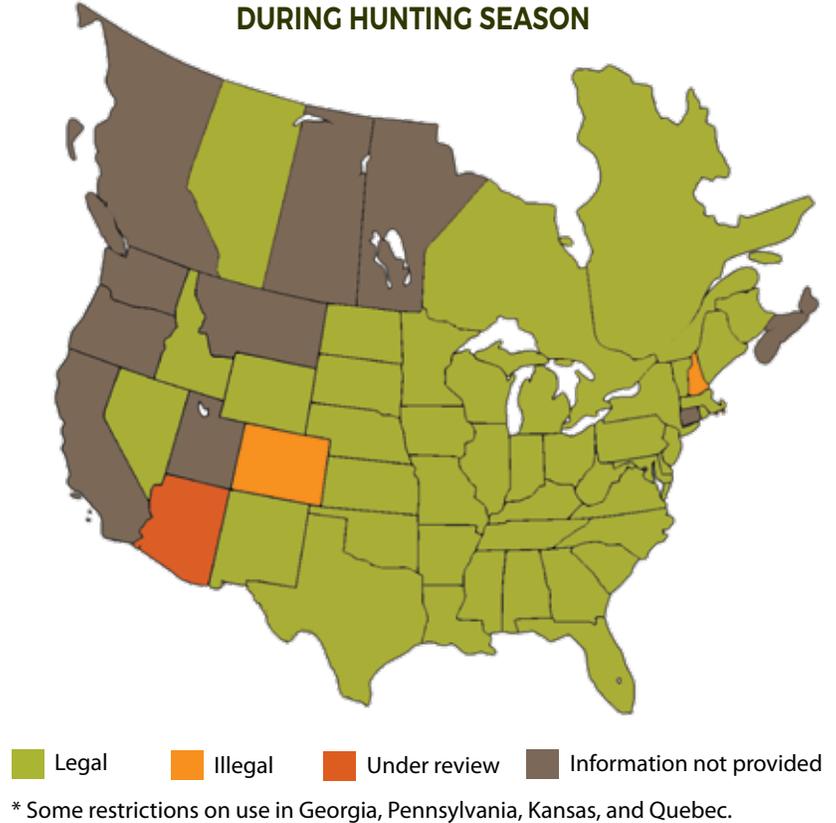
Over the last 30 years, probably no other piece of technology has changed the way we deer hunt more than the trail-camera. Deer hunters love their trail-cameras, and advancing technology has resulted in models that are smaller, higher in resolution, with longer battery life than ever before. There are even cameras on the market now that can instantly send pictures to you in the form of a text or e-mail. Another, more recent technology available to hunters are remote-controlled drones. Originally developed for military applications, drones have gotten smaller and much more affordable for the average person and allow for real-time aerial surveillance from a distance.

Both of these new technologies have the potential to cross ethical boundaries, so we asked state and provincial wildlife agencies if non-texting or text-capable trail-cameras and/or drones were legal to use during the hunting season. Forty-one of 42 states (98 percent) that responded to our survey allow non-texting trail-cameras. Arizona is currently the lone exception. Thirty-nine of 42 (93 percent) allow texting cameras, and 16 of 42 (38 percent) allow drones for scouting but not hunting. In Canada, all of the provinces that responded allow trail-cameras regardless of texting abilities, while Alberta, New Brunswick and Ontario prohibit drones. Several agencies specified hunting versus scouting intent regarding these devices within their current regulations and others cited impending changes in the future.

QDMA'S RECOMMENDATIONS

QDMA supports pursuits that are ethical, sportsmanlike and lawful, and allow harvest of white-tailed deer in a manner that does not give the hunter an improper or unfair advantage. While we are not opposed to these technologies when used for scouting, we do recognize these tools could be abused and give hunters an unfair advantage. As these types of technologies advance further, we will evaluate them on a case-by-case basis and will always fight for standards and regulations that ensure fair-chase hunting.

LEGALITY OF CELLULAR TRAIL-CAMERA USE DURING HUNTING SEASON



LEGALITY OF DRONE USE DURING HUNTING SEASON



CWD SAMPLES AND COST



ANNA MITTERLING

Chronic wasting disease (CWD) is an always-fatal neurological disease that affects deer, elk and moose. There is no vaccine or cure for CWD, and this contagious disease can be spread via urine, feces, saliva, blood, and possibly other vectors. See page 20 for a current update on CWD and other diseases found in whitetails.

Regardless of whether CWD has been identified in your area, it impacts deer and other wildlife by drawing from your wildlife agency's financial and personnel resources. Collecting tissue samples from harvested deer is time consuming, and having them tested costs agencies millions of dollars annually; valuable funds that could be used for other wildlife projects. In addition, while prevalence rates appear to be climbing in areas that have had CWD the longest, like Wisconsin and Wyoming, rumors are that less deer are being tested.

Thus, we surveyed state and provincial wildlife agencies to determine the number of deer they sampled for CWD and the cost per sample in 2008 and 2016. Thirty-one states reported testing 56,600 samples in

2008 and 40 states reported testing 95,209 samples in 2016 (see table on next page). In the three regions where whitetails are most common in the U.S., the Midwest realized the largest increase in testing (141 percent) while the Northeast saw the biggest decline (-19 percent). The average cost per sample has not changed considerably between 2008 (\$25) and 2016 (\$28), but has ranged widely from \$10 to nearly \$100 per sample. Notably, four of seven states in the Midwest, six of 10 in the Southeast, seven of 10 in the Northeast, and two of two in the West all tested fewer deer in 2016 than in 2008.

QDMA'S RECOMMENDATIONS

Every aspect of CWD is costly to state and provincial wildlife agencies, whitetail populations and the future of hunting. While not all funds spent on CWD testing come from agency general operating budgets, much of it does, as federal sources are limited compared to the past. Moreover, these dollars could have been spent on other more productive projects if not for the presence of CWD for many agencies, including those with increased testing vol-

5 States With Lowest Number of CWD Samples Tested

State	2016 Totals
Vermont	0
Massachusetts	<10
North Carolina	73
Oklahoma*	79
South Dakota*	82

Top-5 States With Highest Number of CWD Samples Tested

State	2016 Totals
Missouri*	25,659
Texas*	9,830
Illinois*	7,839
Michigan*	7,750
Wisconsin*	6,130

Top-5 States With Largest % Increase in Samples Tested from 2008-2016

State	% Increase
Tennessee	7,627
Missouri*	2,003
Minnesota*	1,900
Arkansas*	461
Texas*	148

5 States With Largest % Decrease in Samples Tested from 2008-2016

State	% Decrease
Vermont	100
Massachusetts	98
South Dakota*	94
North Carolina	93
Oklahoma*	92

* State with CWD in wild and/or captive deer.

umes. As sportsmen, it's clearly in our best interest to protect the herds we hunt from this dreaded disease and to do our part to control it anywhere it is identified.

CWD SAMPLES AND COST

State/Province	2008		2016		% Change (# samples) 2008 to 2016	Comments (2016)
	# Samples	Cost/ sample	# Samples	Cost/ sample		
Alabama	625	\$25	588	\$25	-6	
Arkansas	888	\$20	4,983	\$12	461	
Florida	*	*	652	\$10	*	
Georgia	593	\$12	250	\$80	-58	
Louisiana	437	\$12	360	\$40	-18	
Mississippi	1,215	\$12	444	\$17 / \$40	-63	Costs depends on test type
North Carolina	1,000	\$12	73	\$20 / \$30	-93	Costs depends on test type
Oklahoma	986	\$25	79	\$17	-92	
South Carolina	528	\$90	*	*	*	Targeted surveillance only. Contract with SCWDS
Tennessee	26	*	2,009	\$17	7,627	
Texas	3,963	\$20	9,830	\$30	148	Total cost \$100/sample, including time, equip, and lab fees
Southeast Total	10,261		19,268		88	
Connecticut	*	*	*	*	*	
Delaware	599	\$10	529	\$11	-12	
Maine	848	\$15	472	\$21	-44	
Maryland	1,015	\$12	319	\$11	-69	
Massachusetts	487	\$40	< 10	\$25-50	-98	Costs depends on test type
New Hampshire	405	\$21	268	\$11	-34	
New Jersey	339	*	570	\$11	68	
New York	7,450	\$28	2,565	\$28	-66	
Pennsylvania	3,810	\$10	5,707	\$25	50	
Rhode Island	*	*	193	\$12	*	
Vermont	400	*	0	*	-100	
Virginia	1,200	*	1,525	\$20	27	
West Virginia	*	*	1,173	\$22	*	
Northeast Total	16,553		13,331		-19	
Illinois	7,758	\$13	7,839	\$15	1	
Indiana	*	*	837	\$14	*	
Iowa	4,232	\$14	1,919	\$25	-55	
Kansas	*	*	474	\$28	*	
Kentucky	*	*	1,469	\$20	*	
Michigan	*	*	7,750	*	*	
Minnesota	200	\$25	4,000	\$17	1,900	
Missouri	1,220	\$25	25,659	\$89	2,003	
Nebraska	*	*	753	*	*	
North Dakota	*	*	1,513	*	*	
Ohio	1,469	\$51	1,381	unknown	-6	
South Dakota	1,465	\$96	82	unknown	-94	
Wisconsin	8,507	\$19	6,130	\$80	-28	
Midwest Total	24,851		59,806		141	
Arizona	2,157	\$17	1,327	unknown	-38	
California	*	*	*	*	*	
Colorado	*	*	740	\$75	*	Whitetail and mule deer
Idaho	500	*	*	*	*	
Montana	*	*	*	*	*	
Nevada	*	*	200	\$17	*	
New Mexico	*	*	139	*	*	
Oregon	31	\$18	*	*	*	
Utah	*	*	*	*	*	
Washington	*	*	*	*	*	
Wyoming	2,247	\$15	398	\$15	-82	Whitetails only
West Total	4,935		2,804		-43	
U.S. Total	56,600		95,209		68	
Alberta	*	*	5,000	\$1,000	*	All species, cost includes all phases of the process
British Columbia	*	*	*	*	*	
Manitoba	*	*	*	*	*	
New Brunswick	*	*	0	*	*	
Nova Scotia	*	*	*	*	*	
Ontario	*	*	460	\$24	*	Canadian dollars
Quebec	*	*	1,000	\$56	*	Canadian dollars
Saskatchewan						
Canada Total			6,460			

2017 DEER DISEASE UPDATE

By now pretty much every deer hunter has heard of chronic wasting disease (CWD), and unfortunately an increasing number of deer herds are being directly impacted by it every year. However, there are other diseases you may have heard of. Below is a run-down of some of the biggest issues regarding white-tailed deer diseases that hit the headlines in 2017, starting with hemorrhagic disease.

