

# NDA'S DeerRe port 2024 An annual report on the status of wild deer the foundation of the hunting industry in North America

Compiled and Written by the National Deer Association Staff

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# a message from KIPADAMS

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. However, there are other prominent deer species and subspecies worth mentioning too.

That is why I am so excited that we can bring you this annual report on the status of deer hunting and management programs. It includes information on black-tailed, Coues, Key, and mule deer, in addition to whitetails. We are in a unique position 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 Deer" address for hunters, landowners, natural resource professionals and the media.

So, how are deer and deer hunters doing? There are some very positive trends occurring. In the whitetail world, yearling buck harvest rates are the lowest ever recorded, and the percentage of 3½ year old and older bucks in the harvest is 42% of the total antlered buck harvest, which is the highest percentage ever recorded! Hunters are clearly reaping the benefits of more naturally balanced age structures in herds across the whitetail's range.

In addition, the antlered buck (those 1½ years or older) harvest is over 2.9 million, which is near historically high values. Similarly, the antlerless harvest topped 3 million and was 1% above the previous five-year average. Pennsylvania hunters shot the most antlered bucks per square mile (PSM), and Delaware hunters shot the most antlerless deer PSM. The Mid-Atlantic region is a sweet spot for deer herds and hunters. With respect to mule deer, populations are stable or increasing in most states they inhabit. Utah hunters shot the most antlered bucks PSM, while Colorado shot the most antlerless deer PSM.

The biggest issues and trends include 27 states have prescribed fire councils and use prescribed fire on at least 8.8 million acres of wildlife habitat. Forty-

one percent of hunters successfully harvested at least one deer in 2022. That number dropped from 48% in 2011. Only 17% of hunters shot more than one deer in 2022, and that was down from 21% in 2011. Seventeen states open deer season early enough to allow for the harvest of velvet bucks. Ten million hunters pursue deer annually and spend nearly 120 million days afield doing so. Eighteen states allow the use of drones during deer season, 43 states allow the use of trail cameras on private land, and 39 states allow them on public land. Forty-two states allow the use of cellular cameras on private land while 37 states do so on public land. Thirtythree states allow supplemental feeding in at least some part of their jurisdiction, and 22 states allow baiting. Nineteen states publicly support the use of nonlead ammunition for big game hunting, while only seven states have educational programs promoting that use. Finally, 30 states have "Learn to Hunt" programs and 23 states have adult mentored hunting programs.

All this information and much more is included in the following pages. I hope you enjoy the data, interpretations, and NDA'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 deerassociation.com. Here's to a productive 2024 and a great deer season this fall.

Respectfully,

Deer Report 2023

Kip Hans



At the time of writing this Deer Report, many 2023-24 deer seasons were still underway, so the statistics highlighted in this report are all from the most recent hunting season that is complete (2022-23). However, some states have already issued press releases on the 2023-24 deer season, and we have included six of the top headlines here as an outlook for the data you will see in next year's Deer Report. If the early results hold true for the other states, 2023 was a slow year for many deer hunters.

### ILLINOIS

Hunters harvest over 76K deer in firearms season; decrease from 2022



MARYLAND Deer kill down in Montgomery County and statewide

**NEBRASKA** Firearm deer harvest down 18% statewide



OHIO Ohio's extra gun weekend records big deer harvest C

WEST VIRGINIA Buck harvest drops more than 7% in 2023 season



WISCONSIN Deer harvest numbers down for the 2023 9-day gun deer season



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### About the Deer Harvest Data in This Report

The 2023-24 deer season is closed or nearing so for states and provinces across the U.S. and Canada, and biologists will be crunching data in the coming months to assess the outcome of this past season. For the 2024 Deer Report, NDA compared harvest data from the three most recent seasons available: 2020-21, 2021-22, and 2022-23. We acquired some harvest data for all 48 states in the contiguous U.S. and from seven 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 tables. In future years we will also conduct analyses on data from these latter two regions as multiple years of data are available. Finally, some western states' harvest data included both whitetails and mule deer. Therefore, we chose to separate harvest data from the

### **Antlered Buck Harvest**

2022 was an average year for deer hunters. However, we are at historically high harvest numbers, and the buck age structure is among the best in recorded history (see pages 8-9). The total buck harvest was 2,958,432 and that was the fourth highest in the past 10 seasons. More antlered bucks (those 1½ years or older) were shot in 22 of 37 states (59%) in the 2022-23 deer season than during the 2021-22 season. Six of 11 states in the Southeast, 10 of 13 states in the Northeast, and six of 13 states in the Midwest shot more bucks in 2022 than 2021.

DEER REPORT REGIONS

CANADA WEST MIDWEST NORTHEAST SOUTHEAST

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" (PSM) 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.



Overall, Texas shot the most bucks (377,394) and Rhode Island shot the fewest (1,302). Pennsylvania (3.7) and Michigan (3.6) more than doubled the national average of 1.7 bucks PSM, while Nebraska and North Dakota shot the fewest (0.3 PSM). An average of 69% of South Carolina hunters shot a buck. Maryland and Virginia led the Northeast with 49% of hunters shooting a buck, and South Dakota topped the Midwest at 48% of hunters.

Comparing the 2022 buck harvest to the previous five-year average shows hunters had an average year. Twentythree of 37 states (62%) shot more bucks in 2022 than their prior five-year aver-

# **TOP STATES:**

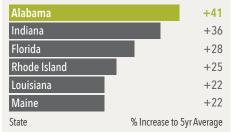
#### **Antlered Buck Harvest**

Texas	377,394
Michigan	203,744
Pennsylvania	164,190
Wisconsin	163,806
Missouri	140,735
State	2022 Harvest

#### Antlered Buck Harvest (PSM)

Pennsylvania	3.7
Michigan	3.6
Maryland	3.3
South Carolina	3.0
West Virginia	3.0
Wisconsin	3.0
State	2022 Harvest PSM

### Greatest Antlered Buck Harvest Increase 2022 versus 5-year average



### Greatest Antlered Buck Harvest per 100 deer hunters

South Carolina	69
Florida	61
Mississippi	61
Alabama	58
Louisiana	58
State	2022 Harvest

age. The Southeast's 2022 buck harvest was 2% below its five-year average, the Northeast's was up 3%, and the Midwest's was up 1% above its five-year average. Notably, Alabama shot 41% more bucks than its five-year average, six states averaged 3.0-3.7 bucks PSM, and the Southeast region dominated the buck harvest per deer hunter category with nearly half of its hunters bagging a buck during the 2022-23 season.

### Part 1 // DEER HARVEST TRENDS

### ANTLERED BUCK HARVEST

State/Province	2020	2021	2022	% Change 2021-22	2022 Bucks PSM	2017-21 Average	% Change 2022 to 5yr Avg	2022 Buck Harvest/100 Deer Hunters
Alabama	116,514	123,280	137,634	12 4	2.7 1.7	97,355 94,235	41 -5	58 30
Arkansas Florida	103,973 43,643	86,557 52,254	89,791 64,981	24	1.2	50,817	-5 28	61
	43,043	97,056	96,261	-1	1.2	121,970	-21	46
Georgia Louisiana	99,736	128,370	120,824	-6	2.8	98,721	22	58
Mississippi	122,013	114,860	119,105	4	2.5	104,543	14	61
North Carolina	86,335	89,246	86,232	-3	1.8	83,473	3	36
Oklahoma	72,874	69,308	73,128	6	1.1	68,225	7	20
South Carolina	97,690	95,351	90.047	-6	3.0	98,557	-9	69
Tennessee	86,397	74,516	86,316	16	2.1	76,956	12	46
Texas	449,933	447,972	377,394	-16	1.4	474,622	-20	50
Southeast Total/Avg	1,393,867	1,378,770	1,341,713	-3	1.8	1,369,474	-2	46
Connecticut	5,824	5,747	5,599 4,359	-3 -37	1.2 2.2	6,044 5,812	-7 -25	23 28
Delaware Maine	7,640 19,139	6,891 21,697	23,802	-37	0.8	19,474	22	20 *
Maryland	29,242	27,947	31,601	13	3.3	29,558	7	49
Massachusetts	8,506	8,042	9,076	13	1.2	8,091	12	20
New Hampshire	7,986	8,103	8,339	3	0.9	7,939	5	15
New Jersey	21,675	15,896	16,110	1	2.2	19,610	-18	21
New York	116,433	110,839	116,425	5	2.5	113,774	2	21
Pennsylvania	174,780	145,320	164,190	13	3.7	158,968	3	25
Rhode Island	1,148	1,215	1,302	7	1.2	1,042	25	24
Vermont	9,256	9,133	9,619	5 -2	1.0	9,590	0	12
Virginia West Virginia	101,509 59,637	93,919 64,231	91,613 71,556	-2	2.3 3.0	97,506 60,570	-6 18	49 *
Northeast Total/Avg	562,775	518,980	553,591	7	2.3	<b>537,978</b>	3	26
Illinois	75,415	69,315	73,259	6	1.3	70,802	3	31
Indiana	55,446	53,752	68,912	28	1.9	50,639	36	33
lowa	49,662	45,181	46,470	3 -7	0.8 0.5	46,725 42,423	-1 -1	28 39
Kansas Kentucky	44,379 69,443	45,215 68,035	41,982 71,144	5	1.8	69,157	-1	22
Michigan	219,387	223,476	203,744	-9	3.6	218,500	-7	38
Minnesota	100,558	100,028	88,114	-12	1.1	98,876	-11	19
Missouri	140,855	143,815	140,735	-2	2.0	138,367	2	30
Nebraska	29,726	27,075	23,401	-14	0.3	28,536	-18	24
North Dakota	25,400	19,375	17,512	-10	0.3	22,857	-23	19
Ohio	83,332	88,969	89,984	1	2.2	81,011	11	31
South Dakota	36,394	34,498	34,065	-1	0.4	30,473	12	48
Wisconsin	158,096	153,112	163,806	7	3.0	153,678	7	27
Midwest Total/Avg	1,088,093	1,071,846	1,063,128	-1	1.3	1,052,046	1	29
3-Region Total/Avg	3,044,735	2,969,596	2,958,432	<1	1.7	2,959,497	<1	35
Arizona California	9,057	14,312	6,809	-52	0.1	10,356	-34	16
Colorado	30,411	31,160	29,397	-6	0.3	29,972	-2	32
Idaho	35,366	35,855	32,524	-9	0.4	23,249	40	*
Montana	29,120	27,941	26,677	-5	0.2	27,993	-5	*
Nevada	-	-	-	-	-	-	-	-
New Mexico	11,151	8,689	9,093	5	0.1	10,434	-13	28
Oregon	36,615	36,198	26,818	-26	0.3	32,178	-17	21
Utah Washington	25,408	21,665	20,858	-4	0.3	- 19,759	-	21
Washington Wyoming	27,938	23,957	20,838	-4 -9	0.3	19,739	6 9	37
West Total/Avg	205,066	<b>199,777</b>	167,166	-16	0.2	177,195	-6	26
U.S. Total/Avg	3,249,801	3,169,373	3,125,598	-1	1.5	3,136,693	<1	33
Alberta	*	30,607	25,514	-17	0.1 *	25,718	-1 *	24
British Columbia	*	20,000	*	*		*	*	*
Manitoba Now Brunswick	6,182	6,443	14,695 6,981	* 8	0.1 0.3	5,849	19	* 16
New Brunswick Nova Scotia	0,182	6,443 7,310	7,606	8	0.3	5,849 7,109	7	10 *
Ontario	31,748	32,017	35,279	10	0.4	32,992	7	19
Quebec	29,716	35,342	39,641	12	0.1	30,576	30	29
Saskatchewan	21,862	19,981	21,876	9	0.1	22,391	-2	51
Canada Total/Avg	89,508	151,700	151,592	<1	0.1	124,634	22	25

\*Data not provided/available - These states contain no white-tailed deer

### Age Structure of the Antlered Buck Harvest

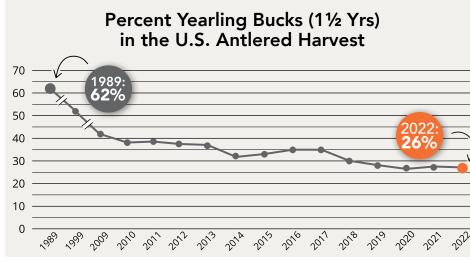


The NDA also acquired the age structure of the buck harvest for most states. Twenty-six states reported the percentage of their antlered buck harvest that was  $1\frac{1}{2}$  years old, and 22 states reported the percentage that was also  $2\frac{1}{2}$ and  $3\frac{1}{2}$  years or older. Most states in the Southeast collect age data, and the majority in the Midwest and Northeast do. Conversely, only one agency in the West (Idaho) and two in Canada (New Brunswick, Nova Scotia) provided this data so these regions were excluded from the table.

In 2022, the average percentage of the antlered buck harvest that was  $1\frac{1}{2}$  years old was 26%. This ties the lowest

national percentage ever reported! The fact that about one in four antlered bucks shot today is  $1\frac{1}{2}$  years old is amazing, and the line graph on this page shows how the yearling percentage of the antlered buck harvest in the U.S. has changed during the past 34 years.

In 2022, Mississippi and Oklahoma averaged the fewest yearlings (9% of antlered buck harvest) and New Jersey reported the most (51% of antlered buck harvest). It's noteworthy the top five states with lowest yearling buck harvest rates are all in the Southeast, even though this region has, by far, the longest average deer season length (151 days). As a region, the Southeast averaged the fewest yearlings



# **TOP STATES:**

Lowest % of Yearling Bucks in Harvest



### Highest % of Yearling Bucks in Harvest



### Highest % of 3½-Plus Bucks in Harvest

Mississippi	80
Louisiana	78
Oklahoma	72
Texas	72
Arkansas	61
State	2022 (%)

(16%), followed by the Midwest (31%) and Northeast (38%). Missouri had the largest year-to-year decline in harvest percentage by dropping from 26 to 18% yearling bucks. Indiana had the largest year-to-year rise in harvest percentage by increasing from 23 to 33% yearling bucks.

Twenty-two of 26 states (85%) 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 42% in 2022. This is the highest percentage ever reported, and it's amazing to realize that more than 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 9% in New Jersey to 80% in Mississippi.

# Part 1 // DEER HARVEST TRENDS

### PERCENTAGE OF ANTLERED BUCK HARVEST BY AGE CLASS

	1½ Years Old		2½ Years Old			3½ Years and Older			
State/Province	2020	2021	2022	2020	2021	2022	2020	2021	2022
Alabama	12	12	15	29	27	26	59	61	59
Arkansas	6	12	11	18	24	28	76	64	61
Florida	14	11	13	48	49	47	38	40	40
Georgia	24	24	22	36	37	31	41	39	48
Louisiana	9	12	10	9	15	12	82	73	78
Mississippi	9	10	9	12	11	11	79	79	80
North Carolina	20	32	34	38	39	41	43	29	26
Oklahoma	8	11	9	9	18	19	83	71	72
South Carolina	*	*	*	*	*	*	*	*	*
Tennessee	23	22	25	45	46	47	31	32	28
Texas	16	14	14	13	14	13	71	72	72
Southeast Average	14	16	16	26	28	28	60	56	56
C			*	*	*	*	*	*	*
Connecticut	31 *	33	*	*	*	*	*	*	*
Delaware									
Maine	37 *	54	48	34 *	27	41 *	29 *	18 *	11 *
Maryland	*	44		*			*		
Massachusetts		41	38		27	29		32	33
New Hampshire	37	42	48	25	28	23	38	31	29
New Jersey	35		51	44		40	21	*	9
New York	38	39	36	40	38	41	22	23	23
Pennsylvania	36	38	33	*	*	*	*	*	*
Rhode Island	30	30	*	33	34	*	37	36	
Vermont	19	35	32	46	39	46	35	26	22
Virginia	34	35	*	27	22	*	38	42	*
West Virginia	*	*	19	*	*	41	*	*	40
Northeast Average	33	39	38	36	31	37	31	30	24
Illinois	37	36	36	*	*	*	*	*	*
Indiana	25	23	33	34	36	43	41	41	23
lowa	*	*	*	*	*	*	*	*	*
Kansas	*	*	*	*	*	*	*	*	*
Kentucky	22	22	24	44	*	*	34	*	*
Michigan	*	*	36	*	*	36	*	*	28
Minnesota	*	*	*	*	*	*	*	*	*
Missouri	24	26	18	47	37	*	29	37	*
Nebraska	22	22	22	*	38	40	*	40	38
North Dakota	*	*	*	*	*	*	*	*	*
Ohio	39	38	34	33	33	37	28	29	29
South Dakota	*	*	*	*	*	*	*	*	*
Wisconsin	40	41	41	31	30	31	29	29	28
Midwest Average	30	30	31	38	35	37	32	35	29
3-Region Average	26	27	26	33	33	32	41	40	42

\*Data not provided/available





### Antlerless Deer Harvest



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 3,001,563 antlerless deer in 2022. This is only the second time the antlerless harvest has topped three million since 2013, and it was 1% above the five-year average. Overall, Texas topped the list with 303,277 antlerless deer, Pennsylvania followed with 258,770, and Wisconsin was third with 176,476.

The overall antlerless harvest increased 1% from 2021 in those three regions combined. The Southeast decreased 4% due to a 20% reduction in Texas. The Midwest increased 2% with eight of 13 states (62%) shooting more, and the Northeast shot 12% more as 12 of 13 states (92%) shot more antlerless deer in 2022 than the prior year.

Delaware harvested the most antlerless deer per square mile (PSM; 6.4), followed by Pennsylvania (5.8) and Maryland (4.6). These are astounding harvest rates. Regionally, the Northeast (2.7) averaged shooting the most antlerless deer PSM, followed by the Southeast (1.8) and the Midwest (1.3).

Looking long term, antlerless harvest was down in the Midwest and Southeast (both less than 1%), but up in the Northeast (6%) in 2022 over the five-year average. In total, 25 of 37 states (68%) shot more antlerless deer in 2022 than their five-year average, with Oklahoma increasing its harvest 35%, and Maine jumped by 59%.

Six of 13 (46%) Midwest states shot more antlerless deer than antlered bucks,

# TOP STATES:

#### **Antlerless Harvest**

Texas	303,277
Pennsylvania	258,770
Wisconsin	176,476
Georgia	174,950
Alabama	171,095
State	2022 Harvest

### Antlerless Harvest (PSM)

Delaware	6.4
Pennsylvania	5.8
Maryland	4.6
Alabama	3.4
Wisconsin	3.3
State	2022 Harvest PSM

### Greatest Antlerless Harvest per 100 deer hunters

Georgia	83
Delaware	79
Mississippi	74
Alabama	72
Maryland	69
South Carolina	69
State	2022 Harvest

### Antlerless Deer per Antlered Buck Harvest

Delaware	2.9
Georgia	1.8
Pennsylvania	1.6
lowa	1.4
Maryland	1.4
New Jersey	1.4
State	2022 Ratio

six of 13 (46%) Northeastern states shot more antlerless deer, and four of 11 (36%) Southeastern states shot more antlerless deer than antlered bucks in 2022.

Reduced antlerless harvests are necessary in areas where deer herds have been balanced with the habitat and/or 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.

### Part 1 // DEER HARVEST TRENDS

### ANTLERLESS DEER HARVEST

State/Province	2020	2021	2022	% Change 2021-22	2017-21 Average	% Change 2022 to 5yr Avg	2022 Antlerless PSM	2022 Antlerless/ Antlered	2022 Antlerless/100 Deer Hunters
Alabama	159,068	177,842	171,095	-4	144,754	18	3.4	1.2	72
Arkansas	112,862	94,822	95,788	1	106,113	-10	1.8	1.1	32
Florida	21,933	21,817	28,503	31	25,960	10	0.5	0.4	27
Georgia	155,513 92,064	160,398 105,030	174,950 96,876	9 -8	167,990 86,479	4 12	3.0 2.2	1.8 0.8	83 47
Louisiana Mississippi	92,004 134,658	155,041	143,725	-7	122,909	12	3.1	1.2	74
North Carolina	83,638	79,181	77,599	-2	77,672	0	1.6	0.9	32
Oklahoma	53,416	48,321	61,030	26	45,269	35	0.9	0.8	17
South Carolina	100,203	87,529	89,367	2	92,267	-3	3.0	1.0	69
Tennessee	73,876	57,698	76,928	33	66,787	15	1.9	0.9	41
Texas	402,515	379,958	303,277	-20	391,034	-22	1.2	0.8	40
Southeast Total/Avg	1,389,746	1,367,637	1,319,138	-4	1,327,234	-1	1.8	1.0	45
Connecticut	5,057	3,052	4,846	59	4,623	5	1.0	0.9	20
Delaware	9,982	8,492	12,489	47	10,220	22	6.4	2.9	79 *
Maine	14,020 49,033	17,250 39,498	19,985 45,086	16 14	12,549 46,886	59 -4	0.6 4.6	0.8 1.4	69
Maryland Massachusetts	6,260	4,361	6,777	55	5,734	18	0.9	0.7	15
New Hampshire	5,058	4,448	5,743	29	4,925	17	0.6	0.7	10
New Jersey	33,305	20,891	22,214	6	27,755	-20	3.0	1.4	29
New York	137,557	100,430	115,536	15	110,360	5	2.4	1.0	20
Pennsylvania	260,400	231,490	258,770	12	229,686	13	5.8	1.6	40
Rhode Island	1,200	949 6,725	1,403 7,842	48 17	1,119 7,688	25 2	1.3	1.1	26 10
Vermont Virginia	9,735 107,847	6,725 97,812	95,175	-3	100,839	-6	0.8 2.4	0.8 1.0	51
West Virginia	47,224	41,043	46,943	14	45,144	4	1.9	0.7	*
Northeast Total/Avg	686,678	576,441	642,809	12	607,528	6	2.7	1.2	34
Illinois	87,337	77,107	84,595	10	81,552	4	1.5	1.2	36
Indiana	68,734	58,730	52,942	-10	64,639	-18	1.5	0.8	25
lowa	59,882	57,629	63,130	10	58,432	8	1.1	1.4	38
Kansas	38,747	38,792	38,833	0	38,110	2	0.5	0.9	36
Kentucky Michigan	72,182 191,252	64,293 171,583	73,349 135,445	14 -21	71,663 164,379	2 -18	1.9 2.4	1.0 0.7	23 25
Minnesota	96,757	84,670	84,151	-1	91,548	-8	1.1	1.0	18
Missouri	156,359	151,328	158,984	5	152,158	4	2.3	1.1	33
Nebraska	21,101	17,727	16,888	-5	19,091	-12	0.2	0.7	17
North Dakota	17,100	13,042	12,519	-4	14,003	-11	0.2	0.7	13
Ohio South Dakota	114,389 22,677	108,019 20,643	120,989 21,315	12 3	106,403 19,016	14 12	3.0 0.3	1.3 0.6	41 30
Wisconsin	181,545	156,280	176,476	13	165,389	7	3.3	1.1	29
Midwest Total/Avg	1,131,393	1,019,843	1,039,616	2	1,046,383	-1	1.3	1.0	28
3-Region Total/Avg	3,207,817	2,963,921	3,001,563	1	2,981,145	1	1.7	1.0	36
Arizona	*	104	*	*	*	*	*	*	*
California	- 0 400	- 9,401	- 8,650	- -8	8,288	- 4	- 0.1	-	-
Colorado Idaho	8,488 14,291	9,401 11,647	8,650 10,246	-0 -12	0,200 10,818	-5	0.1 0.1	0.3 0.3	9 *
Montana	21,892	16,773	18,692	11	24,128	-23	0.1	0.5	*
Nevada	-		-	-	-	-	-	-	-
New Mexico	205	138	173	25	138	26	0.0	0.0	1
Oregon	3,448	3,390	2,933	-13	3,096	-5	0.0	0.1	2
Utah Washington	4,027	2,653	2,567	-3	3,422	-25	0.0	0.1	- 3
Wyoming	13,336	11,104	7,516	-32	11,148	-33	0.0	0.1	13
West Total/Avg	66,587	55,902	50,777	-8	61,038	-17	<0.1	0.3	10
U.S. Total/Avg	3,288,024	3,019,131	3,052,340	1	3,042,182	<1	*	1.0	*
Alberta	*	22,753	33,228	46	20,119	65	*	1.3	32
British Columbia	*	3,600		*	*	*	*	*	*
Manitoba		*	1,877	*	*	* 40	<0.1	0.1	*
New Brunswick Nova Scotia	1,594	1,602 2,559	1,835 2,464	15 -4	1,309 2,445	40	<0.1 <0.1	0.3 0.3	4
Ontario	21,197	19,713	20,023	2	22,234	-10	0.7	0.5	11
Quebec	18,708	19,253	23,517	22	21,099	11	1.1	0.6	17
Saskatchewan	4,947	2,749	8,860	222	4,306	106	<0.1	0.4	21
Canada Total/Avg	46,446	45,876	91,804	27	71,512	47	0.2	0.6	15

\*Data not provided/available // - These states contain no white-tailed deer

### Age Structure of the Antlerless Harvest



Kayode Ijalana tagged his first deer ever on NDA's Back40 property in Michigan, part of a Field to Fork hunt.

The NDA also acquired the age structure of the antlerless harvest data for most states. Twenty-seven states reported the percentage of their antlerless harvest that was less than one year old. Twenty-four states reported the percentage that was  $1\frac{1}{2}$  years, and 21 states reported the percentage that was  $2\frac{1}{2}$  and  $3\frac{1}{2}$  years or older. Since very few agencies in the West or Canada reported this data, those regions were excluded from the table. In 2022, the average antlerless harvest that was a fawn was 19%; thus, less than one in five antlerless deer harvested was a fawn for the three main U.S. regions.

The Southeast averaged the lowest percentage of fawns (12%) while the Midwest (22%) and Northeast (27%) both averaged considerably more. Individually Texas (3%) shot the fewest fawns and Massachusetts (41%) shot the most. Texas historically shoots a very small percentage of fawns. 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 2020 to 2022 that was  $1\frac{1}{2}$ ,  $2\frac{1}{2}$  and  $3\frac{1}{2}$  years or older. Monitoring how these percentages change over time is valuable and that's especially true for the 31/2 years and older age class. This age class includes mature animals, and they typically are also the most productive individuals and most successful mothers. Nationally, nearly half (42%) of the antlerless deer shot in 2022 reached the 3<sup>1</sup>/<sub>2</sub> year and older age class. The Southeast leads the regions with 49% of antlerless deer in this age class, and Texas led all states with 66% being 31/2 years and older.

Age structure data is the backbone of deer management programs.

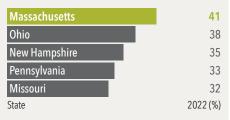
Monitoring the age structure of the harvest is key for managers to make wise management decisions including the appropriate number of antlerless deer to harvest annually in each management unit. Good age data helps managers from under-harvesting and from overharvesting deer herds. Many hunters learn how to estimate the age of deer they harvest, and all hunters should provide every piece of data requested by their wildlife agency.

# **TOP STATES:**

Lowest % of Fawns in the Antlerless Harvest



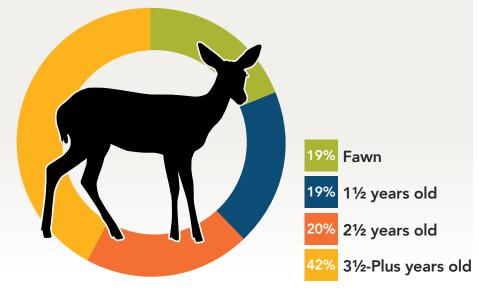
### Highest % of Fawns in the Antlerless Harvest



### Highest % of 3½-Plus Year Olds in the Antlerless Harvest

Texas	66
Louisiana	59
Mississippi	58
Oklahoma	58
Alabama	54
State	2022 (%)

### 2022 PERCENTAGE OF ANTLERLESS HARVEST BY AGE CLASS



# Part 1 // DEER HARVEST TRENDS

PER	CEN	TAGE		ANT	LERL	.ESS	HAR	VEST	BY	AGE	CLAS	55
		Fawns		11⁄2	2 Years (	Old	21/2	2 Years C	Old	31⁄2 Y	éars anc	l Older
State/Province	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Alabama	14	13	12	15	15	15	21	19	19	50	54	54
Arkansas	13	12	11	12	18	15	21	21	24	54	49	50
Florida	12	17	17	15	25	14	32	24	25	41	34	44
Georgia	14	13	18	21	21	20	33	33	29	33	34	33
Louisiana	8	7	7	14	19	15	19	18	19	59	56	59
Mississippi	8	6	6	15	19	18	20	16	18	57	59	58
North Carolina	18	10 *	12	18	20	22	27	31	27	38	39	39
Oklahoma	11	*	12	16	16	12	17	15	18	57	67	58
South Carolina			*	*	*	*	*	*	*	*	*	*
Tennessee	25	18	20	25	26	22	29	30	27	22	26	31
Texas	2	3	3	14	11	12	19	19	19	65	67	66
Southeast Average	13	11	12	17	18	17	24	23	23	48	48	49
Connecticut	12	*	*	*	*	*	*	*	*	*	*	*
Delaware	*	*	*	*	*	*	*	*	*	*	*	*
Maine	37	19	31	9	19	15	12	12	13	42	50	42
Maryland	*	30	*	*	23	*	*	*	*	*	*	*
Massachusetts	*	37	41	*	18	12	*	17	20	*	28	27
New Hampshire	29	35	35	14	14	14	20	16	15	38	36	36
New Jersey	25	*	18	25	*	30	22	*	34	28	*	18
New York	22	20	16	18	20	19	24	23	25	36	37	40
Pennsylvania	32	31	33	18	19	18	*	*	*	*	*	*
Rhode Island	18	14	*	18	14	*	26	29	*	38	44	*
Vermont	19	18	17	15	19	17	12	15	16	54	48	50
Virginia	25	35	*	20	17	*	20	15	*	35	33	*
West Virginia	*	*	25	*	*	24	*	*	20	*	*	31
Northeast Average	27	27	27	18	18	19	19	16	20	39	39	35
Illinois	27	30	14	*	*	*	*	*	*	*	*	*
Indiana	13	14	8	35	33	32	37	34	37	15	19	23
lowa	*	*	*	*	*	*	*	*	*	*	*	*
Kansas	4	9	4	*	*	*	*	*	*	*	*	*
Kentucky	14	*	*	20	*	*	36	*	*	31	*	*
Michigan	*	*	15	*	*	20	*	*	22	*	*	44
Minnesota	29	30	29	*	*	*	*	*	*	*	*	*
Missouri	32	26	32	19	27	20	19	15	*	30	32	*
Nebraska	*	32	18	*	19	23	*	24	29	*	25	30
North Dakota	*	*	*	*	*	*	*	*	*	*	*	*
Ohio	36	35	38	19	19	19	*	*	*	*	*	*
South Dakota	*	*	*	*	*	*	*	*	*	*	*	*
Wisconsin	11	27	26	20	18	19	27	22	22	42	33	33
Midwest Average	21	27	20	20	23	19 22	30	22	22	30	27	33 32
withwest Aveidge	41	<b>ZJ</b>	<b>44</b>	23	۷۵	<b>22</b>	30	24	<b>21</b>	30	<b>41</b>	32
3-Region Average	18	20	19	17	18	19	22	21	20	43	41	42
•				-	-					-		

DEDCENTACE OF ANTIEDLESS HADVEST DV

\*Data not provided/available





### Deer Harvest by Weapon Type

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 and provincial 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 2020, 2021 and 2022 seasons. Earlier chapters did not include the West or Canada due to a lack of comparable data. However, both provided ample data on harvest by weapon type so it is included in the text and table for this chapter.

Nationally, muzzleloader hunters took 9% of the total deer harvest, bow/crossbow hunters took 25%, and firearm (rifle/ shotgun) hunters took 66% of the total deer harvest in 2022.

Regionally, bow hunters averaged the highest percentage of the harvest in the Northeast (33%). Muzzleloader hunters also averaged their highest percentage in the Northeast (15%). Surprisingly, firearm hunters in the Northeast took just over half of the deer (51%). In the Southeast, firearms reign supreme as over three of four deer taken in 2022 (77%) were with a rifle or shotgun. Muzzleloading (7%) and bow hunting (16%) paled in comparison to the firearm harvest. The Midwest harvest was 5% muzzleloader, 27% bow, and 68% firearms. In the West, muzzleloading was least popular at only 5% of the harvest, and a firearm harvest of 85% was by far the highest in the country. In Canada, the bow/crossbow harvest was 10% followed by muzzleloader at 12% and firearms at 77%.

Individually, New Jersey leads the U.S. in the percentage of total harvest taken by archers (65%), Wyoming had the highest percentage taken by firearms hunters (94%), and Rhode Island tops the list with percentage taken by muzzleloader hunters (42%). 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:

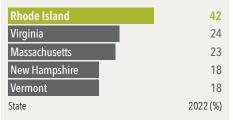
#### Percentage of Harvest by Bow/Crossbow



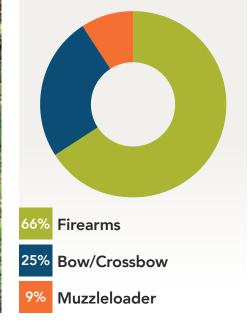
#### Percentage of Harvest by Rifle/Shotgun

Wyoming	94
Montana	93
Idaho	92
South Carolina	91
Texas	89
State	2022 (%)

#### Percentage of Harvest by Muzzleloader



### TOTAL 2022 U.S. DEER HARVEST BY WEAPON TYPE





# Part 1 // DEER HARVEST TRENDS

#### PERCENTAGE OF DEER HARVEST BY WEAPON TYPE Rifle/Shotgun Bow/Crossbow Other State/Province Alabama Arkansas 79 Florida 2 \* Georgia Louisiana Õ Mississippi North Carolina \* \* Oklahoma South Carolina Tennessee Texas Southeast Average <1 <1 Connecticut Delaware Maine \* \* \* \* Maryland Massachusetts New Hampshire New Jersey New York 42 49 Pennsylvania Rhode Island Vermont Virginia West Virginia **Northeast Average** Illinois Indiana lowa Kansas Kentucky \* Michigan Minnesota Missouri Nebraska 2 Ō North Dakota Ohio South Dakota Wisconsin Midwest Average <1 <1 \* \* \* \* \* Arizona \* \* \* \* \* California \* <1 \* \* \* \* \* Colorado Idaho Montana Nevada \* New Mexico \* \* \* \* Oregon \* Utah \* \* Washington \* \* Wyoming West Average <1 <1 <1 <1 <1 **U.S. Average** \* \* \* \* Alberta \* \* \* \* \* \* \* \* \* British Columbia \* \* \* Manitoba \* \* \* \* \* \* \* New Brunswick \* \* Nova Scotia \* \* \* \* \* \* \* Ontario \* \* \* Quebec \* \* \* \* Saskatchewan