HEMORRHAGIC DISEASE

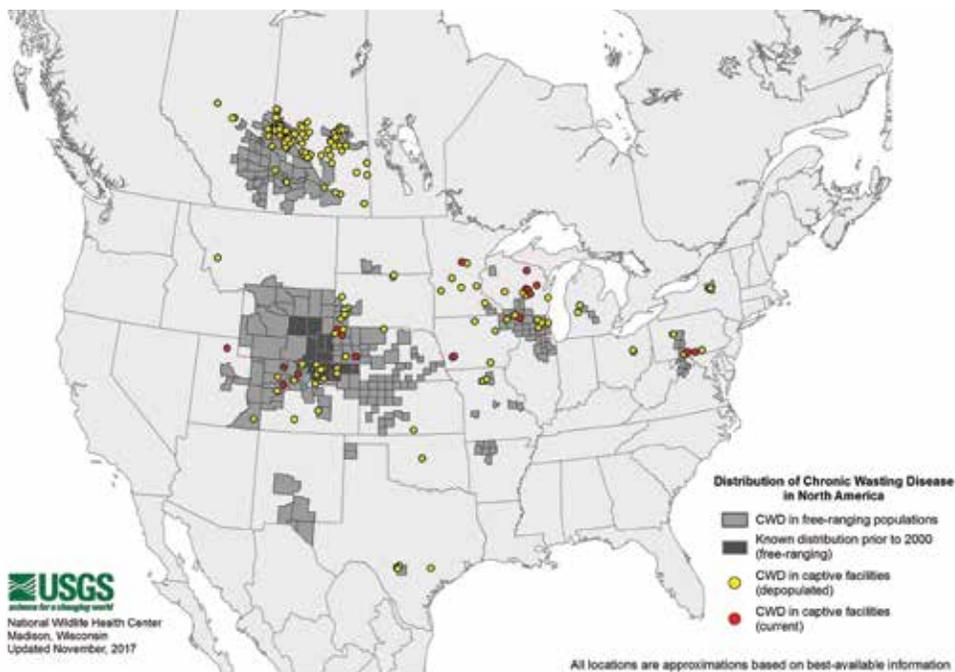
Hemorrhagic Disease (HD) is an infectious, blood-borne disease of deer and elk that is transmitted by biting midges or flies. It is caused by either of two closely related viruses, epizootic hemorrhagic disease virus (EHDV) or bluetongue virus (BTV). Since the symptoms and disease features produced by both of these viruses are relatively indistinguishable, the general term “HD” is often used. For additional information on the biology of HD, see our 2009 *Whitetail Report*.

HD made a few headlines in 2017 and some of the biggest included:

Positive Cases

- As of late October 2017, the Southeastern Cooperative Wildlife Disease Study (SCWDS) confirmed HD in 18 states. Most notable was a focally severe outbreak that occurred in the Appalachian Plateau physiographic region, with Kentucky, Ohio, Pennsylvania, Tennessee, and West Virginia being hit hardest. For example, Kentucky received reports of more than 4,500 sick or dead deer, mostly in the eastern portion of the state. SCWDS also isolated HD viruses from deer in parts of Alabama, Maryland, North Carolina, and Virginia that are adjacent to affected areas in the above states.

- An additional noteworthy finding from 2017 was that two HD-positive white-tail bucks were discovered in Ontario, representing the first ever detection in Canada. Also for the first time, HD was found in a single deer in Connecticut. These new locations add to existing concerns of a gradual northern expansion of HD over time, potentially associated with climate change.



BOVINE TUBERCULOSIS

Bovine tuberculosis (TB) is a bacterial infection of the respiratory system. Bovine TB is a chronic, progressive disease that can take years to develop. There is no vaccine. Prior to 1994, only eight wild white-tailed deer and mule deer were reported with TB. Since then, it has been discovered in Montana, Wisconsin, Minnesota, Michigan and Indiana. With the exception of Michigan, TB appears to be eradicated in the other states. The key is quickly reducing/eliminating the reservoir or host (e.g., cattle or captive elk).

Bovine TB made no big headlines in 2017.

NEW WORLD SCREWWORM

New World screwworm is fly larvae (maggots) that can infest livestock and other warm-blooded animals, including deer and even people. They most often enter an animal through an open wound or, in the case of newborns, the navel. They feed on the animal's living flesh. If not treated, infestations can be fatal. While New World screwworm has not been widely present in the United States since the 1960s, it is still found in most of South America and in five Caribbean countries.

Screwworm made a single big headline in 2017:

- A 2016 screwworm outbreak in Florida Key deer marked the first time in three decades the parasite has infested a group of animals in the U.S., and the first time in 50 years the insect appeared in Florida. Eradication efforts included a declared agricultural emergency, establishing an Animal Health Checkpoint at the northern-most Key, releasing sterile adult screwworm flies (a scientifically proven method), enhanced surveillance, and extensive public outreach. With no new screwworm finds by spring, the checkpoint was closed on March 18, 2017 and sterile fly releases were discontinued by April 25, 2017. For more info visit: freshfromflorida.com/screwworm

CHRONIC WASTING DISEASE

Chronic wasting disease is an always-fatal disease found in most deer species, including elk, moose, mule and white-tailed deer, and CWD has now been identified in 24 U.S. states, three Canadian provinces, Korea (from an elk imported from Canada in 1997) and in free-ranging reindeer, moose and red deer in Norway. Contagions spread through urine, feces, saliva, blood, deer parts, and especially via live deer. Importantly, there is no vaccine or cure.

Research shows variances in infectiv-

ity among prion transport systems (for example, saliva may be ten times as infectious as urine), that plants can bind, uptake and transport prions from infected soil, and hamsters that ate the plants contracted the disease. CWD has also been shown to experimentally infect squirrel monkeys, pigs and laboratory mice that carry some human genes. In addition, and perhaps most frightening, ongoing research provides some evidence of potential infection when primates closely related to humans consume infected venison (more below). These results do not cast a favorable light for CWD, deer, American agriculture, our hunting heritage and conservation.

CWD made numerous other headlines in 2017 and some of the biggest included:

Positive Cases

- Last fall, and for the first time ever, CWD was found in wild deer in Montana. At the time of this writing six deer, four mule deer bucks, one mule deer doe and one white-tailed doe, had tested positive. As a result, agency officials formed an incident command team, implemented their CWD response plan and initiated a quota hunt in the infected area.
- From 2015 to 2016, a total of nine free-ranging deer tested positive for CWD in Michigan in two counties, Clinton and Ingham. In 2017, at least 21 new cases had been identified, including 17 suspected positives in Montcalm county and three in Kent county.
- In December 2017, Arkansas had confirmed 70 new cases of CWD since the 2017 deer season opened. Although the number of positive cases was high, no samples from new areas of the state had been found by the time of this writing. By the end 2016, the first year CWD was discovered in Arkansas, the total number of free-ranging positive samples included 132 deer and five elk.
- Preliminary tests showed that seven deer harvested in Minnesota's disease management zone during 2017 may have been infected with CWD. Minnesota confirmed CWD again in wild deer in 2016, the first found since 2010.
- Confirmation of CWD in two Wisconsin deer shot on a hunting ranch in Waupaca County led to an additional Iowa County property being quarantined. The two 4-year-old bucks were killed on

the 84-acre Waupaca hunting ranch, but originated from a 15-acre breeding farm in Mineral Point, Wisconsin that contained 110 white-tailed deer, according to the owner's most recent registration records. Both deer were additions to the breeding farm and were moved to the Waupaca hunting ranch in September.

- Though well established in the state, Wyoming officials found CWD in one new deer hunt area.

Research

- A study begun in 2009 by Canadian and German scientists evaluating whether CWD can be transmitted to macaques, a type of monkey that is genetically closer to people than any other animal previously infected with CWD, has begun to shed some light on possible human susceptibility. On July 10, 2017 a summary of the study's progress was presented to the public, in which lead scientists showed that CWD was successfully transmitted to study animals when fed raw meat (muscle tissue) or brain tissue from CWD-infected deer and elk. CWD was also able to spread to macaques that had the infectious material placed directly into their brains.
- Another completed research project confirmed positive results in pigs orally inoculated with CWD, suggesting that it may be possible for swine to serve as a prion reservoir. The results have raised concerns regarding the potential for feral hogs to further complicate the epidemiology and management of CWD in wild populations, as well as the potential for swine to represent a source of CWD exposure through domestic animal and human food chains.

Other

- In 2017, the "CWD Management Act" was introduced, both initiated and supported by QDMA, along with several other key sportsman's groups. If passed, this bipartisan bill would support efforts to develop and implement management strategies, research and methods to control the further spread of the disease. It has three main components:
 1. Authorizing funding to state and tribal agencies responsible for wildlife management to implement management strategies to address CWD.
 2. Directing USDA to make grants to

expand and accelerate applied research on CWD.