\*Data not provided/available

Canada Average

\*

### Annual Deer Harvest Summary by State/Province

State/Province	Summary Link
Southeast:	
Arkansas	https://www.agfc.com/en/hunting/big-game/deer/deer-harvest-reports/
Georgia	https://georgiawildlife.com/deer-info
Louisiana	https://www.wlf.louisiana.gov/resources/category/deer/reports
Mississippi	https://www.mdwfp.com/media/301944/21-2019-20-deer-report.pdf
North Carolina	https://www.ncwildlife.org/Learning/Species/Mammals/Whitetail-Deer#6328485-harvest-reports
South Carolina	https://www.dnr.sc.gov/wildlife/deer/2022DeerHarvestReport.html
Northeast:	
Connecticut	https://portal.ct.gov/-/media/DEEP/wildlife/pdf_files/game/deersum2022.pdf
Maine	https://www.maine.gov/ifw/fish-wildlife/wildlife/reports-publications/research-management.html
Maryland	https://dnr.maryland.gov/wildlife/Documents/Maryland-Big-Game-Report-2021-22.pdf
Massachusetts	https://www.mass.gov/files/documents/2023/01/31/2022%20Deer%20Harvest%20Summary%20Preliminary.pdf
New Hampshire	https://www.wildlife.nh.gov/sites/g/files/ehbemt746/files/inline-documents/sonh/2022-harvest-summary.pdf https://dep.nj.gov/wp-content/uploads/njfw/deer-harvest-2022-2023.pdf
New Jersey New York	https://www.dec.ny.gov/docs/wildlife_pdf/2022deerrpt.pdf
Pennsylvania	https://www.dec.ny.gov/docs/whdne_pdi/2022deenpi.pdi/ https://www.pgc.pa.gov/HuntTrap/Hunting/HarvestDataandMaps/Documents/2022-23%20Deer%20Harvest%20Estimates%
i ennsylvania	20Report%20with%202H.pdf
Rhode Island	https://dem.ri.gov/sites/g/files/xkgbur861/files/2023-08/deerharv22-3.pdf
Vermont	https://vtfishandwildlife.com/sites/fishandwildlife/files/documents/Learn%20More/Library/REPORTS%20AND%20DOCUMENTS/
Vermont	HUNTING/HARVEST%20REPORTS/deer/2022-Deer-Harvest-Report.pdf
Virginia	https://dwr.virginia.gov/wildlife/deer/harvestsummary/
5	
Midwest:	
Illinois	https://huntillinois.org/harvest-data
Indiana	https://www.in.gov/dnr/fish-and-wildlife/wildlife-resources/animals/white-tailed-deer/
lowa	https://gooutdoorsiowa.com/RealTimeHarvestReport.aspx
Kansas	https://ksoutdoors.com/Hunting/Big-Game-Information/Deer
Kentucky	https://fw.ky.gov/Hunt/Documents/2022-23_Kentucky_Deer_Report.pdf
Michigan	https://www.michigan.gov/dnr/-/media/Project/Websites/dnr/Documents/WLD/Reports/2022_deer_harvest_survey_report.pdf?rev=7
	759ece2966941888e8a0ce377aa1b1c
Minnesota	https://www.dnr.state.mn.us/news/2023/02/21/dnr-announces-2022-deer-season-preliminary-harvest-results-cwd-management-
	findings#:~:text=Hunters%20harvested%20about%20170%2C000%20deer%20during%20the%202022,than%20the%20five-
Misser	year%20average%20deer%20harvest%20for%20Minnesota.
Missouri Nebraska	https://mdc.mo.gov/sites/default/files/2023-09/2022DeerPopulationStatusReport.pdf https://outdoornebraska.gov/wp-content/uploads/2023/04/2023-Big-Game-Recommendation-Book-compressed-1.pdf
Ohio	https://ohiodnr.gov/static/documents/wildlife/wildlife-management/Pub+5304_2022.pdf
South Dakota	https://gfp.sd.gov/hunt-surveys/
Wisconsin	https://widnr.widen.net/s/8dsrmzn2gl/item-6.a2022-deer-season-report
WIJCONJII	https://www.www.https/oushitzhzy/nem o.a. 2022 actr season report
West:	
Arizona	https://www.azgfd.com/hunting/hunt-draw-and-licenses/harvest-reporting/
Montana	https://myfwp.mt.gov/fwpPub/harvestReports
Nevada	https://www.ndow.org/wp-content/uploads/2022/07/2021-2022-Big-Game-Status-Book.pdf
New Mexico	https://www.wildlife.state.nm.us/hunting/harvest-reporting-information/
Utah	https://wildlife.utah.gov/hunting/main-hunting-page/annual-reports.html
Washington	https://wdfw.wa.gov/publications/02367
Wyoming	https://wgfd.wyo.gov/WGFD/media/content/Hunting/2022_Deer_HarvestReport_2023-02-02-(1).pdf
Canada:	
Alberta	https://mywildalberta.ca/hunting/hunters-harvest.aspx
New Brunswick	https://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/Wildlife/2022-big-game-report.pdf
Nova Scotia	https://novascotia.ca/natr/hunt/pdf/deer-harvest-2022.pdf
Saskatchewan	https://publications.saskatchewan.ca/api/v1/products/121677/formats/140947/download

# Part 1 // DEER HARVEST TRENDS

### Notes


### 2023 Deer Disease Update



An Arkansas hunter places a deer sample in a free CWD drop box provided by the Arkansas Game & Fish Commission. The sample will be tested and results sent to the hunter within two to three weeks on average.

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 disease threats to deer populations that you may or may not have heard of. Here is a run-down of some of the biggest issues regarding deer diseases that hit the headlines in 2023, 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.

As of November 2023, the Southeastern Cooperative Wildlife Disease Study (SCWDS) and other labs confirmed HD in deer from at least 16 states. Most of the viruses isolated were EHDV; however, although much less frequent, numerous BTV were detected in six different states. Overall, SCWDS confirmed HD by virus isolation or RT-PCR from free-ranging white-tailed deer in Florida, Georgia, Indiana, Kansas, Kentucky, Louisiana, Missouri, Montana, North Carolina, Nebraska, Pennsylvania, Virginia, and West Virginia. Independent diagnostic labs also identified EHDV in white-tailed deer from Iowa and Michigan, as well as BTV in a mule deer in Idaho. One case of an elk with EHDV was detected by SCWDS in the Midwest.

Despite drought conditions across significant areas this summer, it was a surprisingly low HD year. Relatively speaking, distribution was limited (compared to 24 states in 2022) and prevalence was low. Additionally, the majority of HD activity appeared to have occurred in the Midwest and Mid-Atlantic regions.

#### **Bovine Tuberculosis**

Bovine tuberculosis (bTB) 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 bTB. Since then, it has been discovered in Indiana, Michigan, Minnesota, Montana and Wisconsin. Except for the historical detection area of northeast Michigan's lower peninsula (13 counties) where the disease is routinely found in wild deer annually, bTB appears to be eradicated in the other states. The key is quickly reducing/eliminating the reservoir or host (e.g., cattle or captive elk).

As of mid-November, 2,587 samples had been tested in Michigan with five additional new positives discovered in 2023, all in Alpena County. Although total samples tested at that time were a fraction of the previous year's total, prevalence rates so far continue to be rare (less than 1%) in deer; comparatively, 28 white-tailed deer tested positive among 16,054 submitted by Michigan hunters in the 2022 season.

#### SARS-CoV-2

The susceptibility of white-tailed deer to SARS-CoV-2 (the virus that causes COVID-19) infection was first demonstrated early in 2021 through experimental infections conducted by the USDA Agricultural Research Service. In this work, deer-to-deer transmission of this virus was documented. More recently, USDA Animal and Plant Health Inspection Service (APHIS) released preliminary research in July 2023 that shows SARS-CoV-2 is likely to have spread widely within the U.S. wild population, was transmitted from humans to deer, mutated, and was potentially transmitted back to humans. More study of the SARS-CoV-2 virus in deer is needed. Updates, including a full list of confirmed cases of SARS-CoV-2 in all U.S. animals, can be found at APHIS' One Health interactive dashboard.

#### **Ticks and Tick-Borne Illnesses**

Ticks and Tick-Borne Illnesses are the second most important vector of human pathogens (after mosquitos) regarding the number and virulence of pathogens transmitted. Ticks also are important vectors of domestic and wild animal pathogens, including deer. Numerous well-known tickborne pathogens have been recognized that cause human disease, including anaplasmosis, babesiosis, ehrlichiosis, Lyme disease, Powassan disease, STARI, Rocky Mountain spotted fever, tularemia, as well as some newcomers like Alpha-gal, Heartland virus, Bourbon virus, and two Borrelia species, B. miyamotoi and B. mayoni, that share the same vector as B. burgdorferi, the causative agent of Lyme disease. Importantly, scientists from the University of Massachusetts-Amherst published a groundbreaking study in March 2023 demonstrating that serum from white-tailed deer blood effectively kills the bacterium that causes Lyme disease, perhaps one day leading to new approaches for human Lyme prevention and treatment.

Also, USDA APHIS confirmed the identification of an exotic tick called the Asian Longhorned Tick (ALHT), *Haemaphysalis longiconis* in 2017. Today ALHT is found in 20 states, including: Arkansas, Connecticut, Delaware, Georgia, Kentucky, Maryland, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Virginia, West Virginia and most recently (2023), Massachusetts.

#### **Eastern Equine Encephalitis**

Eastern Equine Encephalitis (EEE) is an infectious, often fatal disease of horses, humans, and pigs. Wild ruminants like deer can also become infected. The virus is maintained in temperate areas by wild bird reservoirs and mosquito vectors. By December 2023, EEE was discovered in a single wild deer in Rhode Island, in seven humans from four Southeast states, as well numerous other vectors in 18 states, concentrated mostly in the Southeast and Northeast regions and Michigan.

#### **Rabies**

Rabies is a fatal but preventable viral disease that infects the central nervous system. It can spread to people and pets if bitten or scratched by a rabid animal. In the U. S., rabies is mostly found in wild animals like bats, raccoons, skunks, and foxes, but rarely in deer. In 2023, a single free-ranging white-tailed deer tested positive for rabies in New York and there were two cases in West Virginia.

#### **Chronic Wasting Disease**

Chronic Wasting Disease is an always fatal disease found in most deer species, including elk, reindeer, moose, mule, red and white-tailed deer. CWD has now been identified in 32 U.S. states, five Canadian provinces (including the Toronto zoo), Korea (from an elk imported from Canada in 1997), Norway (in free-ranging reindeer, moose and red deer), Finland and Sweden (free-ranging moose). Contagions spread through urine, feces, saliva, blood, semen, deer parts, and especially via live deer. Importantly, there is no vaccine or cure.

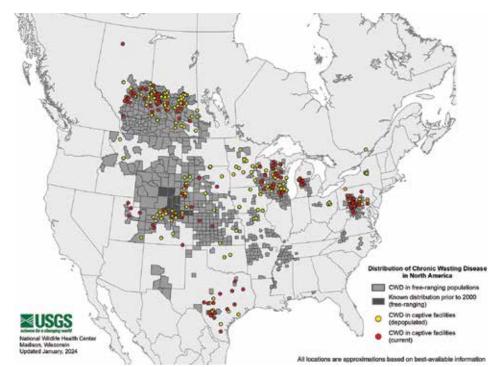
Research shows variances in infectivity among prion transport systems (for example, saliva may be 10 times as infectious as urine), that plants can bind, uptake and transport prions from infected soil, and hamsters that ate the plants contracted the disease. One study found that mineral licks can serve as reservoirs of CWD prions and thus facilitate disease transmission. CWD has also been shown to experimentally infect squirrel monkeys, pigs and laboratory mice that carry some human genes. In addition, CWD-positive deer are two to three times more likely to die and are considerably less active than deer that are negative.

In whitetails, prevalence is typically highest in adult bucks, followed by adult does, yearlings ( $1\frac{1}{2}$ -year-olds) of both sexes, and fawns, in that order. Adult bucks are often  $1\frac{1}{2}$  to 3 times more likely to be infected with CWD compared to does, while adult does are 10 times more likely to be CWD-positive if they have a CWDpositive relative nearby.

CWD made numerous headlines in 2023, and some of the biggest were:

#### **CWD Research**

• A long-term study of hunters in Colorado, Wyoming and Wisconsin by the Centers for Disease Control (CDC) found prion disease deaths did not exceed the rate among all Americans



• The National Institutes of Health (NIH) reported that after 13 years of attempting to cause prion disease in lab subjects (macaques and genetically modified "humanized" mice) no evidence of transmission has occurred, suggesting a strong species barrier may exist

• However, USDA and Case Western Reserve University were able to cause prion disease in a raccoon using CWD prions from whitetails, and that raccoon then successfully infected 12 out of 12 humanized mice where the original strain (skipping the raccoon step) did not, suggesting the deerto-human barrier may experimentally be defeated by going through an intermediary host species

• The U.S. Geological Survey (USGS) National Wildlife Health Center (NWHC) released a study that offers the first nationwide understanding of the financial cost of CWD\*

• Researchers published papers that suggest flesh biopsies (ear and belly skin via RT-QuIC; tonsil via immunohistochemistry) are possible for identifying CWD in wild deer postmortem

• University of Minnesota researchers developed a new diagnostic technique (Nano-QuIC) that allows for faster and more accurate detection of CWD

• The USGS NWHC and the Wisconsin Department of Natural Resources (DNR) launched a study to examine gene frequencies in white-tailed deer to assess if the relative abundance of certain sequences have changed over time

• Experts released findings that there are at least seven unique strains of CWD. There are two in North America, one of which takes longer to kill infected deer

• Researchers at the University of Wisconsin-Madison found that ticks can harbor and excrete transmissible amounts of CWD prions

• New research showed CWD prions could potentially be spread to prionfree venison if butchering equipment like knives, cutting boards, and meat grinders



aren't cleaned properly

• Researchers at Mississippi State University and University of Minnesota pioneered new detection methods at scrapes and supplemental feeders that should strengthen disease surveillance in the future, without requiring a deer (dead or alive) to confirm presence

• Using captive elk, scientists at the University of Wyoming and University of Alberta induced a significant, measurable immune response for the first time in any CWD vaccine trial

• Separate trials with mountain lions and bobcats suggest that most ingested prions (97-98%) by predatory felines are eliminated or sequestered by the first defecation after consumption of CWD-positive venison

#### CWD/Other

• CWD was discovered for the first time in Florida and Kentucky, in the first wild deer in Oklahoma, as well as in Yellowstone and Grand Teton National Parks in 2023

• The CWD Research and Management Act was signed by President Biden\*

• USDA APHIS made over \$12 million available for states and Tribal governments, research institutions, and universities to control and prevent CWD in wild and farmed cervids\*

• Diagnostic laboratories experienced significant testing delays for CWD due to a national shortage of test kits, leading to delays for hunters

• In Minnesota, the DNR removed deer feeding and attractant bans in 24 counties and regained authority to manage captive cervid facilities. Also, Cook County officials banned deer and elk farms, a first in the state

• Also a first, Priogen released an over-the-counter "PrioSense CWD Venison Test Kit" for hunters

• State agencies in Kentucky and South Carolina enforced deer carcass transport bans by using lawsuits, significantly higher fines and the threat of jail time

• Texas issued an Emergency Order implementing additional movement and testing restrictions as CWD cases escalated

in cervid breeding facilities. Then on December 1 it was detected at Kerr Wildlife Management Area Captive Deer Research Facility

• Starting in September, APHIS announced that Canadian-origin cervids imported into the U.S. must be accompanied with a health certificate that includes CWD verification statements

• A National Academies of Science committee was formed to review the state of knowledge about modes of transmission and means of geographic spread of CWD

• Mississippi State University released a 13-part video series and Colorado Parks & Wildlife released a two-part documentary titled "Seeing Is Believing" to increase awareness about CWD

• Seven timber companies and four conservation organizations launched a new coalition to fight the spread of CWD through promotion of practices that help discover, manage, and mitigate its negative impacts\*

To best view the incredibly wide breadth of new CWD cases, management implications and policy developments from this past year, type the phrase "CWD Round Up" in the search window at www.deerassociation.com to get our six 2023 bi-monthly reports from NDA staff.

#### **NDA's Recommendations**

Disease transmission among freeranging and from captive to free-ranging deer is a major threat to the future of wildlife management and hunting in North America. One of the NDA's critical focus areas is deer diseases; therefore, we recommend a continued and strengthened effort by wildlife professionals to study, monitor and evaluate solutions for minimizing the spread of CWD, bTB and other communicable, preventable diseases.

The NDA also recommends main-



hunter-harvested deer being tested for CWD.

taining or enhancing strict movement restrictions (like border closings, etc.) and testing protocols on captive deer, as well as returning/maintaining full authority over captive deer facilities and regulations with the state/ provincial wildlife agencies. Currently, some state/provinces have this authority while the Department of Agriculture shares it or maintains sole possession in others.

Regarding HD, although its national

impact on deer populations was minor in 2023, it can be locally severe especially in areas where the disease is relatively new. The NDA recommends hunters who experience significant losses 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 report it immediately to your state/ provincial agency or to SCWDS.

### Prescribed Fire Councils, Assistance and Acreage

Prescribed fire is an affordable and effective management tool to accomplish many land management goals including enhancing wildlife habitat, reducing fuel loads to reduce the intensity and chance of wildfire, restoring native plant communities, controlling invasive species, and more. The responsible use of prescribed fire can benefit the people and resources of each state/province.

Prescribed Fire Councils (PFC) protect, conserve and expand the responsible use of prescribed fire in their general area, as well as allow private landowners, fire practitioners, agencies, non-governmental organizations, policymakers, regulators, and other stakeholders to network and share information; however, the purpose of each PFC differs based on regional needs. Many PFCs in the western United States focus on promoting prescribed fire through policies and regulations, while those in the South primarily concentrate on education, research and sharing techniques and/or experiences among practitioners.

In addition to PFCs, Prescribed Burn Associations (PBA) are groups of landowners and other proactive citizens that form local partnerships to conduct prescribed burns, pool their knowledge, manpower and equipment to help conduct prescribed burns within the association membership. Every PBA starts with eager landowners working toward a common goal.

To better understand prescribed fire use and agency involvement across North America, we asked state and provincial wildlife agencies if a PFC existed in their jurisdiction, if their state/province offered assistance to landowners or PBAs interested in using prescribed fire, and the approximate number of acres managed with prescribed fire annually.

Overall, 27 of 43 states (63%) that responded to our survey maintain an active PFC today, with 32 of the 43 (74%) currently providing some form of prescribed fire assistance to landowners. The Southeast leads the charge with all 11 states in that region having both a PFC and offering assistance. This was followed by the Midwest with 10 of 12 (83%) states maintaining a PFC and 11 of 12 (92%) offering assistance to landowners. Only one state in the West (Washington) and five of 13 (38%) in the Northeast have a PFC; New York has a Commission that is similar to a PBA, but it is dedicated to one specific ecoregion (eastern Long Island) instead of statewide. Canada is the most restrictive as it relates to prescribed fire with none of the reporting provinces having a PFC or offering assistance.

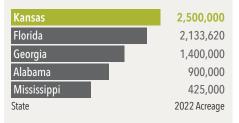
The Southeast also takes the top spot in acres managed with prescribed fire at 5,922,776 acres burned annually. The Midwest averages 2,846,500 acres, followed by the Northeast (26,745 acres) and the West (1,100 acres).

#### NDA's Recommendations

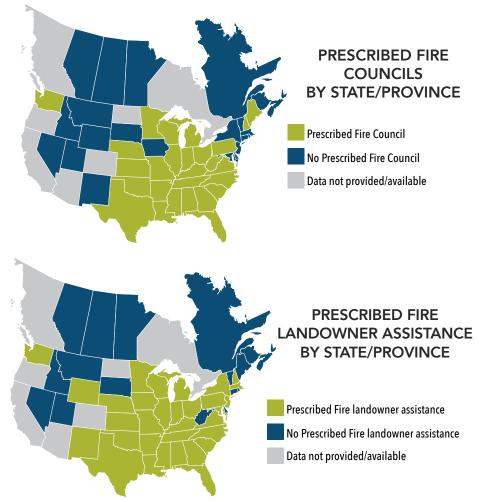
The NDA is a strong supporter of prescribed fire use to enhance habitat for deer and other wildlife; in fact, staff are involved with PFCs in Pennsylvania, Georgia, and Missouri with some serving as board members. NDA staff are also involved with form-

# **TOP STATES:**

# Annual Acres Managed with Prescribed Fire



ing local PBAs, landowner cooperatives, and assisting neighboring landowners with prescribed burns. The NDA recommends its members, hunters and landowners get involved with their state's Prescribed Fire Councils or local Prescribed Burn Associations to enhance habitat for deer and other wildlife and promote prescribed fire as an affordable and effective management tool in more locations.



### PRESCRIBED FIRE COUNCILS, ASSISTANCE AND ACREAGE

State/Province	Does your state/province offer assistance in using prescribed fire?	What is offered:	Approx. number of acres managed with prescribed fire
Alabama Arkansas	Yes Yes	Fire break construction and conducting prescribed fires Burn plans, equipment, agency staff assistance to conduct prescribed fires, and connection with private lands burn associations	900,000 50,000
Flavida		with private lands burn associations	2 122 / 20
Florida Georgia	Yes Yes	Certified burner training	2,133,620 1,400,000
Louisiana	Yes	Public and private land burn assistance, prescribed fire workshops Equipment, training/certification, technical assistance	154,000
Mississippi	Yes	Technical guidance, on-site evaluations and recommendations, cost-share through grants for prescribed fire in focal areas	425,000
North Carolina	Yes		100,000
Oklahoma South Carolina	Yes Yes	Guidance through local prescribed burn association Various publications and outreach, prescribed fire plans, fuel load estimation guidance,	* 385,000
Tennessee	Yes	training programs	25,156
Texas Southeast Total	Yes 11 of 11	Technical guidance, burn plan development, assistance on burns, equipment	350,000 <b>5,922,776</b>
Commontiout	NI-		
Connecticut Delaware	No	*	*
Maine	No No	*	*
Maryland	Yes	Prescribed fire assistance upon landowner request	*
Massachusetts	Yes	Funding sources available for prescribed fire Implementation, fire break preparation, prescribed fire planning	4,000
New Hampshire New Jersey	Yes Yes	* Preparation of prescribed burn plan and a site visit, specialized equipment upon reimbursement from landowner	* 17,000
New York	Yes	Authorizes use and reviews/approves prescribed fire plans	300
Pennsvlvania	Yes	Authorizes use and reviews/approves prescribed fire plans Assistance on habitat management options	*
Rhode Island	No	*	25
Vermont	No	*	20
Virginia	Yes	Technical assistance, financial assistance, prescribed burn training courses	*
West Virginia Northeast Total	No 7 of 13	*	5,400 <mark>26,745</mark>
Illinois	Yes	*	*
Indiana	Yes	*	*
lowa	Yes	Landowner presribed fire recommendations, developing burn plans, assist in finding financial assistance for prescribed fire	110,000
Kansas	Yes	Burn plan writing, field assistance, some equipment loans Landowner prescribed fire courses, burn equipment loan caches	2,500,000
Kentucky	Yes	Landowner prescribed fire courses, burn equipment loan caches	10,000
Michigan Minnesota	Yes Yes	Consultant/volunteer lists, grants, training, BMPs, burn plan writing Technical support from state and federal natural resource agencies, cost share sources for prescribed burning	105,000
Missouri	Yes	Workshops, cost share, assistance in creating burn plans	35,000
Nebraska	Yes	Planning, some assistance and equipment through cooperators and grants	60,000
North Dakota	*	*	*
Ohio South Dakata	Yes	Technical assistance	1,500
South Dakota Wisconsin	No	A Online information, hurn plan template and contractor list	25,000
Midwest Total	Yes 11 of 12	Online information, burn plan template and contractor list	23,000 2,846,500
3-Region Total	29 of 36		8,796,021
Arizona	*	*	*
California	*	x	*
Colorado		× •	*
Idaho Montana	No No	*	*
Nevada	No	*	*
New Mexico	Yes	Recommendations	*
Oregon	*	*	*
Utaĥ	No	*	*
Washington	Yes	*	*
Wyoming West Total	Yes 3 of 7	Assistance in planning, funding and implementing prescribed fires	1,100 <mark>1,100</mark>
U.S. Total	32 of 43		8,797,121
Alberta	No	*	*
British Columbia	*	*	*
Manitoba	No	*	*
New Brunswick	No	×	*
Nova Scotia	No *	*	*
Ontario Quebec	No	*	*
Saskatchewan	No No	*	*
Canada Total	0 of 6		*

\*Data not provided/available

### **Outdoor Gear Tax**

Funding for conservation is an area of concern for all state and provincial wildlife agencies. The Pittman-Robertson Act of 1937 placed an 11% excise tax on firearms, ammunition, and archery equipment that is distributed to state governments for wildlife projects and other conservation funding. Wildlife agencies rely on the Pittman-Robertson funds and revenue from license sales to support their conservation efforts. To better understand where wildlife agencies obtain additional funding for conservation, we asked state and provincial deer project leaders if their state/ province had a dedicated "outdoor gear" tax as a means to generate funding.

Only Virginia and Georgia (two of 44 states; 5%) indicated they have a dedicated outdoor gear tax for conservation, while none of the Canadian provinces have such a mechanism in place. Texas has an outdoor gear tax, but those funds are used for parks and outdoor recreation.

Minnesota responded their voters approved constitutional amendments that established dedicated funding for environmental, recreational, and cultural purposes. They receive funding from the Environment and Natural Resources Trust Fund (ENRTF) as well as "Legacy" funds (Outdoor Heritage Fund, Clean Water Fund, and Parks and Trails Fund). Missouri does not have an outdoor gear tax, but instead has a statewide dedicated conservation sales tax (1% of 1%) that is to be used only for conservation and cannot be considered part of the state's total revenues. Iowa and Arkansas have followed and have similar methods of supporting their conservation efforts from sales taxes.

#### **NDA's Recommendations**

NDA supports and encourages all wildlife agencies to implement complementary funding sources to help aid in their conservation efforts. The National Caucus of Environmental Legislators put together a fact sheet about where agencies sometimes receive other funding, including real estate transfer taxes, bond programs, lottery revenue, severance taxes, state general fund allocations, and even income tax check-offs and special license





plate sales to help generate revenue for conservation.

With hunter numbers trending downward, funds from license sales and Pittman-Robertson funds may be insufficient to cover future conservation projects. All wildlife agencies should investigate additional forms of funding to help offset this decline.

# **Hunting Land Liability Insurance**

The National Deer Association offers the most comprehensive and affordable liability insurance coverage available.



# 2023-2024

For as little as a few cents per acre, landowners or hunters can receive:

- \$1 million per occurrence general liability coverage
- \$100,000 fire legal liability coverage
- Member-to-member coverage
- Guest liability coverage
- No deductible on general liability
- No hidden exclusions for claims involving firearms, tree stands, ATVs, limited watercraft, and more
- Policies underwritten by
   Outdoor Underwriters, LLC



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- Or Complete the Online Application and pay by credit card at
   NDA.outdoorunderwriters.com

### Wildlife Agency Governing Bodies and Legislative Engagement

Numerous variables impact a wildlife agency's ability to manage deer populations. Some are regional such as severe winter weather in the extreme north, while others are universal throughout the whitetail's range like disease. However, public reform campaigns have surfaced recently in an effort to convert wildlife management away from conservation, biological science and consumptive users, and more toward protectionist, emotion-based and animal welfare points of view. The biggest example of this endeavor is from a group called "Wildlife for All" whose mission is to democratically win as many gubernatorial appointments as possible to fish and game commissions.

An important component of the North American Model of Wildlife Conservation is that wildlife is held in trust by each state and province for all citizens to enjoy. Yet, public engagements are often complex, and in a few cases stakeholder involvement can actually lead to ineffective management of deer or other wildlife, such as bad legislation or abuse of the political process via a misguided individual or group.

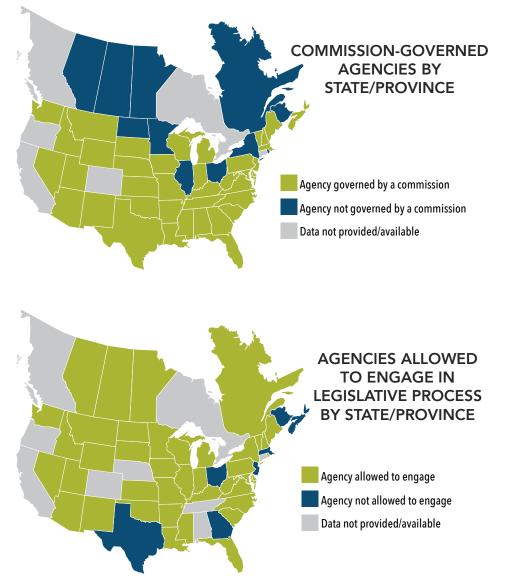
With the emergence of these political rather than biological influences on our management decisions today, we surveyed each state and provincial wildlife agency's deer project leader and asked if their agency is governed by a decision-making body such as a commission, if that body is appointed or elected, and if their meetings are digitally offered for public viewing. We also asked if their agency is allowed to engage in the legislative process and/or if they currently have a legislative liaison.

Of the 44 states that responded to our survey, 38 states (86%) have a decisionmaking body in place such as a commission. All states (100%) in the Southeast and West regions reported being governed by a commission, while 10 of 12 states (83%) in the Northeast and nine of 13 states (69%) in the Midwest are directed by one. The vast majority of state wildlife agency governing bodies are appointed (37 of 38 states; 97%); Kentucky is the only state that reported having an elected commission. Additionally, 31 of the 38 states (82%) that have a commission digitally offer their meetings for public viewing in either a livestream format or record and post it to the Internet. In Canada, only one of six provinces (16%) that responded to our survey are governed by a decision-making body such as a commission, and it is elected.

We also asked if the agency is allowed to engage in the legislative process, and 36 of 41 states (88%) and four of six provinces (67%) responded affirmatively. Interestingly, most states that are permitted to participate in the legislative process employ a liaison for those efforts (33 of 36 states; 92%), while New Mexico, North Dakota and Vermont do not.

#### NDA's Recommendations

NDA is a strong proponent of balancing public involvement in deer management programs; however, that support is based on the foundation that science, ecosystem health and active management through hunting remain the primary method in which decisions are made. 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 vital for state and provincial wildlife agencies and hunters to work more closely together and forge strong relationships for a productive deer hunting future.



### WILDLIFE AGENCY GOVERNING BODIES & LEGISLATIVE ENGAGEMENT

		Governing Body	/	Legislative Er	ngagement
State/Province Alabama	Commission Yes	Appointed or Elected Appointed	Meetings available for public viewing? No	Allowed to engage in the Legislative process?	Legislative Liaison
Arkansas	Yes	Appointed	Yes	Yes	Yes
lorida	Yes	Appointed	Yes	Yes	Yes
	Yes		Yes	No	*
eorgia		Appointed			
uisiana	Yes	Appointed	Yes	Yes	Yes
ississippi	Yes	Appointed	Yes	Yes	Yes
orth Carolina	Yes	Appointed	Yes	Yes	Yes
klahoma	Yes	Appointed	Yes	Yes	Yes
outh Carolina	Yes	Appointed	Yes	Yes	Yes
nnessee	Yes	Appointed	Yes	*	*
	Vea		Yes	No	*
xas outheast Total	Yes 11 of 11	Appointed 11 of 11	10 of 11	7 of 9	7 of 7
onnecticut	*	*	*	*	*
laware	Voc	Appointed	Yes	Yes	Yes
	Yes				
aine	Yes	Appointed	Yes	Yes	Yes
aryland	Yes	Appointed	No	Yes	Yes
ssachusetts	Yes	Appointed	Yes	No	*
w Hampshire	Yes	Appointed	No	Yes	Yes
w Jersey	Yes	Appointed	Yes	No	*
w Jeisey		Appointed	*		
ew York	No			Yes	Yes
nnsylvania	Yes	Appointed	Yes	Yes	Yes
ode Island	No	*	*	Yes	Yes
rmont	Yes	Appointed	Yes	Yes	No
	Yes	Appointed	No	Yes	Yes
rginia		Appointed	No	Yes	Yes
est Virginia ortheast Total	Yes 10 of 12	Appointed 10 of 10	6 of 10	10 of 12	9 of 10
nois	No	*	*	Yes	Yes
		Annaintad	Yes	Yes	Yes
diana	Yes	Appointed		res	
va	Yes	Appointed	No	Yes	Yes
nsas	Yes	Appointed	Yes	Yes	Yes
ntucky	Yes	Elected	Yes	Yes	Yes
chigan	Yes	Appointed	Yes	Yes	Yes
innesota	No	*	*	Yes	Yes
			Vac		
issouri	Yes	Appointed	Yes	Yes	Yes
ebraska	Yes	Appointed	No	*	*
orth Dakota	No	*	*	Yes	No
nio	No	*	*	No	*
uth Dakota	Yes	Appointed	Yes	Yes	Yes
	Yes	Appointed	Yes	Yes	Yes
isconsin <mark>idwest Total</mark>	9 of 13	8 of 9	7 of 9	11 of 12	10 of 11
Region Total	30 of 36	29 of 30	23 of 30	28 of 33	26 of 28
izona	Yes	Appointed	Yes	Yes	Yes
lifornia	*	*	*	*	*
lorado	*	*	*	*	*
		Appointed	Yes		Yes
iho	Yes			Yes	
ontana	Yes	Appointed	Yes	Yes	Yes
vada	Yes	Appointed	Yes	Yes	Yes
w Mexico	Yes	Appointed	Yes	Yes	No
egon	*	*	*	*	*
ah	Yes	Appointed	Yes	Yes	Yes
all Andreasta			Yes		
ashington	Yes	Appointed		Yes	Yes
roming	Yes	Appointed	Yes	Yes	Yes
est Total	8 of 8	8 of 8	8 of 8	8 of 8	7 of 8
S. Total	38 of 44	37 of 38	31 of 38	36 of 41	33 of 36
perta	No	*	*	Yes	Yes
itish Columbia	*	*	*	*	*
anitoba	No	*	*	Yes	Yes
w Brunswick	No	*	*	No	*
		Elected	No	No	*
va Scotia	Yes	Elected	N0 *	N0 *	*
	*		*		
iebec	No	*		Yes	Yes
ntario Jebec skatchewan	No No	* * 0 of 1	* 0 of 1	Yes Yes 4 of 6	Yes * 3 of 3

### Successful Deer Hunters



Which region and state has the most successful hunters? In 2022, the Southeast took the top honors with South Carolina leading the way. We determined this by surveying every state and provincial wildlife agency on the percentage of hunters that harvested at least one deer and the percentage that harvested two or more deer during the 2022 hunting season. We have similar data from 2011, 2017, and 2019 and were able to compare changes across years.

In the U.S. an average of 41% of hunters successfully harvested at least one deer in 2019 and again in 2022. However, the percentage of successful hunters in that category was 48% in 2011, marking a 7% decline in just over a decade. Likewise, the national average for hunters harvesting two or more deer decreased from 21% to 17% in that same time period. Overall, hunter success rates have decreased in all U.S. regions, with the Northeast having experienced the largest decline from 2011 to 2022.

Looking to 2022, the Southeast led the country with 56% of hunters successfully taking at least one deer. The Midwest was next with 40% of its hunters taking a deer, followed by the West (35%) and Northeast (33%). South Carolina led all states with 71% of its hunters harvesting at least one deer. New Hampshire's hunters were least successful at 18%. In Canada an average of 27% of hunters successfully harvested at least one deer in 2019; that number increased to 38% in 2022, largely due to three provincial wildlife agencies (Alberta, Manitoba, and Saskatchewan) reporting data for the first time.

The Southeast also led the country with 26% of hunters shooting two or more deer, followed by the Midwest (14%) and Northeast (11%). Some Western states (Arizona and New Mexico) have a onedeer bag limit, so that region was excluded from analysis of hunters harvesting two or more deer. Thus, the three-region average for hunters shooting two or more deer in 2022 was 16%, and this ranged from 11% in the Northeast to 26% in the Southeast.