3. Directing the USDA and Department of Interior to work cooperatively with states to conduct research and implement state CWD response plans to reduce the spread and prevalence of the disease.

- Wildlife scientists, QDMA and other experts from across the country gathered in Michigan for a CWD Symposium in October.

QDMA RECOMMENDATIONS

Disease transmission among free-ranging and from captive to free-ranging deer is a major threat to the future of wildlife management and hunting in North America. The QDMA recommends a continued and strengthened effort by wildlife professionals to study, monitor and evaluate solutions for minimizing the spread of CWD, Bovine TB and other communicable, preventable diseases.

QDMA also recommends maintaining or enhancing strict movement restrictions (like border closings) and testing protocols on captive deer, as well as returning/maintaining primary authority over captive deer facilities and regulations to the state/provincial wildlife agencies. Currently, some states/provinces have this authority while the Department of Agriculture shares it or maintains sole possession in others (See the 2017 *Whitetail Report*).

We strongly recommend a moratorium on the interstate movement of all live deer and elk by individuals as well as state and federal wildlife agencies, at least until such time as a practical live animal test becomes available. We also support a prohibition on the transport of high-risk parts such as the brain, eyes, spleen and backbone. These two actions would do more to suppress the spread of CWD than any other actions that could be taken.

Regarding HD, although its national impact on deer populations was minor in 2017, it can be locally severe, especially in areas where the disease is relatively new. The QDMA recommends hunters who experience significant losses should closely monitor population indicators to determine if reducing the local antlerless harvest is necessary, and if any hunter identifies a sick or malnourished deer, to please report it immediately to their state/provincial wildlife agency or to SCWDS.

ANTLER RESTRICTIONS

Antler restrictions are a hot topic among deer hunters. Whether you love or hate them, you can be sure your state or provincial wildlife agency has discussed them. In fact, at least 23 states and one province had some form of antler restrictions implemented in 2017. Antler restrictions are not synonymous with Quality Deer Management. Rather, antler restrictions are a strategy to protect a specific age class (generally yearlings) or classes of bucks. Many antler restrictions have been used, including point, spread and beam length requirements, as well as Boone & Crockett score. All restrictions have advantages and disadvantages. The key is to implement a strategy devised from local data, and then educate local sportsmen and women on the benefits.

Twelve states have statewide restrictions for at least one buck in the bag limit, while 11 states and Quebec use them in some wildlife management areas, units, regions and/or military bases. The most commonly-used restriction was the number of antler points. Fifteen states and the

one province employ this technique, and depending on the state, the number varies from one to four points on a single antler.

Three states use an antler spread restriction. Antler spread is a better predictor of whether a buck is 1½ or 2½ years or older and is therefore a more biologically sound approach to protecting yearlings. Five states use a combination of antler points and spread, or antler points and main beam length, or antler spread and main beam length. The combination approaches allow hunters to harvest bucks that meet one of the two criteria. Combination approaches are generally more biologically sound, flexible, and preferred to single restriction strategies.

Modern-day deer management certainly differs from that of a decade or two ago. Today's hunters are more knowledgeable than ever and are demanding more intensive management programs from their state and provincial wildlife agencies. This has proven to be very healthy for deer herds and for the future of deer hunting.

QDMA'S RECOMMENDATIONS

In general, QDMA prefers the voluntary passing of yearling bucks to mandatory antler regulations. However, we recognize that mandated antler restrictions may be justified in some situations to achieve specific deer management objectives. Regarding our position on specific antler restriction proposals, QDMA examines each on a case-by-case basis and applies a three-part test.

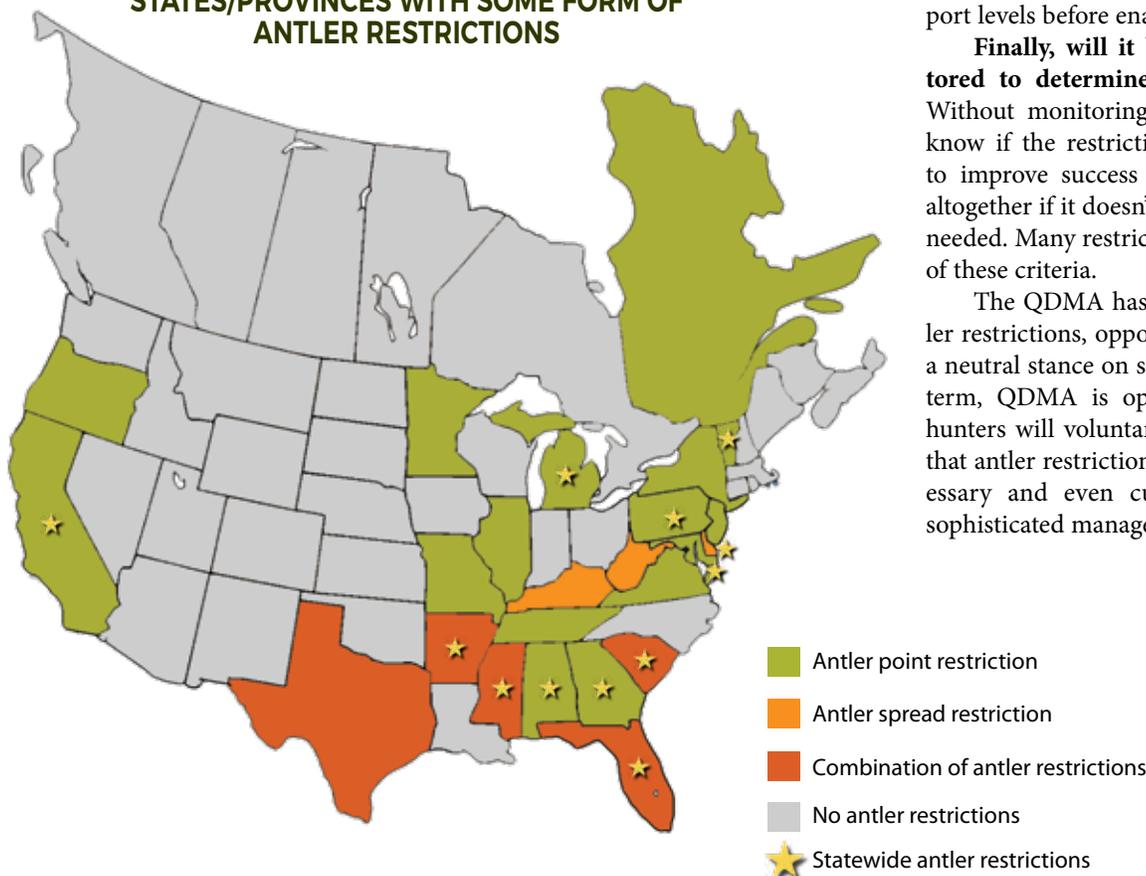
First, is the restriction biologically sound? This means the proposed restriction will protect the majority of yearlings while allowing the majority of bucks 2½ years old and older to be eligible for harvest. This is always the goal of state-mandated restrictions, though voluntary antler restrictions on private lands may seek to protect some older age classes as well. In either case, the antler restriction criteria must be based on data collected from the affected deer population to ensure the correct bucks are protected.

Second, is it supported by the majority of affected hunters and landowners? Agencies considering an antler restriction should conduct surveys to determine support levels before enacting the restriction.

Finally, will it be objectively monitored to determine success or failure? Without monitoring, there is no way to know if the restriction should be altered to improve success or possibly removed altogether if it doesn't work or is no longer needed. Many restrictions fail one or more of these criteria.

The QDMA has supported some antler restrictions, opposed others, and taken a neutral stance on still others. In the long term, QDMA is optimistic that enough hunters will voluntarily pass young bucks that antler restrictions will become unnecessary and even cumbersome to more sophisticated management.

STATES/PROVINCES WITH SOME FORM OF ANTLER RESTRICTIONS



FOOD PLOTS LEAD THE WAY AMONG HUNTER LAND MANAGEMENT PRACTICES



While roughly three out of 10 surveyed hunters are actually involved in managing or attracting wildlife on the land where they hunt, of those who do, more than 80 percent of their efforts are spent on creating food plots. In fact, a 2017 survey conducted by Southwick Associates, a market research and economics firm specializing in the hunting, shooting, sportfishing, and outdoor recreation markets, found that food plots were the leading practice by nearly double most other practices.

The following are the top five management practices as revealed by the survey:

- Food plots = 81 percent
- Mineral sites = 49 percent
- Timber management = 45 percent
- Plant management = 42 percent
- Feeders = 39 percent

Other practices measured included creating man-made water sources (17 percent), controlled burns (15 percent), maintaining water level or flow (11 percent) and “other” (6 percent).

The survey also examined the interaction of hunters around their feeding

sites. Of those hunters who do use feeders (where legal) to enhance opportunities, 86 percent monitor those sites with trail-cameras, 67 percent of them do so year-round, 33 percent run feeders year-round, and 83 percent hunt over them or near them.

“This survey shows that food plots and other means of attracting and hold-

Although food plots aren't for everybody, the QDMA feels they are a critical part of the conservation conversation for both public and private landowners and managers.

ing game in an area or on a particular property are important management tools among a third of today's hunters,” said Rob Southwick, president of Southwick Associates, which designs and conducts the surveys at HunterSurvey.com, ShooterSurvey.com and AnglerSurvey.com.

QDMA'S RECOMMENDATIONS

One of the Four Cornerstones of QDM is habitat management, which of course includes food plots, along with numerous other habitat enhancement strategies. Certainly, food plots can serve to both improve year-round nutritional capacity and increase harvest opportunity; however, they are much more than that. We know that not everyone has access or the means to put in food plots, but as indicated by this survey, food plots are extremely popular and we believe are one of the primary gateways in which the average deer hunter transforms from consumer to manager. It gets them through the door and on the path to thinking about habitat improvement. Let's face it, improving habitat has become an essential part of the modern deer hunter's vocabulary and management efforts, which is clear from the general availability of information and merchandise on the market. Although food plots aren't for everybody, the QDMA feels they are a critical part of the conservation conversation for both public and private landowners and managers.