Multiple deer bag limits are the norm today, and some states even allow an unlimited number of antlerless deer to be taken. Some hunters (and non-hunters) perceive this as assuring an overharvest of

# **TOP STATES:**

#### Highest Percentage of Successful Hunters in the 2022 Season

South Carolina	71
Tennessee	65
Texas	64
Mississippi	61
Rhode Island	61
State	2022 (%)

#### Lowest Percentage of Successful Hunters in the 2022 Season

New Hampshire	18
Connecticut	19
Maine	19
Vermont	21
Washington	23
State	2022 (%)

#### Highest Percentage Shooting More than 1 Deer

South Carolina	45
Tennessee	33
Georgia	31
Virginia	30
Ohio	27
State	2022 (%)

deer. However, the reality is only a small percentage of hunters actually fill multiple tags. For example, a license in Georgia allows two bucks and 10 antlerless deer, but nearly half of Georgia's hunters do not harvest a single whitetail.

#### **NDA's Recommendations**

NDA recommends balancing deer herds with the available habitat, and this requires harvesting the biologically appropriate number of antlerless deer annually. The appropriate number is determined pre-season using the best available data, and obtaining the target harvest is achieved using the combination of hunter numbers, access, seasons and bag limits. Bag limits by themselves do not make or break a management program, rather they are one piece of a much larger program that can be manipulated to allow for success.

# Part 2 // CURRENT ISSUES & TRENDS

	PERCE	INTAGE	E OF SL	JCCESS	FUL DE		NTERS	
	Percen	tage that Sh	ot at Least	1 Deer	Percenta	age that Shc	t <b>More than</b>	1 Deer
<b>State/Province</b> Alabama	2011 *	2017 *	2019 *	2022 *	2011 *	2017 *	2019 *	2022 *
Arkansas	*	49	52	46	*	19	19	17
Florida Georgia	55	57 51	34 54	40 57	35	24 27	15 29	18 31
Louisiana	41	39	37	51	16	17	19	22
Mississippi	65	63	62	61	*	*	*	*
North Carolina	49	50	49	47	26	24	22	21
Oklahoma South Carolina	46 70	53 69	49 68	56 71	17 49	22 42	18 43	24 45
Tennessee	83	09 *	*	65	36	42 *	45	33
Texas	58	61	60	64	*	*	*	*
Southeast Avg	58	55	52	56	30	25	24	26
Connecticut	*	*	18	19	*	*	10	10
Delaware	50 *	53	43 17	* 19	*	47 <1	23 1	*
Maine Maryland	57	13 50	56	17	32	24	27	3
Massachusetts	20	19	19	24	5	5	6	8
New Hampshire	15	19	15	18	2	3	3	3
New Jersey	63 *	31	*	28	41 *	14	* 8	12
New York Pennsylvania	26	27 34	30 37	30 40	8	6 11	13	8 13
Rhode Island	*	*	17	61	*	*	5	15
Vermont	30	20	20	21	14	3	4	4
Virginia Weat Virginia	80 *	60 32	61 40	57	26	21 17	50 12	30 15
West Virginia Northeast Avg	43	33	31	50 <mark>33</mark>	18	14	14	11
Illinois	43	*	41	29	15	*	*	13
Indiana	56	35	27	40	26	10	11	12
lowa Kansas	43 *	30 53	30 56	42 59	14 *	12 14	17	13 15
Kentucky	*	30	39	28	*	7	11	9
Michigan	45	50	50	50	14	15	16	16
Minnesota	33	37	36	32	3	3	12	15
Missouri Nebraska	40 *	42 *	43 48	44 40	11 *	11 *	12 10	13 8
North Dakota	*	61	64	53	*	20	*	*
Ohio	35	35	37	41	25	24	24	27
South Dakota Wisconsin	* 39	* 37	42 34	42	* 11	* 10	* 9	* 12
Midwest Avg	39 42	41	42	27 40	15	13	14	14
3-Region Avg	48	43	42	43	21	17	17	17
Arizona	*	12	39	36	*	*	*	0
California	*	*	*	*	*	*	*	*
Colorado Idaho	* 42	* 44	39 38	* 35	*	*	*	* 0
Montana	4Z *	44 *	57	41	*	*	12	7
Nevada	*	*	50	31	*	*	*	Ó
New Mexico	*	35	33	29	*	*	*	0
Oregon Utah	*	*	28 31	* 41	*	*	*	* 0
Washington	*	*	27	23	*	*	*	*
Wyoming	*	54	67	42	*	10	*	15
West Avg	*	36	41	35	*	*	*	*
U.S. Avg	48	41	41	41	*	*	*	*
Alberta	*	*	*	48	*	*	*	*
British Columbia	*	*	*	*	*	*	*	*
Manitoba New Brunswick	*	* 14	* 18	50 20	*	*	4	*
Nova Scotia	25	*	*	20	*	*	*	*
Ontario	*	36	32	*	*	2	1	*
Quebec	29	34 *	32	37	3	*	3	3
Saskatchewan	* 27	* 28	* 27	51 <mark>38</mark>	*	*	*	* 2
Canada Avg	21	20	21	30			3	2

\*Data not provided/available

### Velvet Buck Harvest

The antler velvet shedding process has intrigued deer hunters for centuries. Antler growth, mineralization, and casting (dropping antlers) is largely controlled by hormones and regulated by photoperiod (the amount of light per day). In brief, antlers generally grow during spring and summer and mineralize in August and September in response to increasing testosterone levels. This process is often referred to as "drying out" and is what eventually leads to shiny antlers, buck rubs, and sparring or fighting; however, a buck that maintains its velvet holds its own mystique.

In our 2022 *Deer Report*, we asked state and provincial wildlife agencies when the first bucks in their jurisdiction began shedding velvet and when the majority of bucks had completed the velvet shedding process. The results provided varied antler velvet shedding times across the country; so, for this report we followed up and asked if their deer season opened early enough to allow the harvest of bucks still holding velvet on their antlers.

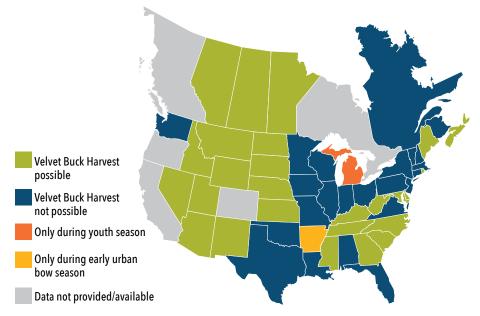
Surprisingly, 17 of 44 (39%) states and four of six (67%) provinces indicated their deer season opens early enough to allow the harvest of velvet bucks. Overall,

the West maintains the most opportunity to take home a velvet buck, with seven of eight (88%) states, followed by the Southeast with nearly half of the states (five of 11; 45%). The Northeast and Midwest tied, each with five of 13 (38%) states offering an opportunity to harvest velvet bucks. Michigan responded they have a youth season that is early enough to harvest velvet bucks, but not statewide. Arkansas had a similar response in they have a special early urban deer hunt program in nine cities that is early enough (September 1) to harvest a velvet buck with archery equipment, but during the regular bow/firearm deer seasons across the rest of the state it wouldn't be possible.

### **NDA's Recommendations**

Velvet shedding is an exciting part of deer biology, and many hunters dream of harvesting a buck in velvet. NDA recommends state and provincial wildlife agencies set hunting seasons based on biology and public engagement to ensure the future of wild deer and hunting. We support velvet hunting opportunities that fit within those boundaries.

#### DEER SEASON OPPORTUNITY FOR VELVET BUCK HARVEST BY STATE/PROVINCE



30 • National Deer Association // DeerReport 2024

Chata / Day 1 and	Does your Deer Season Open Early
State/Province	Enough for Velvet Buck Harvest?
Alabama Arkansas	No Not statowida, Only during spacial
AIKalisas	Not statewide. Only during special early urban bowhunting season.
Florida	No
Georgia	Yes
Louisiana	No
Mississippi	Yes
North Carolina	Yes
Oklahoma	No
South Carolina	Yes
Tennessee	Yes
Texas Southeast Total	No
Southeast Iotal	5 of 11
Connecticut	No
Delaware	Yes
Maine	Yes
Maryland	Yes
Massachusetts	No
New Hampshire	No
New Jersey	No
New York	No
Pennsylvania	No
Rhode Island	Yes
Vermont	No
Virginia	No
West Virginia	Yes
Northeast Total	5 of 13
	NI
Illinois Indiana	No
	No
lowa Kansas	Yes
Kentucky	Yes
Michigan	Not statewide. Youth season early
mengen	
Ŭ	enough for velvet bucks
Minnesota Missouri	enough for velvet bucks
Minnesota	enough for velvet bucks No
Minnesota Missouri	enough for velvet bucks No No
Minnesota Missouri Nebraska North Dakota Ohio	enough for velvet bucks No No Yes Yes No
Minnesota Missouri Nebraska North Dakota Ohio South Dakota	enough for velvet bucks No Yes Yes No Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin	enough for velvet bucks No Yes Yes No Yes No
Minnesota Missouri Nebraska North Dakota Ohio South Dakota	enough for velvet bucks No Yes Yes No Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b>
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin	enough for velvet bucks No Yes Yes No Yes No
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b>
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b>
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes *
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado	enough for velvet bucks No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes *
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total <b>3-Region Total</b> Arizona California Colorado Idaho	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total <b>3-Region Total</b> Arizona California Colorado Idaho Montana	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * * Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * * Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * * Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * * Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes No
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total <b>3-Region Total</b> Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total	enough for velvet bucks No No Yes Yes No Yes No 5 of 13 10 of 36 Yes * * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta	enough for velvet bucks No No Yes Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta British Columbia	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total 3-Region Total Arizona California Colorado Idaho Montana Newada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta British Columbia Manitoba	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Newada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta British Columbia Manitoba New Brunswick	enough for velvet bucks No No Yes Yes No Yes No 5 of 13 10 of 36 Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta British Columbia Manitoba New Brunswick Nova Scotia	enough for velvet bucks No No Yes No Yes No <b>5 of 13</b> <b>10 of 36</b> Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta British Columbia Manitoba New Brunswick Nova Scotia Ontario	enough for velvet bucks No No Yes Yes No Yes No 5 of 13 10 of 36 Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Minnesota Missouri Nebraska North Dakota Ohio South Dakota Wisconsin Midwest Total 3-Region Total Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total U.S. Total Alberta British Columbia Manitoba New Brunswick Nova Scotia	enough for velvet bucks No No Yes Yes No Yes No 5 of 13 10 of 36 Yes * Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes

\*Data not provided/available

4 of 6

**Canada Total** 

### Part 2 // CURRENT ISSUES & TRENDS

### Average Number of Deer Hunter Days Afield

State/Province	2018	2022
Alabama	*	23
Arkansas	20	20
Florida	22	19
Georgia	21	22
Louisiana	21	19
Mississippi North Carolina	25 15	18 15
Oklahoma	18	15
South Carolina	19	15
Tennessee	*	19
Texas	12	11
Southeast Avg	19	18
	•••••	
Connecticut	*	8
Delaware	13	15
Maine	8 14	7 14
Maryland Massachusetts	14	14
New Hampshire	*	*
New Jersey	*	27
New York	18	*
Pennsylvania	10	10
Rhode Island	*	20
Vermont <sup>a</sup>	5	5
Virginia	20	20
West Virginia	11	11
Northeast Avg	13	14
Illinois	*	*
Indiana	3	3
lowa	*	14
Kansas	11	11
Kentucky	*	*
Michigan	15	14
Minnesota	*	11
Missouri	8	12
Nebraska	4	8
North Dakota		4 18
Ohio South Dakota	15 5	5
Wisconsin	18	12
Midwest Avg	10	10
3-Region Avg	14	14
	•••••	
Arizona	8	5
California	*	*
Colorado Idaho	5	
Montana	0 *	6 7
Nevada	*	6
New Mexico	4	4
Oregon	*	*
Utaĥ	10	4
Washington	*	6
Wyoming	7	10
West Avg	7	6
	10	10
U.S. Avg	13	12
Alberta	11	6
British Columbia	*	*
Manitoba	*	*
New Brunswick	8	9
Nova Scotia	*	*
Ontario	6	*
Quebec	*	9
Saskatchewan	*	5
Canada Avg	8	7



About 10 million hunters pursue deer annually, and they spend nearly 120 million days afield doing so. Season lengths, bag limits, deer densities, hunter numbers, and other variables impact the average number of days hunters spend afield. NDA surveyed state and provincial wildlife agencies to determine the average number of days each deer hunter spends pursuing deer annually. Fortunately, we had similar data from 2016 and 2018 and can provide state-by-state comparisons over time. Please refer to the 2019 *Whitetail Report* for additional information.

In 2018 hunters spent an average of 13 days afield in pursuit of deer. That statistic dropped to 12 days during the 2022 deer season. This varied from three days in Indiana to 27 days annually in New Jersey. Importantly, the data represents the total average number of days spent afield during all seasons combined that year. For example, Minnesota hunters averaged 15 days

# **TOP STATES:**

Highest Average Number of Days Afield per Deer Hunter per Year

New Jersey	27
Alabama	23
Georgia	22
Arkansas	20
Rhode Island	20
Virginia	20
State	2022 Average

#### Lowest Average Number of Days Afield per Deer Hunter per Year

Indiana	3
North Dakota	4
New Mexico	4
Utah	4
Arizona	5
South Dakota	5
State	2022 Average

during the archery season and six days during the firearms season, for an overall average of 11 days spent afield annually in pursuit of deer.

Regionally, the Southeast averaged 18 days afield per deer hunter per year, followed by the Northeast (14 days), Midwest (10 days), and West (six days). In Canada, hunters averaged seven days afield. All regional averages were within one day from 2018 to 2022.

### **NDA's Recommendations**

The number of days spent afield annually can have a large impact on a state wildlife agency's management programs and on its budget from the associated Pittman-Robertson funds obtained from specific hunting gear. More time afield equates to more needed supplies which is good for the hunting industry and our wildlife management programs. More time afield also affords additional mentoring opportunities, which is good for the future of hunting. The NDA favors enhanced opportunities where wildlife populations can support them.

\* Data not provided/available \* Data only represents the number of hunter days afield for regular firearms season.

### Drone Use During Deer Season



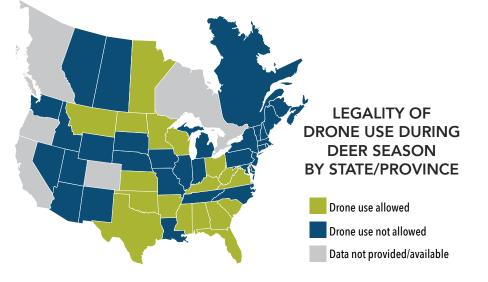
The use of technology is becoming more and more prevalent in the world of deer management. Trail cameras opened the door for new and innovative scouting methods, but another more recent technology available to hunters is remote-controlled drones. Originally developed for military applications, drones have become smaller and much more affordable for the average person and allow for real-time aerial surveillance from a distance. Certain technologies may challenge fair-chase as their capabilities improve, so we asked state and provincial wildlife agencies if they allow the use of drones during deer season, and if so, the types of activity they can be used for, including scouting, game animal recovery and/or with the addition of thermal imagery.

Eighteen of the 45 states (40%) that responded to our survey allow the use of drones during deer season. The Southeast is the most lenient region when it comes to the use of drones with nine of 11 states (82%) allowing them during deer season followed by the Midwest where it is permitted in six of 13 states (46%). Conversely, the Northeast is highly restrictive with-Virginia and West Virginia being the only states in the region where drone use is permitted, while Montana is the only state in the West that allows their use. In Canada, Manitoba is the only province (one of six; 17%) that responded that allows the use of drones during deer season.

We also asked the state and provincial wildlife agencies that allow drone use in their jurisdiction about the types of activity permitted. Of the 18 states that allow it during deer season eleven states (61%) allow them for scouting purposes, with the Southeast region accounting for over half of that number. Thirteen of 18 states (72%) also allow them for game animal recovery, while 13 of 18 states also (72%) permit the use of thermal imaging equipment. See the chart for more detailed information on specific drone use regulations in various locations.

#### **NDA's Recommendations**

NDA encourages anyone using drones to follow all local, state, and federal regulations and to obtain the proper permits where necessary prior to use. While we are not opposed to these technologies when used for scouting, game animal recovery, and with thermal imaging technology where legal, 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.



# Part 2 // CURRENT ISSUES & TRENDS

During Duer Season Network         Southing Network         Guant Recovery Network         Withermal Imaging Cup Yes         Community Yes         Co	LEGALITY OF DRONE USE IN 2023					
Alabama     Yes     Yes     Yes     Yes     Yes     Yes       Adamase     Yes     No     No     Yes     Yes       Decisional     Yes     Yes     Yes     Yes       Massispin     Yes     Yes     Yes     Yes       Innak     No     No     Yes     Yes       Innak     Yes     Yes     Yes     Yes       Innak     Yes     Yes     Yes     Yes       Innak     No     Yes     Yes     Yes       Innak     Yes     Yes     Yes     Yes       Innak     No     Yes     Yes     Yes       Massing     No     Yes     Yes     Yes       Massing     No     Yes     Yes     Yes       No     Yes     Yes     Yes     Yes       No     Yes <t< td=""><td colspan="4">Drone Use Permitted</td><td></td></t<>	Drone Use Permitted					
Alabama     Yes     Yes     Yes     Yes     Yes       Advances     No     Ne     No     Advances       Decisiona     Yes     Yes     Yes     Yes       Massingin     Yes     Yes     Yes     Yes       Massingin     No     Yes     Yes     Yes       Massingin     No     Yes     Yes     Yes       Massingin     No     Yes     Yes     Yes       Construction     No     Yes     Yes     Yes       Markand     No     Yes     Yes     Yes       Maskancests     No     Yes     Yes     Yes       New York     No     Yes     Yes     Yes       New York     No     Yes     Yes     Yes       New York     No     Yes     Yes       No     <		During Deer Season	Scouting	Game Recovery	w/ Thermal Imaging Equip	
Horida Georgia Lausiana         Yes         Yes <thyes< th="">         Yes         <thyes< th=""></thyes<></thyes<>					Yes	
Georgia Lusiana Missiopian         Yes         Yes <thyes< t<="" td=""><td></td><td></td><td></td><td></td><td></td><td>of animals.</td></thyes<>						of animals.
Laukana Masissippi Varita Calularia Non Calularia Energisse Penergisse Non Calularia Non Calularia Non Calularia Penergisse Non Calularia Non Calulari Non Calularia Non Calularia Non Calularia Non Calula						Towney Dear survive with an area vista normite
Mississipi Missis						<b>Texas:</b> Deer surveys with appropriate permits.
Noth Carolina Sudi Carolina Pressoe         No         *         *         *           Sudi Carolina Pressoe         Yes         Yes         Yes         Yes           Branssoe         No         Yes         Yes         Yes         Yes           Mare         No         Yes         Yes         Yes         Yes         Yes           New Jersky         No         Yes         Yes         Yes         Yes         Yes           Persylvania         No         Yes         Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes         Yes         Yes         Yes           Northeast Data         No         Yes         Yes         Yes         Yes         Yes           Northeast Data         No         Yes         Yes						
Note of the set						
Suth Carolina Interessee No         Yes No         Yes No         Yes No         Yes No         Yes No         Yes No           Conservation Beaksare Namia         9 of 11         6 of 11         8 of 10         Yes Suthest Stable No         9 of 11           Conservation Maine         No         -         -         -         -           Maine         No         -         -         -         -           Mariand         No         -         -         -         -           Mariand         No         -         -         -         -           Mariand         No         -						
Tenses Tease Southeast ItalNo 9 of 11Image: Constitution 6 of 11No 8 of 11Image: Constitution 9 of 11Connecticul Data Marginal Mage and Mascachusets No Mascachusets No Mascachusets No Mascachusets No Mascachusets No No Mascachusets No No Mascachusets No N						
Total Southeast Total         Yes         No         Yes         No         Yes         No           Connecticit         No         •						
Southeast Total9 of 116 of 118 of 119 of 11ConnecticutNo••••ManeNo••••MarkandNo••••MarkandNo••••MarkandNo••••Mex HampahreNo•••and hurt the same property on which the done was flown on the same day.New HampahreNo•••and forme during any hurning secon, hower, it is unlawful at the same property on which the done was flown on the same day.New YorkNo••••any done during any hurning secon, hower, it is unlawful at the same property on which the done was flown on the same day.New YorkNo•••any done during any hurning secon, hower, it is unlawful at the same day.New YorkNo•••any done during any hurning secon, hower, it is unlawful at the same day.WernortNo••••ViginiaYesYesYesYesVernortNo•••IninaisNo•••IninaisNo•••Ing and count any done was flow any don			No	No	Yes	
Deleavere     No     *     *     *       Maine     No     *     *     *       Maryland     No     *     *     *       Maschutetts     No     *     *     *       Mew Hampshire     No     *     *     *       New Hampshire     No     *     *     *       Pernsylvania     No     *     *     *       Vermont     No     *     *     *       Verginia     Yes     Yes     Yes     Yes       Northest Call     2 di 13     1 di 13     1 di 13     1 di 13       Illinois     No     *     *     *     *       Northest Call     2 di 13     1 di 13     1 di 13     1 di 13       Illinois     No     *     *     *     *       Northolakia     No     *     *     *     *       No     *     *     *     *     *       Notholakia <td>Southeast Total</td> <td>9 of 11</td> <td>6 of 11</td> <td></td> <td></td> <td></td>	Southeast Total	9 of 11	6 of 11			
Deleavere     No     *     *     *       Maine     No     *     *     *       Maryland     No     *     *     *       Maschutetts     No     *     *     *       Mew Hampshire     No     *     *     *       New Hampshire     No     *     *     *       Pernsylvania     No     *     *     *       Vermont     No     *     *     *       Verginia     Yes     Yes     Yes     Yes       Northest Call     2 di 13     1 di 13     1 di 13     1 di 13       Illinois     No     *     *     *     *       Northest Call     2 di 13     1 di 13     1 di 13     1 di 13       Illinois     No     *     *     *     *       Northolakia     No     *     *     *     *       No     *     *     *     *     *       Notholakia <td>•••••</td> <td></td> <td></td> <td></td> <td></td> <td></td>	•••••					
Mane Maryland Mayland Masyland Masyland Masyland Masyland Masyland Mew Hampshile NoNoImage of the same day.It has ame day.Masyland Masyland New Jersy NoNoImage of the same day.West Virginia: There is nothing to prevent anyone from operat. ing dome during any hunting season, however, it is unlawful at any time but as dome to hunt, take, itil, wound, harass, shoot at, during or herd wild animals for the purposes of hunting, tapping or killing.West Virginia NoNoImage of the same day.Image of the same day.West Virginia NoYesYesYesNortheast Total Low NoNoImage of the same day.Image of the same day.West Virginia NoYesYesYesNortheast Total Low NoNoImage of the same day.Image of the same day.Northeast Total NoNoImage of the same day.Image of the same day.Northeast Total NoNoImage of the same day.Image of the same day.Northeast Total NoNoImage of the same day.Image of the same day.Northest Total NoNoImage of the same day.Image of the same day.Northest Total NoNoImage of the same day.Image of the same day.Northest Total NoNoImage of the same day.Image of the same day.Northest Total NoNoImage of the same day.Image of the same day.Northest Total NoNoImage of the same day.Image of the same day.Northest Total NoI					*	Virginia: drones are allowed during deer season, but a person
Maryand Masschuesti New Hampshire New Hampshire New Jersey New Vork New Vork No <br< td=""><td></td><td></td><td></td><td></td><td></td><td></td></br<>						
Marginal method times this problem these things the see this problem these terms of the these things the purposes of hunting, tapping or kalling.West Wing the the dame that the kall, wound, harass, short at, any time to: use dame that must kall, wound, harass, short at, any time to: use dame that the kall, wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, any time to: use dame that the kall wound, harass, short at, we dame that the kall wound, harass, short at, the hard which constitutes adding in the take.Illinois No 					*	the same day.
New Hampshie       No       *       *       *       ing a drane during any hunting seaon, howere, it is unlawful at New Jersey         New York       No       *       *       *       *         New York       No       *       *       *       *         Pensylvania       No       *       *       *       *         Pensylvania       No       *       *       *       *         West Virginia       Yes       Yes       Yes       Yes       *         Vest Virginia       Yes       Yes       Yes       Yes       *         Illinois       No       *       *       *       *       *         Indiana       No       *<					*	Man and a table to the state of
New York     No     *     *     *     *       PrensyVaria     No     *     *     *     *       Rhode Island     No     *     *     *     *       Wernort     No     *     *     *     *       Virginia     Yes     Yes     Yes     Yes     Yes       Northeast Total     2 of 13     1 of 13     1 of 13     1 of 13       Illinois     No     *     *     *       Indiana     No     *     *     *       Kanass     Yes     Yes     Yes     No       Kentucky     Yes     Yes     Yes     No       Minesota     No     *     *     *       Minesota     No     *     *     *       Minesota     No     *     *     *       Minesota     Yes     Yes     No     No       Minesota     Yes     Yes     No     No       North Dakota     Yes     Yes     Yes     Yes       Noth Dakota     Yes     Yes     Yes     Yes       Noth Dakota     Yes     Yes     Yes     Yes       Noth Dakota     Yes     Yes     Yes     Yes					*	west virginia: There is nothing to prevent anyone from operat-
New York     No     *     *     *     *       PrensyVaria     No     *     *     *     *       Rhode Island     No     *     *     *     *       Wernort     No     *     *     *     *       Virginia     Yes     Yes     Yes     Yes     Yes       Northeast Total     2 of 13     1 of 13     1 of 13     1 of 13       Illinois     No     *     *     *       Indiana     No     *     *     *       Kanass     Yes     Yes     Yes     No       Kentucky     Yes     Yes     Yes     No       Minesota     No     *     *     *       Minesota     No     *     *     *       Minesota     No     *     *     *       Minesota     Yes     Yes     No     No       Minesota     Yes     Yes     No     No       North Dakota     Yes     Yes     Yes     Yes       Noth Dakota     Yes     Yes     Yes     Yes       Noth Dakota     Yes     Yes     Yes     Yes       Noth Dakota     Yes     Yes     Yes     Yes					^ +	ing a drone during any nunting season, nowever, it is unlawiul at
Pennsylvaria Kondel Sland VermontNo****or killing.VermontNo******VermontNo******Veringinia West VirginiaYesYesYesYes**Mortheast Total 					*	drive or bord wild animals for the nurneses of hunting transing
Rhode Island No * *   Vermont No * *   Virginia Yes Yes Yes   Northeast Total 2 of 13 1 of 13 1 of 13   Illinois No * *   Indiana No * *   Kanasa Yes Yes No   Kentudy Yes Yes   North Bakota No *   Minnesota No *   Minnesota No *   Kentudy Yes Yes   North Bakota No *   Minsouri No *   Missouri No *   Morthasata No *   Minesota Yes   Ves Yes   North Bakota No   Ohio Yes   Ves Yes   North Bakota No   Ohio Yes   Ves Yes   North Bakota No   Ohio Yes   Ves Yes   Visconsin No   Arizona No   Calioratio No   Calioratio No   Veshico No			*	*	*	
Vermont Vrignia West Vrignia West Vrignia West Vrignia West Vrignia No Northeast Total 2 of 13•• <td></td> <td></td> <td>*</td> <td></td> <td>*</td> <td>or kning.</td>			*		*	or kning.
Virginia West Virginia Vest Vies West Vies Indiana Northeast TotalYes 2 of 13Yes 1 of 13Yes 4 4 4Winnesota: 1 of 13Minnesota: 1 of 13Illinois Indiana No Waw No No Michigan No Wisconsin No <b< td=""><td></td><td></td><td>*</td><td>*</td><td>*</td><td></td></b<>			*	*	*	
West viginia Northeast TotalYes 2 of 131 of 131 of 131 of 13Illinois IndianaNo••••IndianaNo••••IndianaNo••••IndianaNo••••IndianaNo••••IndianaNo••••IndianaNo••••KansasYesYesYesNoNoKontidyYesYesYesNoNoMichiganNo••••MinnesotaYesYesNoNoNoMisconinNo••••NothbakiaYesYesYesYesYesNoNo••••OhioYesYesYesYesYesNoNo••••OhioYesYesYesYesSouth DakotaNo•••ArzonaNo•••Colorado*•••ArzonaNo•••Colorado*•••Ves HarioNo•••Ves HarioNo•••Ves HarioNo•••OradaNo••<			Yes	Yes	Yes	
Northesis Total2 of 131 of 131 of 131 of 13IllinoisNo••••IndianaNo••••IllinoisNo••••IllinoisNo••••IllinoisNo••••IllinoisNo••••IllinoisNo••••IllinoisNo••••IllinoisNo••••KansasYesYesNoNo•MichiganNo••••MissouriNo••••MissouriNo••••Noth DakotaYesYesNoNoOhioYesYesNoNoOhioYesYesNoNoOhioYesYesYesYesNoth DakotaYesNo*•ArizonaNo•••California••••ArizonaNo•••California••••New MexicoNo•••Oregon••••VesthylingNo•••MantbalYesYesYesYesNew MexicoNo• <td>West Virginia</td> <td></td> <td></td> <td></td> <td></td> <td></td>	West Virginia					
Indiana lowa     No     *     *     *     *       Iowa     No     *     *     *       Kansas     Yes     Yes     No     No       Kansas     Yes     Yes     No     No       Michigan     No     *     *     *       Michigan     No     *     *     *       Minesta     Yes     No     No     No       Missouri     No     *     *     *       Noth Dakota     No     *     *     *       With Oakota     No     *     *     *       With Dakota     No     *     *     *       Witorsin     Yes     Yes     Yes     Yes       Witorsin     Yes     Yes     Yes     Yes       Vationa     No     *     *     *       Calfornia     Cof13     40f13     30f13     2 of13       3.Region Total     17 of 37     10 of 37     12 of 37     12 of 37       Arizona     No     *     *     *       Calfornia     *     *     *     *       Calfornia     No     *     *     *       Oregon     *     *     *     *			1 of 13	1 of 13	1 of 13	
Indiana lowa     No     *     *     *     *       Iowa     No     *     *     *       Kansas     Yes     Yes     No     No       Kansas     Yes     Yes     No     No       Michigan     No     *     *     *       Michigan     No     *     *     *       Minesta     Yes     No     No     No       Missouri     No     *     *     *       Noth Dakota     No     *     *     *       With Oakota     No     *     *     *       With Dakota     No     *     *     *       Witorsin     Yes     Yes     Yes     Yes       Witorsin     Yes     Yes     Yes     Yes       Vationa     No     *     *     *       Calfornia     Cof13     40f13     30f13     2 of13       3.Region Total     17 of 37     10 of 37     12 of 37     12 of 37       Arizona     No     *     *     *       Calfornia     *     *     *     *       Calfornia     No     *     *     *       Oregon     *     *     *     *	•••••					
Iowa KansasNo****KansasYesYesNoNoNoNoNoKentuckyYesYesYesNoNoOhio: Drones not allowed on Wildlife Areas without written authorization.authorization.MinnesotaYesNoNoNoNoNoMissouriNo****North DakotaYesYesNoNoNoOhio:YesYesYesYesYesOhioYesYesYesYesYesNorth DakotaNo***OhioYesYesYesYesYesSouth DakotaNo***MistouriYesNoYesYesMistouriaYesNoYesYesMistouriaYesNoYesYesMistouriaYesYesYesYesMidwest Total17 of 3710 of 3712 of 3712 of 37ArizonaNo***California***Nortana:YesYesYesNew MexicoNo**Oregon***UtahNo**West Total1 of 81 of 81 of 8UtahNo**MortanaYesYesYesYesYesNo**	Illinois	No				Minnesota: Drone use is legal but you cannot use it to aid in the
Kansas KentuckyYesYesYesNoNoMichiganNo***authorization.MichiganNo***authorization.MissouriNo****NetraskaNo****Noth DaktaYesYesNoNoWiscourisNoth DaktaYesYesNoNoOhioYesYesNoNoOhioYesYesNoNoOhioYesYesNoNoOhioYesYesNoNoOhioYesYesNoNoOhioYesYesNoNoOhioYesYesYesYesSouth DaktaNo***Midwest Total6 of 134 of 133 of 132 of 133.Region Total17 of 3710 of 3712 of 3712 of 37ArizonaNo***Colorado***MontanaYesYesYesNewadaNo**NewadaNo**Vest Total1 of 81 of 81 of 8UJahNo**West Total1 of 81 of 81 of 45Ush TotalNo**Montana:YesYesWest Total1 of 61 of 6Ush TotalNo* <td>Indiana</td> <td></td> <td></td> <td></td> <td></td> <td>take of game animals or use it for game animal recovery in the in-</td>	Indiana					take of game animals or use it for game animal recovery in the in-
FertuckyYesYesYesNoOhio: Drones not allowed on Wildlife Areas without written authorization.MichiganNo***authorization.MinnesotaYesNoNoNoauthorization.MissouriNo***authorization.MissouriNo***authorization.North DakotaYesYesNoNoWisconsin: Must be a third party and only if deer is dead. Likely to updated.OhioYesYesYesYesYesSouth DakotaNo***Midwest Total6 of 134 of 133 of 132 of 133.Region Total17 of 3710 of 3712 of 3712 of 37Arizona CalforniaNo***Calfornia****Caldorado****WexidaNo***Merizona CrigonNo***WexidaNo***West Total1 of 81 of 81 of 8Utah Distributia***West T					*	stance the animal is not dead, which constitutes aiding in the take.
Michingán     No     *     *     *     *     authorization.       Minnesota     Yes     No     No     No     Wiscourin     Nuo     Nuo       Nebraska     No     *     *     *     *     Wiscourin     Wuscousin:     Mustourin     Nuo       North Dakta     Yes     Yes     Yes     No     No     Wiscousin:     Mustourin     Wuscousin:     Mustourin     Mustourin     Wuscousin:     Mustourin     Must						
Miningsin     NO     No     No     No       Minascita     Yes     No     *     *     *       Missouri     No     *     *     *     *       Morth Dakota     Yes     Yes     No     No     Wisconsin: Must be a third party and only if deer is dead. Likely       North Dakota     Yes     Yes     No     No       Ohio     Yes     Yes     Yes       South Dakota     No     *     *       Misconsin     Yes     No     Yes       Mitabacti Ctal     6 of 13     4 of 13     3 of 13     2 of 13       3.Region Total     17 of 37     10 of 37     12 of 37     12 of 37       Arizona     No     *     *     *       California     *     *     *     *       Calorado     *     *     *     *       No     *     *     *     *       Mortana     Yes     Yes     Yes       Wewida     No     *     *     *       Oregon     *     *     *     *       Vashington     No     *     *     *       West Total     1 of 8     1 of 8     1 of 8     1 of 8       Dirisho						
Missouri Nebraska     No     *     *     *     *     *       Nebraska     No     *     *     *     *     *       North Dakta     Yes     Yes     Yes     Yes     Yes       Ohio     Yes     Yes     Yes     Yes     Yes       South Dakta     No     *     *     *     *       Midwest Total     6 of 13     4 of 13     3 of 13     2 of 13       3-Region Total     17 of 37     10 of 37     12 of 37     12 of 37       Arizona     No     *     *     *       Colorado     *     *     *     *       Montana     Yes     Yes     Yes     Yes       No     *     *     *     *       Origon     *     *     *     *       No     *     *     *     *       Montana     Yes     Yes     Yes     Yes       New Maxington     No     *     *     *       West Total     1of 8     1of 8     1of 8     1of 8       Us. Total     18 of 45     11 of 45     13 of 45     13 of 45       Alberta     No     *     *     *       No     *     <						authorization.
Nebraska North Dakota     No     *     *     *     *       Ohio     Yes     Yes     Yes     No       Ohio     Yes     Yes     Yes     Yes       South Dakota     No     *     *     *       South Dakota     No     *     *     *       Wisconsin     Yes     No     Yes     Yes       Midwest Total     6 of 13     4 of 13     3 of 13     2 of 13       3.Region Total     17 of 37     10 of 37     12 of 37     12 of 37       Arizona     No     *     *     *       California     *     *     *     *       Calorado     *     *     *     *       Montana     Yes     Yes     Yes     Yes       New Mexico     No     *     *     *       Oregon     *     *     *     *       Washington     No     *     *     *       West Total     10 of 45     11 of 45     13 of 45       U.S. Total     18 of 45     11 of 45     13 of 45       Maintoba     Yes     Yes     Yes       Nowa Scotia     No     *     *       Nowa Scotia     No     *     * <td></td> <td></td> <td></td> <td></td> <td></td> <td>Wisconsin: Must be a third party and only if dear is dead. Likely</td>						Wisconsin: Must be a third party and only if dear is dead. Likely
North Dakota OhioYesYesNoNoOhioYesYesYesYesYesObioYesYesYesYesYesSouth DakotaNo****WisconsinYesNoYesYesYesMidwest Total6 of 134 of 133 of 132 of 133.Region Total17 of 3710 of 3712 of 3712 of 37ArizonaNo***California*******Colorado***MontanaYesYesYesNew MexicoNo**Oregon***WeshingtonNo**WestTotal1 of 81 of 81 of 8US. Total18 of 4511 of 4513 of 45US. Total18 of 4511 of 4513 of 45Us. StotalNo**AlbertaNo**New BrussikickNo**Notario***Outario***Outario***SaskatchewanNo**SaskatchewanNo**SaskatchewanNo**No***SaskatchewanNo**SaskatchewanNo**No**						to be undated
Ohio South Dakota Wisconsin Wisconsin 						to be updated.
South DakotaNo***WisconsinYesNoYesYesMidwest Total6 of 134 of 133 of 132 of 133.Region Total17 of 3710 of 3712 of 3712 of 37ArizonaNo***California***Kontana:***Colorado***VesYesYesVesadaNo**New MexicoNo**Oregon***WashingtonNo**West Total1 of 81 of 81 of 8UshYesYesWest Total1 of 81 of 8Ush**Montana:YesYesYesYesNo**New MexicoNo*No**UtahNo*No**West Total1 of 81 of 8U.S. Total18 of 4511 of 45AlbertaNo*Nova SoctiaNo*Nova SoctiaNo*Outario**SaskatchewanNo*No**SaskatchewanNoNo**SaskatchewanNoNo*No*SaskatchewanNoNo*Saskatchewan <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Wisconsin Midwest TotalYes 6 of 13Yes 4 of 13Yes 3 of 13Yes 2 of 133-Region Total17 of 3710 of 3712 of 3712 of 37Arizona CaliforniaNo ****California Colorado*******IdahoNo ***Montana NevadaYes *Yes *Yes *New Mexico OregonNo ***No West TotalNo ***Utah Wyoming MinotalNo ***Ush MontanaNo ***No Oregon ****Utah West Total10 of 810 f810 f8Ush Woming Mantoba *11 of 4513 of 4513 of 45Us. Total Mantoba No No ***Us. Total Outario Outario *11 of 6513 of 4513 of 45Ubecc Saskatchewan No No No No ***No Outario Saskatchewan No No No ***No Saskatchewan No No No ***No Saskatchewan No No Saskatchewan1 of 61 of 6						
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ArizonaNo*****California******Calorado******IdahoNo*****MontanaYesYesYesYesYesNevadaNo****NevadaNo****NevadaNo****NevadaNo****NevadaNo****NevadaNo****New MexicoNo****Oregon****WashingtonNo***West Total1 of 81 of 81 of 81 of 8U.S. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***ManitobaYesYesYesNew StotiaNo**Ontario***SaskatchewanNo**No***SaskatchewanNo**No***SaskatchewanNo**No***SaskatchewanNo**No***No***No* <t< td=""><td><b>Midwest Total</b></td><td></td><td>4 of 13</td><td></td><td></td><td></td></t<>	<b>Midwest Total</b>		4 of 13			
ArizonaNo*****California******Calorado******IdahoNo*****MontanaYesYesYesYesYesNevadaNo****NevadaNo****NevadaNo****NevadaNo****NevadaNo****NevadaNo****New MexicoNo****Oregon****WashingtonNo***West Total1 of 81 of 81 of 81 of 8U.S. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***ManitobaYesYesYesNew StotiaNo**Ontario***SaskatchewanNo**No***SaskatchewanNo**No***SaskatchewanNo**No***SaskatchewanNo**No***No***No* <t< td=""><td>••••••</td><td></td><td></td><td></td><td>• • • • • • • • • • • • • • • • • • • •</td><td></td></t<>	••••••				• • • • • • • • • • • • • • • • • • • •	
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California****Colorado****Colorado****IdahoNo***MontanaYesYesYesYesNevadaNo***New MexicoNo***Oregon****WashingtonNo***WostingtonNo***West Total1 of 81 of 81 of 81 of 8ULS. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***ManitobaYesYesYesYesNova ScotiaNo***OuebecNo***SaskatchewanNo***Canada Total1 of 61 of 61 of 6	• •					
Colorado       *       *       *       *         Idaho       No       *       *       *         Montana       Yes       Yes       Yes         Nevada       No       *       *       *         Nevada       No       *       *       *         Nevada       No       *       *       *         New Mexico       No       *       *       *         Oregon       *       *       *       *         Utah       No       *       *       *         Washington       No       *       *       *         Wooming       No       *       *       *         West Total       1 of 8       1 of 8       1 of 8       1 of 8         Jberta       No       *       *       *         Amitoba       Yes       Yes       Yes       Yes         New Brunswick       No       *       *       *         Ontario       *       *       *       *         Quebec       No       *       *       *         Saskatchewan       No       *       *       *						Montana: Cannot use a drone to locate game animals and hunt
Idaho       No       *       *       *         Montana       Yes       Yes       Yes       Yes         Nevada       No       *       *       *         New Mexico       No       *       *       *         New Mexico       No       *       *       *         Oregon       *       *       *       *         Utah       No       *       *       *         Washington       No       *       *       *         Wyoming       No       *       *       *         West Total       1 of 8       1 of 8       1 of 8       1 of 8         U.S. Total       18 of 45       11 of 45       13 of 45       13 of 45         Alberta       No       *       *       *         British Columbia       *       *       *       *         New Brunswick       No       *       *       *         Nova Scotia       No       *       *       *         Ontario       *       *       *       *         Quebec       No       *       *       *         Saskatchewan       No       *						during the same day.
NoteYesYesYesNevadaNo**New MexicoNo**Oregon***UtahNo**WashingtonNo**WomingNo**West Total1 of 81 of 8U.S. Total18 of 4511 of 45AlbertaNo*British Columbia**YesYesYesNow ScotiaNo*Nova ScotiaNo*Nova ScotiaNo*Ontario**QuebecNo*SaskatchewanNoKona*SaskatchewanNoKona*No*<						
Nevada         No         *         *         *           New Mexico         No         *         *         *           Oregon         *         *         *         *           Utah         No         *         *         *           Washington         No         *         *         *           Wyoming         No         *         *         *           West Total         1 of 8         1 of 8         1 of 8         1 of 8           U.S. Total         18 of 45         11 of 45         13 of 45         13 of 45           Alberta         No         *         *         *           Manitoba         Yes         Yes         Yes           New Brunswick         No         *         *           Nova Scotia         No         *         *           Quebec         No         *         *           Saskatchewan         No         *         *           Canada Total         1 of 6         1 of 6         1 of 6						
New Mexico         No         *         *         *           Oregon         *         *         *         *           Utah         No         *         *         *           Washington         No         *         *         *           Wyoming         No         *         *         *           Wyoting         No         *         *         *           West Total         1 of 8         1 of 8         1 of 8         1 of 8           U.S. Total         18 of 45         11 of 45         13 of 45         13 of 45           Alberta         No         *         *         *           British Columbia         *         *         *           Manitoba         Yes         Yes         Yes           New Brunswick         No         *         *           Nova Scotia         No         *         *           Quebec         No         *         *           Saskatchewan         No         *         *           Saskatchewan         No         *         *						
Oregon****UtahNo***WashingtonNo***WyomingNo***West Total1 of 81 of 81 of 8U.S. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***British Columbia***ManitobaYesYesYesNova ScotiaNo**Ontario***QuebecNo**SaskatchewanNo**Canada Total1 of 61 of 61 of 6			*	*	*	
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WashingtonNo***WyomingNo***West Total1 of 81 of 81 of 81 of 8U.S. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***British Columbia***YesYesYesYesNova ScotiaNo**Nova ScotiaNo**QuebecNo**SaskatchewanNo*No**Canada Total1 of 61 of 6		No	*	*	*	
WyomingNo***West Total1 of 81 of 81 of 81 of 8U.S. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***British Columbia***ManitobaYesYesYesNew BrunswickNo**Nova ScotiaNo**Ontario***QuebecNo**SaskatchewanNo**Canada Total1 of 61 of 61 of 6	Washington		*	*	*	
U.S. Total18 of 4511 of 4513 of 4513 of 45AlbertaNo***British Columbia*******ManitobaYesYesYesNew BrunswickNo**Nova ScotiaNo**Ontario***QuebecNo**SaskatchewanNo**Canada Total1 of 61 of 61 of 6		No			*	
AlbertaNo**British Columbia***WanitobaYesYesYesManitobaYesYesNew BrunswickNo**Nova ScotiaNo**Ontario**QuebecNo**SaskatchewanNo*Nota1 of 61 of 6	West Total	1 of 8	1 of 8	1 of 8	1 of 8	
AlbertaNo**British Columbia***WanitobaYesYesYesManitobaYesYesNew BrunswickNo**Nova ScotiaNo**Ontario**QuebecNo**SaskatchewanNo*Nota1 of 61 of 6						
British Columbia****ManitobaYesYesYesYesNew BrunswickNo***Nova ScotiaNo***Ontario****QuebecNo***SaskatchewanNo***Canada Total1 of 61 of 61 of 6	U.S. Total	18 of 45	11 of 45	13 of 45	13 of 45	
British Columbia****ManitobaYesYesYesYesNew BrunswickNo***Nova ScotiaNo***Ontario****QuebecNo***SaskatchewanNo***Canada Total1 of 61 of 61 of 6	Albarta	Na	*	*	*	
ManitobaYesYesYesNew BrunswickNo**Nova ScotiaNo**Ontario***QuebecNo**SaskatchewanNo**Canada Total1 of 61 of 61 of 6					*	
New BrunswickNo***Nova ScotiaNo***Ontario****QuebecNo***SaskatchewanNo***Canada Total1 of 61 of 61 of 6						
Nova ScotiaNo***Ontario****QuebecNo***SaskatchewanNo***Canada Total1 of 61 of 61 of 6						
Ontario***QuebecNo**SaskatchewanNo**Canada Total1 of 61 of 61 of 6			*	*	*	
Quebec         No         *         *         *           Saskatchewan         No         *         *         *           Canada Total         1 of 6         1 of 6         1 of 6         1 of 6			*	*	*	
Saskatchewan     No     *     *       Canada Total     1 of 6     1 of 6     1 of 6		No	*		*	
Canada Total 1 of 6 1 of 6 1 of 6 1 of 6	Saskatchewan	No				
			1 of 6	1 of 6	1 of 6	