HUNTER NUMBER AND HUNTER SPENDING DECLINES

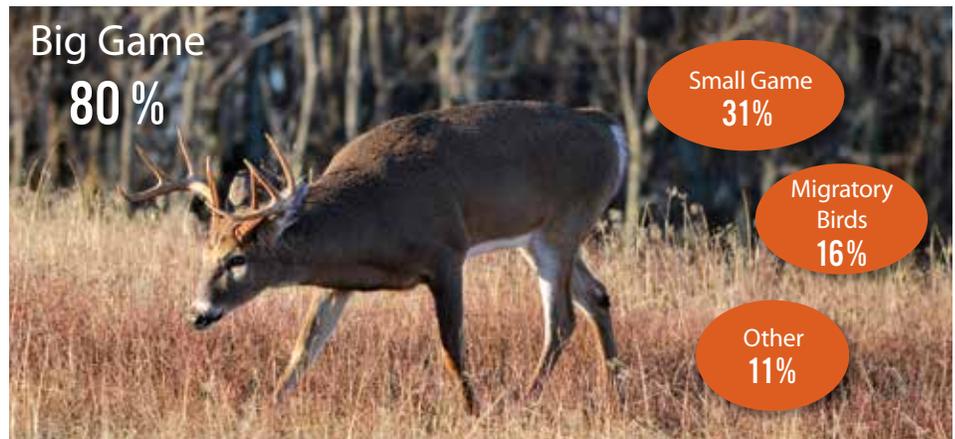
Every five years since 1955, the U.S. Fish and Wildlife Service (USFWS) has conducted a National Survey of Fishing, Hunting and Wildlife-Associated Recreation to report on the number of people who fished, hunted and watched wildlife. The survey also reports on the specific activities sportsmen and women engaged in (such as big game hunting, waterfowl hunting, etc.), the money they spent on those activities, and how that data compared to prior years. The most recent survey was conducted in 2016, and the preliminary results were released in August 2017. At the time of this writing the full report had not been released, but the preliminary report included some very interesting data. The USFWS used similar survey methods in 2011, 2006, 2001, 1996 and 1991, so the results are very comparable across the past 25 years.

AND THE SURVEY SAYS

In 2016, 11.5 million people 16 years of age and older went hunting (5 percent of total U.S. population), averaging 16 days afield each. Eighty percent of those 11.5 million hunters pursued big game like deer and elk, 31 percent pursued small game like squirrels and rabbits, 21 percent pursued migratory birds like geese and ducks, and 11 percent hunted other animals such as coyotes, groundhogs and raccoons.

In total, hunters spent \$25.6 billion in 2016. The bulk of this was on hunting equipment (see pie chart), while only 3 percent was for hunting licenses and

WHAT SPECIES DO ACTIVE NORTH AMERICAN HUNTERS TYPICALLY HUNT?



According to QDMA's 2017 Whitetail Report hunters averaged 13 days afield in pursuit of deer during the 2015-16 season. Given that USFWS estimates the total days hunting averaged 16 days per hunter per year that season, and our survey estimated 13 of those were spent deer hunting, this is yet another measure showing deer hunting dominates the hunting industry.

fees. This is important as an excise tax on guns, ammunition and other hunting items funds a large portion of most state wildlife agency budgets, and thus most wildlife management programs.

COMPARATIVELY SPEAKING

11.5 million hunters and \$25.6 billion in expenditures sounds like a lot, but what's most important is how those numbers compare to prior surveys. Unfortunately, they don't compare well at all. From 2006 to 2011 hunter numbers increased by over one million, but during the past five years we lost 2.2 million hunters. That means hunter numbers decreased by 16 percent from 2011 to 2016! With regard to expen-

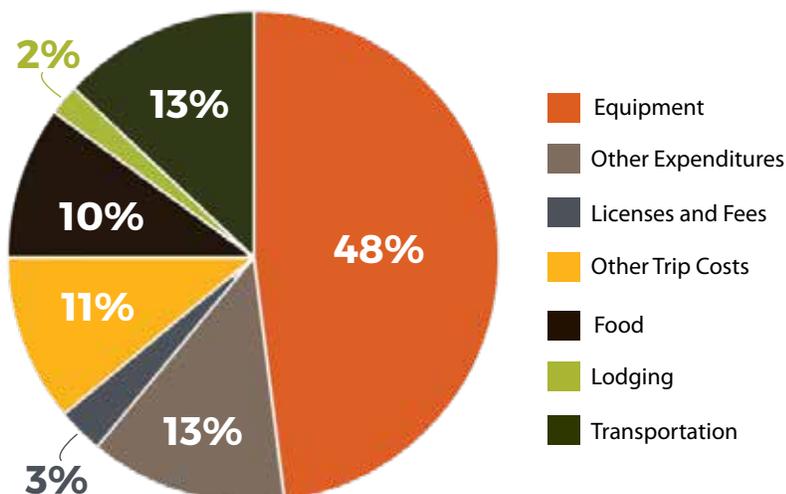
ditures, hunter spending dropped nearly \$11 billion dollars or 30 percent. Adding insult to injury, the number of hunters is expected to continue declining as Baby Boomers exit the sport.

Fewer hunters means fewer advocates for hunting and fewer dollars for our wildlife management programs. Our current system of funding for the vast majority of state wildlife agencies will fail in the near future given these predicted hunter and spending declines.

QDMA'S RECOMMENDATIONS

Public support for hunting has never been higher, but because only 5 percent of American adults hunt we have a tremendous pool of hunting supporters to draw from to increase our ranks. QDMA's Share Your Hunt™, Rack Pack, and Field to Fork Programs are all designed to increase hunter numbers. Importantly, QDMA recently established a five-year goal aimed at recruiting new youth or adult hunters by challenging our members to mentor more than 200,000 new hunters annually. A 2017 QDMA survey showed our members mentored 160,000 new hunters in 2016, and with your help we are confident we can hit the 200,000 mark in 2018; without your help our hunting heritage is in real jeopardy. We encourage you to give some of your time and resources to mentor at least one new hunter this year.

2016 HUNTING EXPENDITURES



DEER HUNTER NUMBERS

Most sportsmen and women realize that hunters are the backbone of wildlife management programs and that they fund the lion's share of our state wildlife agencies. Most also know that overall hunter numbers are in a steady decline (see page 24), but few truly realize just how popular deer hunting is compared to other sources of hunting. For example, the wild turkey is the next most sought-after species, yet deer hunters outnumber turkey hunters nearly four to one. That's why it is so critical to keep very close tabs on deer hunter trends and recruitment efforts, because that is where the stakes are greatest for conservation.

Thus, we asked state and provincial wildlife agencies how many deer hunters they have today and how this estimate has changed from a decade ago. Forty-four of the lower 48 states responded with an estimate of just over 10 million deer hunters and 0 percent change over that time. For comparison, the U.S. Fish and Wildlife Service (USFWS) assessed during their 2011 survey (5 years ago) that of the then 13.7 million hunters, 10.9 million (79 percent) were deer hunters. Astute readers will note that preliminary results of the USFWS survey estimates there are only 9.2 million (80 percent of 11.5 million) big game (deer, elk, etc.) hunters today. So, why the discrepancy? Mostly because the data are collected differently. The latest USFWS results are based on data collected by the U.S. Census Bureau, where 22,416 households were contacted for screening interviews and included over 5,000 samples; the methodology used in all of the USFWS surveys was the same, so the estimates are comparable to each other. The data in our report comes directly from the state and provincial wildlife agencies and is based on various estimates, including deer hunting license sales.

Interestingly, the Northeast saw the largest decrease (6 percent) in our survey when seven of 13 states found themselves losing deer hunters over the past 10 years, while the Southeast realized the largest growth (9 percent) with only two of 11 states experiencing a decline. Overall, 19 of the 42 states (45 percent) and two of the four provinces (50 percent) that responded have seen a loss.

5 States With the Lowest Number of Deer Hunters

State	2016 Number
Rhode Island	9,000
Nevada	18,000
Wyoming	27,814
New Mexico	31,000
Connecticut	47,958

Top-5 States With the Highest Number of Deer Hunters

State	2016 Number
Texas	738,713
Pennsylvania	700,000
Wisconsin	642,517
Minnesota	600,000
Michigan	586,000

Top-5 States With the Largest Increase in Deer Hunter Numbers Last 10 yrs

State	% Increase
Tennessee	35
Texas	28
Georgia	21
Idaho	17
Oklahoma	16

5 States With the Largest Decrease in Deer Hunter Numbers Last 10 yrs

State	% Decrease
North Dakota	-30
Vermont	-20
Colorado	-17
Virginia	-16
West Virginia	-15

QDMA'S RECOMMENDATIONS

Today, with fewer hunters afield, recruitment efforts like those we are initiating at QDMA have never been more important by continuing to support recruitment programs. However, they alone won't be enough to curb hunter declines. It will also require existing hunters to recruit and mentor new hunters in more traditional one on one opportunities. Deer hunters are the solution to reverse the trend of overall hunter loss.