Canada Total \*Data not provided/available

### Trail and Cellular Camera Use on Private and Public Land

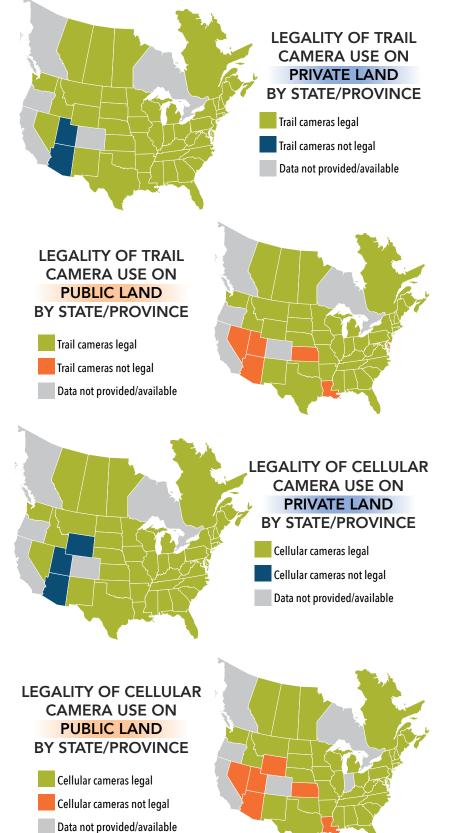
Modern deer hunters are incredibly tech-savvy compared to the past as technology rapidly improves and becomes more user friendly. Some technologies available today have drastically impacted the way many of us scout for hunting opportunities and prepare for deer season. They also, in some cases, challenge the concept of fair chase. Over the last 30 years, 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. The advent of cellular cameras makes it possible to instantly receive pictures in the form of a text or e-mail without having to physically check the memory card. This new technology has the potential to cross ethical boundaries, so we asked state and provincial wildlife agencies if they allow the use of trail cameras during deer season on both public and private land, and if so, are cellular cameras allowed.

Forty three of 45 states (96%) that responded to our survey allow the use of trail cameras during deer season on private land. Arizona and Utah are the only exceptions. Of those states, 42 of 43 (98%) also allow the use of cellular cameras on private land. Wyoming is the only state that allows conventional trail cameras, but not cellular cameras on private land. In Canada, all the provinces that responded allow both trail cameras and cellular cameras on private land.

On public land, 39 of 45 states (87%) allow the use of trail cameras, with Arizona, Delaware, Kansas, Louisiana, Nevada and Utah making up the six states that currently prohibit their use during deer season. Interestingly, 37 of 44 states (84%) allow the use of both conventional and cellular trail cameras on public land. Again, Wyoming is the only state that allows standard trail cameras but not cellular cameras. All the Canadian provinces that responded to our survey allow the use of trail cameras and cellular cameras on public land.

#### **NDA's Recommendations**

The NDA supports ethical, lawful pursuit and harvest of deer in a manner that does not give the hunter an improper or unfair advantage. To our knowledge, there is no evidence trail-camera use threatens these values. While we are not opposed to trail and cellular cameras as hunting, wildlife observation and deer management tools, we do recognize they 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 are science-based and ensure fairchase hunting.



#### LEGALITY OF TRAIL CAMERA USE ON PRIVATE & PUBLIC LAND Private Land Public Land (Any) Trail Cameras **Cellular Cameras** (Any) Trail Cameras State/Province **Cellular Cameras** Alabama Yes Yes Yes Yes Arkansas Yes Yes Yes Yes Florida Yes Yes Yes Yes Georgia Yes Yes Yes Yes Louisiana Yes Yes No No Mississippi Yes Yes Yes Yes North Carolina Yes Yes Yes Yes Yes Oklahoma Yes Yes Yes South Carolina Yes Yes Yes Yes Tennessee Yes Yes Yes Yes Texas Yes Yes Yes Yes Southeast Total 11 of 11 11 of 11 10 of 11 10 of 11 Connecticut Yes Yes Yes Yes Delaware Yes Yes No No Yes Yes Yes Yes Maine Maryland Yes Yes Yes Yes Massachusetts Yes Yes Yes Yes New Hampshire Yesbo Yes<sup>b</sup> Yes Yes New Jersey Yes Yes Yes Yes New York Yes Yes Yes Yes Pennsylvania Yes Yes Yes Yes Rhode Island Yes Yes Yes Yes Yes Vermont Yes Yes Yes Virginia Yes Yes Yes Yes West Virginia Yes Yes Yes Yes **Northeast Total** 13 of 13 13 of 13 12 of 13 12 of 13 Illinois Yes Yes Yes Yes Indiana Yes Yes Yes lowa Yes Yes Yes Yes Kansas Yes No No Yes Kentucky Yes Yes Yes Yes Michigan Yes Yes Yes Yes Minnesota Yes Yes Yes Yes Missouri Yes Yes Yesª Yesª Nebraska Yes Yes Yes Yes North Dakota Yes Yes Yes Yes Ohio Yes Yes Yes Yes South Dakota Yes Yes Yes Yes Wisconsin Yes Yes Yes Yes **Midwest Total** 13 of 13 13 of 13 12 of 13 11 of 12 **3-Region Total** 37 of 37 37 of 37 34 of 37 33 of 36 Arizona No No No No California \* \* \* Colorado \* \* \* \* Yes Idaho Yes Yes Yes Montana Yes Yes Yes Yes Nevada Yes Yes No No New Mexico Yes Yes Yes Yes \* \* Oregon No No No Utaĥ No Washington Yes Yes Yes Yes Wyoming Yes No Yes No West Total 6 of 8 5 of 8 5 of 8 4 of 8 **U.S. Total** 43 of 45 42 of 45 39 of 45 37 of 44 Alberta Yes Yes Yes Yes British Columbia Manitoba Yes Yes Yes Yes New Brunswick Yes Yes Yes Yes Nova Scotia Yes Yes Yes Yes Ontario \* \* Quebec Yes Yes Yes Yes Saskatchewan Yes Yes Yes Yes **Canada Total** 6 of 6 6 of 6 6 of 6 6 of 6

\* Data not provided/available <sup>a</sup>Missori does not allow the use of trail cameras on Department of Conservation property, but they are allowed on other public lands <sup>b</sup>Effective January 1, 2024 - Hunters will be required to have written or verbal landowner permission to place game cameras on private property. State and municipal lands are exempt <sup>c</sup>Cellular cameras may be used but no person shall use a live-action game camera to locate, surveil, or aid or assist in any attempt to locate or surveil any game animal or fur bearing animal, for the purpose of taking or attempting to take said wildlife during the same calendar day and during the open season to take said wildlife.