DEER HUNTER NUMBERS AND % CHANGE

State/Province	# deer hunters	% change from 10 years ago
Alabama	190,000	-8%
Arkansas	350,000	-5%
Florida	98,577	0%
Georgia	353,620	21%
Louisiana	184,400	0%
Mississippi	142,330	8%
North Carolina	250,000	0%
Oklahoma	367,311	16%
South Carolina	138,997	3%
Tennessee	302,415	35%
Texas	738,713	28%
SE Total/Avg	3,116,363	9%

Connecticut	47,958	-8%
Delaware	15,000 -17,000	0%
Maine	210,000 - 220,000	4%
Maryland	59,000	-12%
Massachusetts	50,000	0%
New Hampshire	57,500	-12%
New Jersey	78,000	0%
New York	574,606	0%
Pennsylvania	700,000	-5%
Rhode Island	9,000	11%
Vermont	55,000	-20%
Virginia	200,000	-16%
West Virginia	239,563	-15%
NE Total/Avg	2,301,627	-6%

Illinois	244,724	-9%
Indiana	190,300	*
Iowa	170,781	-6%
Kansas	115,635	14%
Kentucky	350,000	10%
Michigan	586,000	-14%
Minnesota	600,000	0%
Missouri	501,576	4%
Nebraska	135,440	9%
North Dakota	60,000	-30%
Ohio	450,000 - 475,000	9%
South Dakota	67,615	-13%
Wisconsin	642,517	-4%
MW Total/Avg	4,127,088	-3%

3 Reg. Total/Avg	9,545,078	0%
Arizona	61,172	-11%
California	*	*
Colorado	81,253	-17%
Idaho	147,541	17%
Montana	*	*
Nevada	18,000	-10%
New Mexico	31,000	0%
Oregon	*	*
Utah	*	*
Washington	115,901	*
Wyoming	27,814	11%
West Total/Avg	482,681	-2%

U.S. Total/Avg	10,027,759	0%
Alberta	*	Increasing
British Columbia	*	*
Manitoba	*	*
New Brunswick	40,350	-12%
Nova Scotia	*	*
Ontario	200,000	0%
Quebec	142,865	-26%
Saskatchewan	*	*
Canada Total/Avg	383,215	-13%

*Data not provided/available

CAPTIVE DEER CLASSIFICATION

The QDMA supports the legal, ethical pursuit and taking of wild deer living in adequate native/naturalized habitat in a manner that does not give the hunter an unfair advantage and provides the hunted animals with a reasonable opportunity to escape the hunter. We do not oppose high-fence operations that meet those conditions. However, the QDMA is well known for our concerns with several aspects of the captive deer breeding industry, including artificially retaining and manipulating white-tailed deer and the threats these activities place on animal welfare, human health/safety, disease, compliance with game laws and our overall hunting heritage (see the 2013 *Whitetail Report* for more info). In addition, policy and the regulations associated with white-tailed deer in captivity change constantly, so we like to keep track of the legality of these types of practices, how they are viewed within their jurisdiction and who oversees them.

We asked state and provincial wildlife agencies how captive whitetails are currently classified (wildlife, livestock or

other). Overall, 36 of 42 states offered some form of classification, and five states (Nebraska, New Hampshire, South Carolina, Tennessee, and Wyoming) stated

Given the potential for disease transmission and the threat to our \$87 billion hunting industry, QDMA advocates for captive deer to be categorized as wildlife and that primary regulatory authority of captive deer facilities stay with state/provincial wildlife agencies.

that either the industry didn't exist or it was illegal. Of the 36 states that responded to our survey, the category of livestock was used nearly two to one compared to the term wildlife. Today, 21 of 36 states (58 percent) consider captive deer as livestock,

and only 11 (31 percent) consider them wildlife. This is a major shift in classification since our 2013 *Whitetail Report*. At that time 12 of 22 states (55 percent) providing data reported captive deer were wildlife, while only eight (36 percent) considered them livestock.

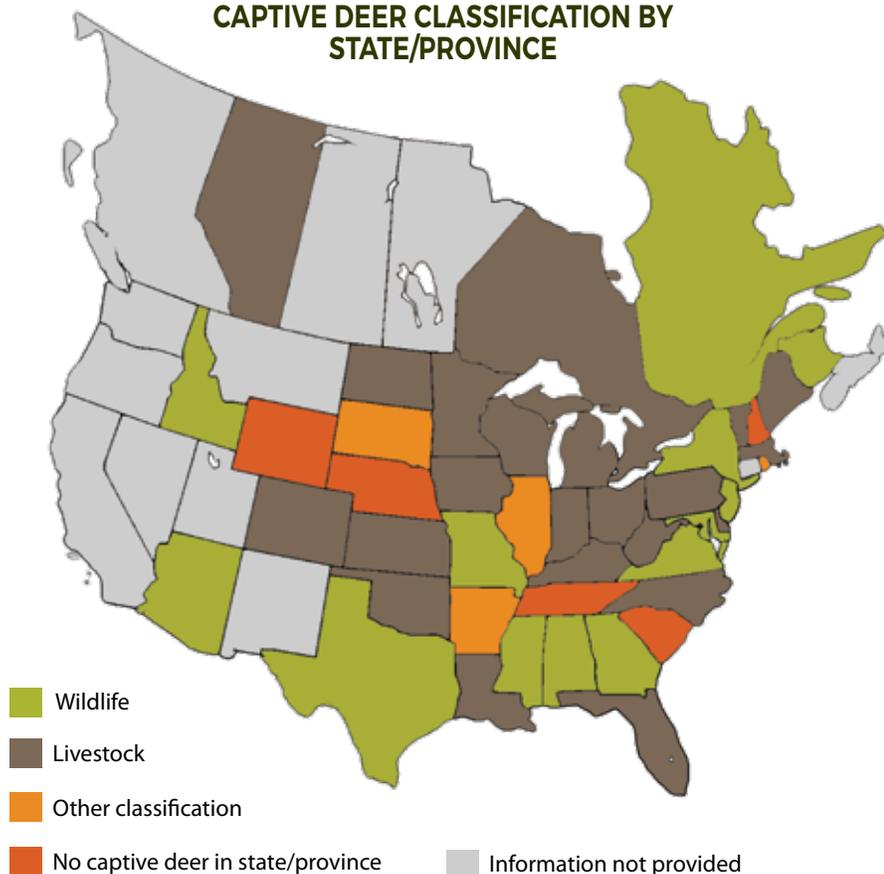
Regionally speaking, four of nine states in the Southeast consider captive whitetails as wildlife, four consider them livestock, and Arkansas considers them as either, depending on the situation. In the Northeast, four of 11 categorize them as wildlife, six consider them as livestock, and Rhode Island labels them as "captive (wild) cervids." In the Midwest, only one of 12 states consider captive whitetails as wildlife, nine classify them livestock, Illinois considers them as either, and South Dakota considers them as a "captive non-domestic." Only four states in the West and four Canadian provinces responded to this question, with roughly split categories for wildlife/livestock in each.

QDMA'S RECOMMENDATIONS

In most cases, this regulatory matrix is a direct result of lobbied and enacted law, with heavy efforts from special-interest groups to move captive deer to the livestock category. The problem is that this inconsistency across state or provincial boundaries possibly creates missed opportunities for communication between agencies controlling and regulating captive deer facilities and certainly limits management efforts. There are also fundamental differences between wildlife and agricultural departments regarding captive deer issues and free-ranging wildlife populations, and when a public-trust resource like whitetails is legally considered livestock, ultimately control moves to the latter.

Given the potential for disease transmission and the threat to our \$87 billion hunting industry, QDMA advocates for captive deer to be categorized as wildlife and that primary regulatory authority of captive deer facilities stay with state/provincial wildlife agencies. These agencies have more experience with wildlife species and have more at stake with wildlife disease issues, especially with regard to transmission to free-ranging populations.

CAPTIVE DEER CLASSIFICATION BY STATE/PROVINCE



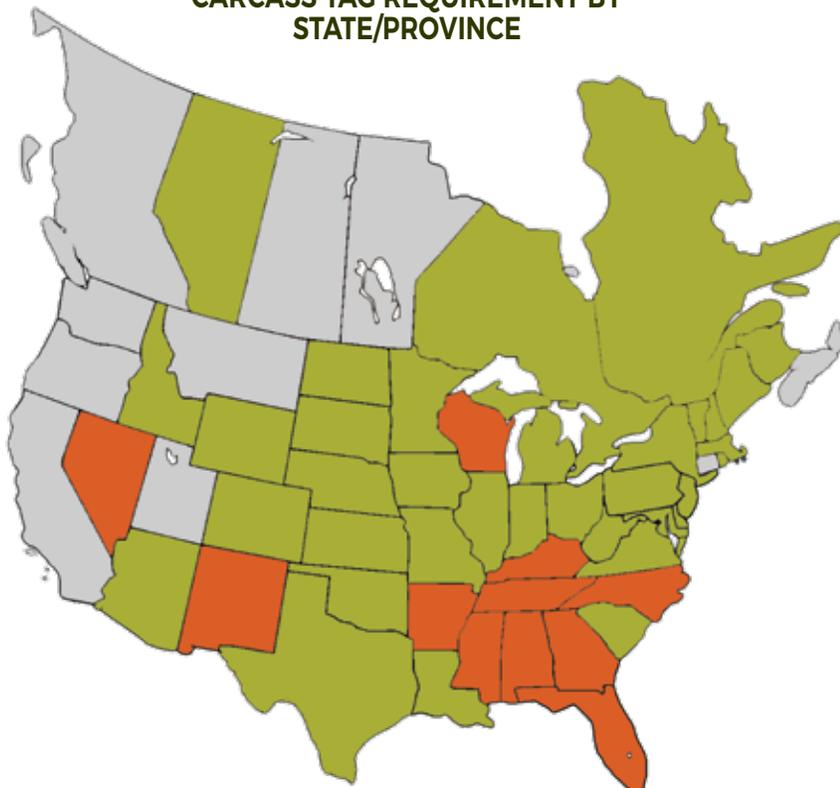
CARCASS TAG REQUIREMENTS



We've all seen photos of harvested deer tagged in various locations. Some tags are placed around an antler, others are in an ear, and some are through a back leg. Ever wonder how many states and provinces require tagging? We did, so we surveyed state and provincial wildlife agencies to determine whether deer had to be physically tagged within their jurisdictions. A similar survey for our 2014 *Whitetail Report* provides a comparison to tagging requirements four years ago.

Thirty-one of 42 states (73 percent) required physical tagging, which is the exact proportion (73 percent) that mandated it in 2014. However, there have been some changes. Tagging is most prominent in the Northeast, where all states that responded required it. New Jersey did not require carcass tags for the 2013-14 season but does now. The Midwest was a close second as 11 states (85 percent) required it, with Wisconsin changing their tagging requirements since our last survey. The Southeast was much more lenient as only four of 11 states (36 percent) required physical tagging. Notably, both Arkansas and South Carolina reversed their carcass tagging regulation since 2014. In the West, four states (67 percent) require it, while all provinces that provided data required tagging in Canada.

CARCASS TAG REQUIREMENT BY STATE/PROVINCE



QDMA'S RECOMMENDATIONS

The days of agency-manned check stations are behind us as less than one third of states and only one of five provinces employ them. However, we feel it is still critically important to link a harvested deer to the successful hunter in a way that's as effective and practical as possible for the hunter and state wildlife agency. This may be through a physical tag placed on the animal or a confirmation number from a "telechecked" deer. Declining agency budgets and an increase in online license purchasing by hunters makes the printing and distributing of carcass tags more problematic. Given the regional variability in carcass tags, the issue is likely as culturally based as biologically important.

 Carcass tag required  Carcass tag not required  Information not provided

NEW HUNTER AND VOLUNTEER ENGAGEMENT PROGRAMS

Declining hunter participation is one of the single most important issues impacting deer hunting and management today. In fact, it has been a major issue for years. It is the primary reason Families Afield was launched in 2004, and it's why the National R3 (Recruitment, Retention and Reactivation) Plan was initiated by the Council to Advance Hunting and the Shooting Sports (CAHSS) much more recently.

Though R3 programs abound (over 450 state and national programs are available today), they have been met with limited success. Experts believe it's because most focus on children and/or entice participants from families with pre-existing hunting experience. CAHSS and other conservation partners feel that to increase the number of hunters from new and existing audiences, multi-pronged marketing and outreach efforts are needed, and those efforts should focus more on non-traditional user groups.

So, to gain a better understanding of these types of opportunities available today, we surveyed state and provincial wildlife agencies and asked whether they currently offered any programs for engaging new, non-traditional audiences for deer hunting. We also asked if they offered formal programs that encouraged volunteerism on government-owned lands that allow deer hunting, as a means to bridge the gap of introducing newcomers to hunting while

building opportunities to improve hunter-agency relationships, habitat, access, and community involvement.

NEW HUNTER PROGRAMS

Thirty-two of 41 states (78 percent) have new hunter programs, some of which are geared for non-traditional audiences. These include programs that teach participants to shoot, hunt and cook wild game. There are several aimed at getting more women in the outdoors and others that offer apprentice hunting licenses for individuals interested in trying hunting. According to wildlife agency officials, nine of 11 states (82 percent) in the Southeast, seven of 12 states (58 percent) in the Northeast, 11 of 12 states (92 percent) in the Midwest and five of six (83 percent) in the West have some form of new hunter program in place. No programs were reported in Canada.

VOLUNTEER PROGRAMS

Far fewer states have similar opportunities for volunteers to help out on publicly accessible lands, as only 14 of 41 states (34 percent) offer a formalized program. One of 11 states (9 percent) in the Southeast has a program, five of 12 states (42 percent) in both the Northeast and the Midwest have a program, and only three of six states (50 percent) in the West have a formal volunteer engagement program available. No programs were reported in Canada.

QDMA'S RECOMMENDATIONS

Although we're pleased to see that new hunter programs exist in nearly every region in United States, there is room for improvement for both new hunter and volunteer engagement. We encourage all state and provincial agencies that currently do not offer a formal new hunter program which specifically targets non-traditional audiences (urban/suburban, locavores, women and minorities) to make them available in the future.

In addition, QDMA is a strong proponent for public involvement in deer management, and we were pleased to see several states taking advantage of formal volunteer programs. We also recognize the budgetary constraints many state and provincial wildlife agencies operate under today. Thus, we recommend more agencies engage sportsmen and women at an even higher level in the future through volunteerism, forging strong working relationships and maintaining open and effective lines of communication with the public.

Many nonprofit organizations like QDMA want to help, and our network of members, Branches and State Advisory Councils can be of great financial, organizational and physical support if asked. In fact, one aspect of our new mission goals specifically challenges QDMA members to get involved by helping out on local government lands. Ideally, they would and should be welcomed with open arms.

STATES/PROVINCES WITH NEW HUNTER PROGRAMS



STATES/PROVINCES WITH VOLUNTEER PROGRAMS



STATE AND PROVINCIAL WILDLIFE AGENCY LOGOS



White-tailed deer are the foundation of our hunting industry and wildlife management system. More hunters pursue deer than all other game species combined. In fact, about 80 percent of all hunters pursue deer (see page 25). In the West, mule deer are favored, but approximately 97 percent of hunters and whitetails in the United States live east of the Rocky Mountains, so in most of the country whitetails reign supreme.

As such, we thought it would be interesting to see the influence whitetails have on state and provincial logos so we surveyed each wildlife agency in the contiguous U.S. and Canada and asked for a copy of their agency's logo. Overall, birds were represented on 26 of 48 state logos (54 percent), followed by fish (25 states, 52 percent) and whitetails (17 states, 35 percent). However, there was a lot of regional variability.

In the Southeast, whitetails were on 64 percent of agency logos, and in the Northeast they were on 54 percent of logos. Conversely, whitetails were only depicted on 15 percent of Midwestern and 9 percent of Western state wildlife agency logos. Big game other than whitetails dominated West logos, as 73 percent included a bear, bighorn sheep, elk, mule deer or pronghorn. In Canada, wildlife was scarce on agency logos. Whitetails, birds and/or fish didn't appear on a single logo. In fact, Manitoba was the only province to display an animal, and it included a bison.

WILDLIFE AGENCY LOGOS BY STATE/PROVINCE

State/Province	White-tailed deer	Other big game mammal	Bird	Fish	Other
Alabama	x		x	x	
Arkansas	x		x	x	
Florida	x		x	x	
Georgia	x		x	x	
Louisiana	x		x	x	
Mississippi	x				Fishing boat, camping
North Carolina					Text
Oklahoma					Native American artifacts
South Carolina	x		x	x	Fishing boat
Tennessee				x	Raccoon
Texas					Text
Southeast Total	7	0	6	7	
Connecticut					Sun
Delaware			x	x	
Maine	x		x	x	
Maryland			x		Landscape
Massachusetts			x	x	
New Hampshire	x		x	x	
New Jersey	x		x	x	
New York					Text and state outline
Pennsylvania	x		x		Landscape
Rhode Island			x	x	Plant
Vermont	x		x	x	
Virginia	x		x	x	
West Virginia	x		x	x	
Northeast Total	7	0	11	9	
Illinois			x		Landscape
Indiana					Text
Iowa					Text
Kansas					Text and graphic designs
Kentucky	x		x	x	
Michigan					Text and state outline
Minnesota					Text
Missouri				x	Raccoon, oak leaf
Nebraska			x	x	Tree
North Dakota		x	x	x	Mule deer
Ohio	x		x	x	
South Dakota			x		
Wisconsin					Landscape
Midwest Total	2	1	6	5	
Arizona			x		
California		x			Bear
Colorado		x			Bighorn sheep
Idaho		x		x	Elk, landscape
Montana					Mountains
Nevada		x	x	x	Bighorn sheep
New Mexico		x			Bear
Oregon		x		x	Mule deer
Utah					
Washington	x		x	x	Crab
Wyoming		x			Pronghorn
West Total	1	8	3	4	
U.S. Total	17 of 48	9 of 48	26 of 48	25 of 48	

VENISON DONATION PROGRAMS



Hunters have been sharing their venison with family, friends, and neighbors for generations. Fortunately, beginning in the 1990s, organized programs started to become readily available to handle hunter-donated venison and provide it to needy individuals. Today there are literally hundreds of venison donation programs in existence, and we reported in our 2011 *Whitetail Report* that a minimum of 2,603,263 pounds of hunter-donated meat was provided for the needy across North America during the 2009-2010 hunting season. That translated to 10,445,512 meals (note: one deer will produce an average of 50 pounds of ground venison and approximately 200 meals)! Elk, moose, antelope, pheasants, and waterfowl were included in this total, but the bulk of the meat was from whitetails.

Formalized venison donation programs are known by a variety of names (e.g., Farmers and Hunters Feeding the Hungry, Sportsmen Against Hunger, Hunters for the Hungry, and Hunters Sharing the Harvest), and they range in abundance from zero to six per state/province. These programs are cooperative efforts among hunters, farmers, sportsmen's associations, meat processors, state meat inspectors, and hunger relief organizations to provide quality, high protein, and low fat wild game meat for the needy.

The National Rifle Association's Hunters for the Hungry Information Clearinghouse (NRA-HHIC) maintains detailed records of donated hunter-harvested meat from official venison donation programs, primarily from white-tailed deer, on an annual basis. This data is

📷 The Midlands QDMA Branch of South Carolina is just one of many that work with local food shelters to provide venison meals to those in need. Last year QDMA Branches and members donated approximately 6.9 million meals to charities or individuals not residing in their household.

comparable across years, and the table on the facing page includes an estimate per state from the 2009-2010 and 2014-2015 hunting seasons. We also surveyed state and provincial wildlife agencies and asked if they kept track of venison donations and, if so, to provide an estimate from the 2016-2017 season.

Overall 19 of 41 states (46 percent) and zero of three provinces that replied to our survey maintain records of venison donations within their jurisdictional boundaries. Also, according to both NRA-HHIC and our data, the Midwest region donates the most venison, followed by the Northeast, the Southeast and the West. Perhaps most obvious, however, is that an apparent decrease of nearly 800,000 pounds of donated venison occurred between 2010 and 2015 when evaluating analogous data from NRA-HHIC, which was a drop of more than 30 percent in five years. This occurred at a time when the national deer harvest also declined appreciably, and was attributed to multiple factors including, but not limited to, disease, weather, habitat loss, fawn recruitment declines and intentional reductions by wildlife agencies (see the 2015 *Whitetail Report* for more info).

Through our new five-year mission goals, QDMA has prioritized providing for our food-insecure neighbors, strongly encouraging our 60,000 members and network of 180 Branches to support venison donation programs in their respective areas or neighborhoods.

QDMA RECOMMENDATIONS

In 2016, over 40 million people (15.6 million households or 12.3 percent of all U.S. households) struggled to put enough food on their tables. The need for donated venison is obvious, and the availability of funding is the primary limiting factor preventing these programs from reaching their potential. Funding comes from a variety of sources such as individuals, churches, civic groups, hunt clubs, outdoor organizations, businesses, foundations, corporations, and local fundraising events.

Through our new five-year mission goals, QDMA has prioritized providing for our food-insecure neighbors, strongly encouraging our 60,000 members and network of 180 Branches to support venison donation programs in their respective areas or neighborhoods. Currently QDMA members donate 6.9 million meals or 1.73 million pounds of bulk venison to charities or individuals not residing in their household annually. Our goal is to donate 40 million meals, or 10 million pounds, by 2022. We hope that our involvement in this invaluable effort will dramatically increase the availability of quality venison to the needy.

**Top-5 States
With the Most Pounds of Venison
Donated 2016-2017**

State	Lbs. Venison
Virginia	283,200
Missouri	198,277
Tennessee	147,000
Iowa	137,500
Pennsylvania	110,000

**Top-5 States
With the Most Pounds of Venison
Donated Per Hunter 2016-2017**

State	Lbs./Hunter
Virginia	1.42
Delaware	1.13
Iowa	0.81
Tennessee	0.49
Missouri	0.40

VENISON DONATIONS BY STATE/PROVINCE

State/Province	Agency tracks donations?	2009-2010**	2014-2015**	2016-2017	2014-2015** lbs/hunter	2016-2017 lbs/hunter
Alabama	N	44,156	24,610	*	0.13	*
Arkansas	Y	68,000	50,000	51,000	0.14	0.15
Florida	N	1,784	560	*	0.01	*
Georgia	N	35,693	19,905	*	0.06	*
Louisiana	N	*	28,724	*	0.16	*
Mississippi	N	*	8,096	*	0.06	*
North Carolina	N	7,973	39,885	*	0.16	*
Oklahoma	Y	39,765	*	20,393	*	0.06
South Carolina	N	28,716	30,995	*	0.22	*
Tennessee	Y	103,755	128,199	147,000	0.42	0.49
Texas	N	186,540	100,000	*	0.14	*
SE Total/Avg	3 of 11	516,382	430,974	218,393	0.14	0.07
Connecticut		4,000	*	*	*	*
Delaware	Y	30,000	18,016	18,154	1.13	1.13
Maine	N	739	5,649	*	0.03	*
Maryland	N	144,350	135,040	*	2.29	*
Massachusetts	N	*	*	*	*	*
New Hampshire	Y	*	*	420	*	0.01
New Jersey	Y	15,020	24,019	20,270	0.31	0.26
New York	Y	10,267	*	76,000	*	0.13
Pennsylvania	Y	52,705	102,300	110,000	0.15	0.16
Rhode Island	Y	*	*	150	*	0.02
Vermont	N	*	*	*	*	*
Virginia	Y	405,340	238,972	283,200	1.19	1.42
West Virginia	Y	50,007	17,725	23,716	0.07	0.10
NE Total/Avg	8 of 12	712,428	541,721	531,910	0.24	0.23
Illinois	N	106,951	4,672	*	0.02	*
Indiana	Y	91,924	172,785	66,000	0.91	0.35
Iowa	Y	308,995	139,450	137,500	0.82	0.81
Kansas	N	4,500	36,660	*	0.32	*
Kentucky	Y	91,000	75,193	35,707	0.21	0.10
Michigan	N	34,350	*	*	*	*
Minnesota	N	400	5,166	*	0.01	*
Missouri	Y	237,363	212,993	198,277	0.42	0.40
Nebraska	Y	2,797	17,062	28,000	0.13	0.21
North Dakota	*	15,885	9,063	*	0.15	*
Ohio	Y	181,725	63,389	102,894	0.14	0.22
South Dakota	Y	97,752	37,643	24,376	0.56	0.36
Wisconsin	Y	176,445	23,250	50,320	0.04	0.08
MW Total/Avg	8 of 12	1,350,087	797,326	643,074	0.19	0.16
Arizona	N	3,136	3,126	*	0.05	*
California	*	6,350	*	*	*	*
Colorado	N	5,410	140	*	0.00	*
Idaho	N	3,000	1,500	*	0.01	*
Montana	*	1,450	38,280	*	*	*
Nevada	N	*	*	*	*	*
New Mexico	N	*	*	*	*	*
Oregon	*	40	*	*	*	*
Utah	*	3,680	1,600	*	*	*
Washington	*	1,300	*	*	*	*
Wyoming	N	*	*	*	*	*
West Total/Avg	0 of 6	24,366	44,646	*	0.09	*
U.S. Total	19 of 41	2,603,263	1,814,667	1,393,377	0.18	0.14
Alberta	N	*	*	565	*	*
British Columbia	*	*	*	*	*	*
Manitoba	*	*	*	*	*	*
New Brunswick	N	*	*	*	*	*
Nova Scotia	*	*	*	*	*	*
Ontario	*	*	*	*	*	*
Quebec	N	*	*	*	*	*
Saskatchewan	*	*	*	*	*	*
Canada Total/Avg	0 of 3	*	*	*	*	*

*Data not provided/available

**Data from NRA's Hunters for the Hungry information clearinghouse

DEER MANAGEMENT PLANS

An important component of the highly successful North American Model of Wildlife Conservation is that wildlife is held in trust by each state and province for its citizens to enjoy. Sportsmen and women are becoming increasingly engaged in deer management programs, and this is important as white-tailed deer are the most popular big game animal in the United States. Approximately three of every four hunters pursue whitetails, and whitetail hunters are the foundation of the \$87 billion hunting industry. Given the whitetail's importance, we surveyed state and provincial wildlife agencies to determine the number that had published deer management plans.

Management plans are written documents that establish specific goals, strategies and timelines to achieve desired outcomes. While the written plan is important, the process of stakeholder collaboration and articulation of specific outcomes is often equally, if not more, important. Thus, plans exist for managing a wide variety of natural resources.

Surprisingly, only 23 of 41 states (56 percent) had a published deer management plan. Plans were most prevalent in the Northeast where nine of 12 states (75 per-

cent) had one. Few states in the Midwest (5 of 12; 42 percent) or Southeast (5 of 11; 45 percent) had plans, and this is concerning given the importance of deer hunting to those regions. Four of six states (67 percent) in the West had plans, and three of four Canadian provinces (75 percent) had a published plan. For states with published deer plans, 12 (52 percent) have updated them within the past five years, and 19 (83 percent) have updated them within the past 10 years. Alabama, Minnesota, Ohio and West Virginia will publish new plans in 2018, while Alberta's plan was last updated in 1995.

QDMA RECOMMENDS

Given the whitetail's importance to the entire hunting industry and wildlife management system, QDMA strongly recommends all states and provinces have a published deer management plan created with input from all key deer stakeholder groups. QDMA staff has provided input to numerous states' management plans, served on several states' steering committees, and we look forward to working closely with states and provinces on future plans.

BY STATE/PROVINCE

State/Province	Published deer plan	Year published
Alabama	N	
Arkansas	Y	2013
Florida	Y	2008
Georgia	Y	2015
Louisiana	Y	2017
Mississippi	N	
North Carolina	N	
Oklahoma	Y	2016
South Carolina	N	
Tennessee	N	
Texas	N	
Southeast Total	5	
Connecticut	*	
Delaware	Y	2010
Maine	Y	2007
Maryland	Y	2009
Massachusetts	N	
New Hampshire	Y	2016
New Jersey	N	
New York	Y	2011
Pennsylvania	Y	2009
Rhode Island	N	
Vermont	Y	2008
Virginia	Y	2015
West Virginia	Y	Being revised
Northeast Total	9	
Illinois	Y	2014
Indiana	N	
Iowa	Y	2009
Kansas	N	
Kentucky	N	
Michigan	Y	2016
Minnesota	N	
Missouri	Y	2014
Nebraska	N	
North Dakota	*	
Ohio	N	
South Dakota	Y	2017
Wisconsin	N	
Midwest Total	5	
Arizona	Y	2016
California	*	
Colorado	Y	
Idaho	Y	2005
Montana	*	
Nevada	Y	2006
New Mexico	N	
Oregon	*	
Utah	*	
Washington	*	
Wyoming	N	
West Total	4	
U.S. Total	23	
Alberta	Y	1995
British Columbia	*	
Manitoba	*	
New Brunswick	N	
Nova Scotia	*	
Ontario	Y	2017
Quebec	Y	2010-2017
Saskatchewan	*	
Canada Total	3	

*Data not provided/available

DEER MANAGEMENT PLANS BY STATE/PROVINCE



EVALUATIONS, AUDITS AND LAWSUITS

Evaluations, audits and lawsuits are three words that wildlife agency deer managers never want to hear associated with their deer management program. However, disgruntled hunters and anti-hunters routinely threaten these actions, so we surveyed state and provincial wildlife agencies and asked whether their deer management program had been subjected to a formal evaluation, audit or lawsuit.

FORMAL EVALUATIONS

A formal evaluation is an assessment of an agency's deer management program. Ten of 41 states (24 percent) have been subjected to a formal deer program evaluation. Nearly half (40 percent) were in the Midwest, while only one was in the West. Six of the evaluations (60 percent) occurred within the past five years, and eight (80 percent) were within the past 10 years. In Canada, one of three provinces providing data has been subjected to a formal evaluation, and it's occurred twice in the province since 2009.

AUDITS

An audit is an official inspection of an agency's deer management program, typically by an independent body. Four of 36 states (11 percent) have been subjected to an audit. Half (50 percent) were in the Midwest, while none were in the West. Two audits occurred within the past five years, and all were within the last 10 years. Some audits were extremely high profile such as when Wisconsin Governor Scott Walker appointed Dr. James Kroll as the Deer Trustee in 2012 to review the DNR's deer management program. In Canada, one of three provinces providing data has been subjected to an audit.

LAWSUITS

A lawsuit is a claim or dispute brought to a court of law with regard to an agency's deer management program. Four of 36 states (11 percent) have also been subjected to a lawsuit. Two of these (50 percent) were in the Northeast, while, again, none were in the West. Two lawsuits occurred within the past five years, and three were within the past 10 years. In Canada, one of three provinces providing data has been subjected to a lawsuit, and like the formal evaluation, it has occurred twice in the province since 2009.

QDMA RECOMMENDS

Few states have been subjected to these actions, but for those that have, much of the activity has occurred within the past five years, and nearly all has taken place within the past decade. As hunter numbers continue declining, and as we continue becoming more of an urbanized society, non-traditional stakeholders take more seats at the proverbial deer management table. Therefore, it's crucial for state and provincial wildlife agencies and hunters to work more closely together and forge strong relationships for a productive deer hunting future.

QDMA is a strong proponent of public involvement in deer management programs. While formal evaluations and audits can strengthen management programs and provide transparency to the public, their net effect is not always positive for the sportsmen and women of the state/province. Thus, extreme caution should be exercised before putting these programs under public scrutiny. Lawsuits are rarely productive as they typically drain precious time and resources from our state and provincial deer managers.

BY STATE/PROVINCE

State/ Province	Formal evaluation (Y/N)	Year	Audit (Y/N)	Year	Lawsuit (Y/N)	Year
Alabama	*		*		*	
Arkansas	N		N		N	
Florida	N		N		N	
Georgia	*		Y	2016	*	
Louisiana	N		N		N	
Mississippi	Y	2013	N		N	
North Carolina	Y	2010	N		N	
Oklahoma	N		N		N	
South Carolina	N		N		Y	1999-2001
Tennessee	*		*		*	
Texas	Y	2005	N		N	
Southeast Total	3		1		1	
Connecticut	*		*		*	
Delaware	N		N		N	
Maine	N		N		N	
Maryland	N		N		N	
Massachusetts	N		N		N	
New Hampshire	N		N		N	
New Jersey	N		N		N	
New York	Y	1990	*		Y	2014
Pennsylvania	Y	2009-2010	N		Y	2007-11
Rhode Island	N		N		N	
Vermont	N		N		N	
Virginia	N		N		N	
West Virginia	N		Y	2010	N	
Northeast Total	2		1		2	
Illinois	N		N		N	
Indiana	Y	2017	*		*	
Iowa	Y	2017	*		*	
Kansas	N		N		N	
Kentucky	N		N		N	
Michigan	N		N		N	
Minnesota	N		Y	2016	N	
Missouri	Y	2014-15	N		Y	2015
Nebraska	N		N		N	
North Dakota	*		*		*	
Ohio	N		N		N	
South Dakota	Y	2013	N		N	
Wisconsin	N		Y	2012	N	
Midwest Total	4		2		1	
Arizona	Y	2017	N		N	
California	*		*		*	
Colorado	N		N		N	
Idaho	N		N		N	
Montana	*		*		*	
Nevada	N		N		N	
New Mexico	N		N		N	
Oregon	*		*		*	
Utah	*		*		*	
Washington	*		*		*	
Wyoming	N		N		N	
West Total	1		0		0	
U.S. Total	10		4		4	
Alberta	N		N		N	
British Columbia	*		*		*	
Manitoba	*		*		*	
New Brunswick	N		N		N	
Nova Scotia	*		*		*	
Ontario	*		*		*	
Quebec	Y	2009/2013	Y		Y	2009/2013
Saskatchewan						
Canada Total	1		1		1	

*Data not provided/available

DEER MANAGEMENT GOALS



State and provincial wildlife agencies manage deer using a myriad of variables and goals. To better understand the most commonly used parameters, we surveyed each state and provincial wildlife agency and asked which of the following goals was included in their deer management program.

Hunting opportunity ranked highest as 28 of 42 states (67 percent) used this variable. Herd density was next in 27 states (64 percent), followed by herd health (62 percent), and hunter satisfaction and agricultural damage (both 60 percent). Herd age structure (12 states; 29 percent) and deer-vehicle accidents (14 states; 33 percent) were the least used parameters.

Top-5 Deer Management Program Goals

Program Goal	% of States Using That Goal
Hunting Opportunity	67
Deer Herd Density	64
Deer Herd Health	62
Hunter Satisfaction	60
Agricultural Damage	60

Regionally, in the Southeast no variable was used in more than 55 percent of the states. Conversely, herd density, herd health and habitat health were used in nearly every Northeast state. Agricultural damage reigned supreme in the Midwest; and herd density, hunter opportunity and hunter satisfaction were used in nearly every state in the West that provided data. In Canada, hunting opportunity and agricultural damage ranked highest, followed by herd density, hunter satisfaction and deer-vehicle accidents.

QDMA RECOMMENDATIONS

Deer management is not a one-size-fits-all recipe. Successful deer management requires a scientific approach that is transparent to the public and supported by hunters. The most successful programs include local deer herd demographic data, combined with other local variables including environment, winter severity, annual precipitation, habitat productivity, hunting culture, and more. Thus, it is not surprising that program goals can vary widely by region. The important thing is for state and provincial wildlife agencies to use scientifically sound variables that are measurable and well defined by a public input process. In general, we recommend deer herd and

habitat health be components of all deer management programs.

Notes to Facing Page

States/provinces in blue did not provide data.

- a Individual property goals for density, herd health, age structure, habitat, hunter satisfaction, ag damage. This is through DMAP.
- b Work with individual municipalities
- c Acceptable levels of deer-human conflicts however they are defined by the public in a WMU
- d Public outreach and technical assistance, hunter opinion of special deer management areas, hunting access, hunter retention and recruitment.
- e Social acceptability is a major goal
- f Take all into account, but don't have benchmarks for each.
- g The primary criteria to manage white-tailed deer in Idaho include % 5+ points (as recorded on one side), hunting opportunity, hunter-days of recreation, buck harvest, and consideration is given to reduce agricultural damage/conflicts.

DEER MANAGEMENT GOALS BY STATE/PROVINCE

State/Province	Herd density	Herd health	Herd age structure	Habitat health	Hunter opportunity	Hunter satisfaction	Deer-Vehicle accidents	Agricultural damage	Other
Alabama									
Arkansas	x	x	x	x	x				
Florida	x	x		x	x	x		x	
Georgia	x								
Louisiana		x		x	x	x		x	
Mississippi									a
North Carolina	x	x	x	x	x	x	x	x	
Oklahoma	x	x	x	x	x	x		x	
South Carolina	x	x	x	x	x	x	x	x	
Tennessee									
Texas									No set goals
Southeast Total	6	6	4	6	6	5	2	5	
Connecticut									
Delaware	x	x	x	x	x	x		x	
Maine	x	x		x	x	x			Carrying capacity
Maryland	x	x		x	x	x	x	x	
Massachusetts	x	x	x	x	x	x	x	x	
New Hampshire	x			x					b
New Jersey		x		x	x	x		x	
New York	x	x	x	x	x	x		x	
Pennsylvania		x		x					c
Rhode Island	x	x		x	x	x	x		
Vermont	x	x		x		x			
Virginia	x			x	x	x	x	x	
West Virginia	x	x		x	x	x	x	x	d
Northeast Total	10	10	3	12	9	9	5	7	
Illinois		x			x		x	x	
Indiana		x			x	x	x	x	
Iowa		x	x	x	x	x	x	x	
Kansas					x	x	x	x	e
Kentucky	x	x							
Michigan		x		x	x		x	x	
Minnesota	x								
Missouri	x	x	x	x	x	x		x	
Nebraska	x	x	x		x		x	x	
North Dakota					x			x	
Ohio						x		x	
South Dakota	x					x		x	
Wisconsin	x								f
Midwest Total	6	7	3	3	8	6	6	10	
Arizona	x	x	x		x	x			
California									
Colorado		x		x	x	x	x	x	
Idaho	x		x		x			x	g
Montana									
Nevada	x					x			
New Mexico	x	x			x	x			
Oregon									
Utah									
Washington									
Wyoming	x			x	x	x		x	
West Total	5	3	2	2	5	5	1	3	
U.S. Total	27	26	12	23	28	25	14	25	
Alberta	x				x			x	
British Columbia									
Manitoba									
New Brunswick					x	x	x	x	
Nova Scotia									
Ontario	x	x		x	x	x	x	x	
Quebec	x	x		x	x	x	x	x	
Saskatchewan									
Canada Total	3	2	0	2	4	3	3	4	