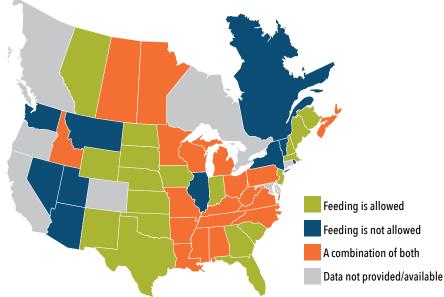
### **Feeding Regulations**

Supplemental feeding is defined as the act of placing quality food resources for the purpose of increasing dietary quality, especially during periods of nutritional stress. For many, the difference between feeding and baiting is whether deer are shot over the food source. If so, then it's baiting; and if not, then it's feeding. To determine its legality, we surveyed state and provincial wildlife agencies and asked if supplemental feeding is currently allowed state- or province-wide. Fortunately, we had similar data from 2011 and 2016 and can provide state-by-state comparisons over time. Please refer to the 2017 Whitetail Report for additional information. In this most recent survey, we also asked if it is permitted in disease areas.

Thirty-three of 42 states (79%) that responded allow the use of supplemental feeding in at least some part of their jurisdiction today. Of those states, 17 of 33 (52%) allow it statewide, and only nine of 31 (29%) allow feeding in disease management zones. In Canada, five of six provinces that responded to our survey permit supplemental feeding and four of the five (80%) allow it in disease management zones.

The map shows where supplemental feeding of deer is legal state- or provincewide, prohibited state- or province-wide, or allowed in some areas of a state or province (combination). According to the responses, feeding is currently allowed in the entire Southeast region (11 of 11 states). In general, it's also allowed in most of the Midwest (12 of 13 states) and Northeast (seven of 10 states), while the West (two of eight states) is the most restricted region. It is important to note that some states have variances on feeding such as not being allowed to feed during the hunting season in South Dakota or on public land in Arkansas.

Since 2016, 11 of 42 states (26%) and three of six provinces (50%) have enacted more conservative restrictions on the legality of supplemental feeding. The Southeast saw the largest difference with five of 11 states (45%) changing their regulations from state-wide to combination, while three Western states (Arizona, Nevada, and Washington) are now prohibiting feeding



SUPPLEMENTAL FEEDING BY STATE/PROVINCE

within their jurisdiction compared to the past. In Canada, Quebec is the only province that allowed feeding in 2016 but does not allow it today.

#### **NDA's Recommendations**

Supplemental feeding can provide additional nutrition for deer, but this management strategy should be viewed as part of an overall management program including herd and habitat management. Supplemental feeding alone will not improve deer health and should not be viewed as a quick-fix solution or as a means to carry a deer herd above what the habitat can support. The NDA supports providing adequate food and cover for deer through habitat management programs. Additionally, the NDA does not support supplemental feeding in known CWD and bovine tuberculosis areas or where this activity may disrupt natural migratory patterns of deer.



## LEGALITY OF SUPPLEMENTAL FEEDING

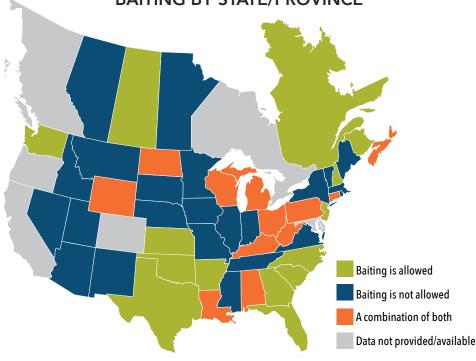
	Supplemental Feeding Legal?	Statewide?	Disease Zones?	Change from 2016?	How has it changed?
labama	Yes	No	No	Yes	Legal to a Combination
ırkansas	Yes	No	No	No	
lorida	Yes	Yes	No	No	
eorgia	Yes	Yes	No	No	
					Level to a Combination
ouisiana	Yes	No	No	Yes	Legal to a Combination
Aississippi	Yes	No	No	Yes	Legal to a Combination
Iorth Carolina	Yes	No	No	Yes	Legal to a Combination
)klahoma	Yes	Yes	Yes	No	Legar to a combination
			*		
outh Carolina	Yes	Yes		Yes	A Combination to Legal
ennessee	Yes	No	No	Yes	Legal to a Combination
exas	Yes	Yes	Yes	No	Logar to a combination
					T I AA MARK CARACTERIN
outheast Total	11 of 11	5 of 11	2 of 10	6 of 11	5 of 11 More Conservative
onnecticut	*	*	*	*	
	*	*	*	*	
elaware					
laine	Yes	Yes	*	No	
laryland	*	*	*	*	
	V	Vee	Na	N	
lassachusetts	Yes	Yes	No	No	
ew Hampshire	Yes	Yes	No	No	
ew Jersey	Yes	Yes	No	No	
		*	*		
ew York	No			No	
ennsylvania	Yes	No	No	Yes	Legal to a Combination
hode Island	No	*	*	No	
		*	*		
ermont	No			No	
irginia	Yes	No	No	No	
Vest Virginia	Yes	No	No	No	
ortheast Total	7 of 10	4 of 7	0 of 6	1 of 10	1 of 10 More Conservative
ivitileast IUtal	7 01 10	-+ UI /	0010	10110	
inois	No	*	*	No	
		V	Nia		
ndiana	Yes	Yes	No	No	
owa	Yes	Yes	Yes	No	
ansas	Yes	Yes	Yes	No	
		No	No	-	Logal to a Combination
entucky	Yes			Yes	Legal to a Combination
lichigan	Yes	No	No	No	
linnesota	Yes	No	No	No	
			No		
lissouri	Yes	No		No	
lebraska	Yes	Yes	Yes	No	
Iorth Dakota	Yes	Yes	Yes	No	
hio		No	No		Level to a Combination
	Yes			Yes	Legal to a Combination
outh Dakota	Yes	Yes	Yes	No	
/isconsin	Yes	No	No	No	
lidwest Total	12 of 13	6 of 12	5 of 12	2 of 13	2 of 13 More Conservative
nuwest iotai	12 01 13	0 01 12	5 01 12	2 01 15	2 Of 15 More Conservative
-Region Total	30 of 34	15 of 30	7 of 28	9 of 34	8 of 34 More Conservative
	N	*	*		
rizona alifornia	No *	*	*	No *	
alifornia					
olorado	*	*	*	*	
laho	Yes	No	No	No	
lontana		*	*	No	
	No				
evada	No	*	*	Yes	A Combination to Not Legal
ew Mexico	Yes	Yes	Yes	No	Ŭ
	*	*	*	*	
regon		*	*		I II NI II I
taĥ	No			Yes	Legal to Not Legal
/ashington	No	*	*	Yes	Legal to Not Legal
/yoming	Yes	Yes	Yes	No	
					2 of 0 Mars Courses
lest Total	3 of 8	2 of 3	2 of 3	3 of 8	3 of 8 More Conservative
.S. Total	33 of 42	17 of 33	9 of 31	12 of 42	11 of 42 More Conservative
	Va-		Vec		
lberta	Yes *	Yes *	Yes *	Yes *	A Combination to Province-wide
ritish Columbia					
lanitoba	Yes	No	No	No	
ew Brunswick	Yes	Yes	Yes	No	
					Level to a Combinett
ova Scotia	Yes	No	Yes	Yes	Legal to a Combination
ntario	*	*	*	*	
uebec	No	*	*	Yes	Legal to Not Legal
askatchewan	Yes	No	Yes	Yes	Legal to a Combination
in a she Takal	5 of 6	2 of 5	4 of 5	4 of 6	3 of 6 More Conservative
Canada Total Data not provide	0 01 0				

#### **Baiting Regulations**



Baiting is defined as the placement of food, minerals, or attractants to concentrate deer for the purpose of hunting, trapping or viewing. To determine its legality, similar to supplemental feeding, we surveyed state and provincial wildlife agencies and asked if baiting is currently allowed state- or province-wide, and if so, if it's permitted in disease areas. We also have data from 2011 and 2016 and can provide state-bystate comparisons over time. Please refer to the 2017 *Whitetail Report* for additional information.

Twenty-two of 43 states (51%) that responded to our survey allow the use of baiting in at least some part of their juris-



permit it statewide and seven of 19 (37%) allow baiting in disease management zones. In Canada, four of six provinces (67%) allow the use of baiting in at least some part of their jurisdiction; of those, three of four (75%) permit it in disease management zones.

diction. Of those states, 11 of 22 (50%)

In general, baiting is allowed in most of the Southeast. However, while it is technically illegal to hunt over bait in Mississippi, it is allowed to occur with certain restrictions; thus, Tennessee is the only state in this region to completely prohibit it. Conversely, the majority of states in the Northeast, Midwest, and West regions all prohibit baiting either statewide or in a portion of the state. Some of these states have never allowed baiting, while others (Michigan and Wisconsin) historically allowed it but now prohibit its use in some areas due to CWD or bovine tuberculosis concerns.

Since 2016, five of 43 states (12%) and two of six provinces (33%) have enacted more conservative restrictions on the legality of baiting. The West saw the largest change, with three of eight states (38%) enacting more prohibitive use of baiting within the past seven years. Conversely, baiting was prohibited in Alabama in 2016 but is now allowed today in some conditions. Three states (Georgia, South Carolina, and Kansas) have made baiting more accessible to hunters, changing from a combination assignment to statewide.

#### **NDA's Recommendations**

Baiting is a hot issue for many hunters and wildlife agencies. You can argue the ethics of baiting, but we believe the future of baiting will be increasingly decided by political desires and actual disease outbreaks rather than recommendations from wildlife professionals. The NDA opposes the expansion of baiting where not currently legal. The NDA will not work to repeal baiting where currently legal, except where CWD (or other known diseases) is present. The NDA supports the use of baiting by wildlife professionals conducting scientific research, and supports continued research on the effects on baiting in deer management programs.

#### BAITING BY STATE/PROVINCE

		I	LEGALIT	Y OF BAITIN	NG
State/Province	Baiting Legal?	Statewide?	Disease Zones?	Change from 2016?	How has it changed?
Alabama	Yes	No	No	Yes	Went from Not Legal to a Combination
Arkansas	Yes	Yes	Yes	No	
Florida	Yes	Yes	No	No	
Georgia	Yes	Yes	Yes	Yes	A Combination to Legal
Louisiana	Yes	No	No	Yes	Legal to a Combination
Mississippi	No	*	*	No	
North Carolina	Yes	Yes	Yes	No	
Oklahoma	Yes	Yes	Yes	No	
South Carolina	Yes	Yes	*	Yes	A Combination to Legal
Tennessee	No	*	*	No	
Texas	Yes	Yes	Yes	No	
Southeast Total	9 of 11	7 of 9	5 of 8	4 of 11	1 of 11 More Conservative
••••••			· · · · · · · · · · · · · · · · · · ·		•••••••••••••••••••••••••••••••••••••••
Connecticut	Yes	No	*	No	
Delaware	*	*	*	*	
Maine	No	*	*	No *	
Maryland	*		*		
Massachusetts	No	*	*	No	
New Hampshire	Yes	Yes	No	No	
New Jersey	Yes	Yes	No	No	
New York	No	*	*	No	
Pennsylvania	Yes	No *	No *	No	
Rhode Island	No	*	*	No	
Vermont	No	*	*	No	
Virginia	No			No	
West Virginia	Yes	No	No	No No	0 of 11 More Conservative
Northeast Total	5 of 11	2 of 5	0 of 4	0 of 11	o of 11 more conservative
	Ne	*	*	No	• • • • • • • • • • • • • • • • • • • •
Illinois	No	*	*	No No	
Indiana	No	*	*	No	
lowa	No		Yes	Yes	A Combination to Legal
Kansas	Yes	Yes	No	No	A Combination to Legal
Kentucky	Yes	No No	No	No	
Michigan	Yes No	N0 *	N0 *	No	
Minnesota Missouri	No	*	*	No	
Nebraska	No	*	*	No	
North Dakota	Yes	No	No	No	
Ohio	Yes	No	No	Yes	Legal to a Combination
South Dakota	No	*	*	No	Legal to a combination
Wisconsin	Yes	No	No	No	
Midwest Total	6 of 13	1 of 6	1 of 6	2 of 13	1 of 13 More Conservative
WIGWESTICIAI	0 01 13	1010	1010	2 01 13	
3-Region Total	20 of 35	10 of 20	6 of 18	6 of 35	2 of 35 More Conservative
		10 01 20		0 01 00	
Arizona	No	*	*	No	
California	*	*	*	*	
Colorado	*	*	*	*	
Idaho	No	*	*	No	
Montana	No	*	*	No	
Nevada	No	*	*	Yes	A Combination to Not Legal
New Mexico	No	*	*	No	5
Oregon	*	*	*	*	
Utah	No	*	*	Yes	Legal to Not Legal
Washington	Yes	Yes	*	No	
Wyoming	Yes	No	Yes	Yes	Legal to a Combination
West Total	2 of 8	1 of 2	1 of 1	3 of 8	3 of 8 More Conservative
••••••••••••••••••		• • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •		
U.S. Total	22 of 43	11 of 22	7 of 19	9 of 43	5 of 43 More Conservative
••••••••••••••••••••••••••••••••••••••		*	*	Nia	
Alberta	No *	*	*	No *	
British Columbia		*	*		
Manitoba	No			No	
New Brunswick	Yes	Yes	Yes	No	Logal to a Combination
Nova Scotia	Yes *	No *	Yes *	Yes *	Legal to a Combination
Ontario		Yes	No	No	
Quebec Saskatchewan	Yes Yes	Yes	Yes	Yes	Legal to a Combination
Saskatchewan Canada Total	4 of 6	3 of 4	3 of 4	2 of 6	2 of 6 More Conservative
*Data not provided/av		3014	5017	2010	

\*Data not provided/available

#### Agency Support of Non-lead Ammunition for Big Game Hunting



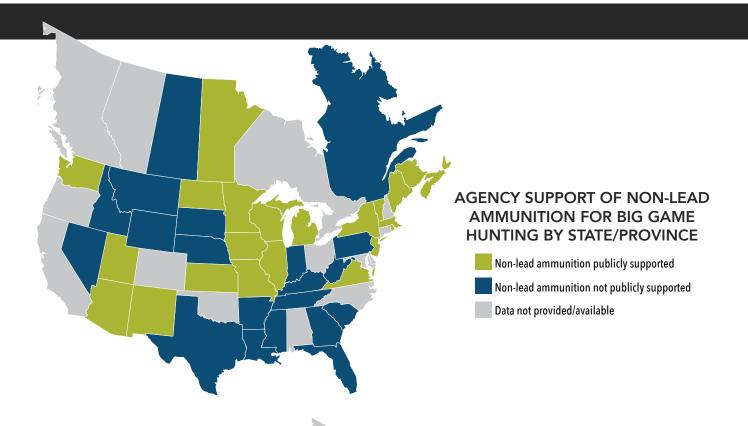
Over the last two decades there have been growing concerns about the dangers of lead ammunition to human health, wildlife, and the environment. The popularity of lead alternatives such as steel, copper, bismuth, and tungsten are rapidly increasing as they continually prove to be as effective as lead, but without the potential threat of toxicity to humans, scavengers, waterfowl, gamebirds, soil, and water. Lead ammunition has long been banned for waterfowl hunting in North America, and similar proposals specific to big game hunting have been brought forward in recent years. To better understand the issue and the future outlook of lead alternatives in deer hunting, we asked state and provincial wildlife agencies if they publicly support using non-lead ammunition for big game hunting, as well as if they promote alternatives through an educational campaign.

Of the 38 states that responded to our survey, 19 states (50%) publicly support the use of non-lead ammunition for big game hunting. The Northeast led the way with seven of nine responding states (78%) publicly supporting non-lead ammo, with the Midwest closely behind with eight of 13 states (62%) showing support. In the West, four of eight states (50%) support non-lead ammo while surprisingly no states in the Southeast publicly support its use for big game hunting. In Canada, three of five provinces (60%) that responded to our survey publicly support the use of non-lead ammo.

We also asked if the agency has an educational campaign for using non-lead ammunition for big game hunting. A mere seven of 39 states (18%) that responded have an educational campaign promoting the use of non-lead ammo for big game hunting. The West and Northeast regions top the charts with three of eight (38%) and three of nine (33%) states, respectively offering educational campaigns, while no states in the Southeast have such resources. Indiana is the only state in the Midwest and Nova Scotia is the only Canadian province that has an educational campaign for using non-lead ammo for big game hunting.

<b>State/Province</b> Alabama	Publicly Supports	Offers Educational Campaign
Arkansas	No	No
Florida	No	No
Georgia	No	No
Louisiana	No	No
Mississippi	No	No
North Carolina	*	*
Oklahoma	*	No
South Carolina	No	No
	No	No
Tennessee		
Texas	No	No
Southeast Total	0 of 8	0 of 9
Connecticut	*	*
Delaware	*	*
Maine	Yes	Yes
Maryland	*	*
Massachusetts	Yes	No
New Hampshire	*	*
		N
New Jersey	Yes	No
New York	Yes	Yes
Pennsylvania	No	No
Rhode Island	Yes	No
Vermont	Yes	Yes
Virginia	Yes	No
West Virginia		
West Virginia	No	No
Northeast Total	7 of 9	3 of 9
Illinois	Yes	No
Indiana	No	Yes
lowa		
	Yes	No
Kansas	Yes	No
Kentucky	No	No
Michigan	Yes	No
Minnesota	Yesª	No
Missouri	Yes	No
Nebraska	No	No
North Dakota	Yes	No
Ohio	No	No
South Dakota	No	No
Wisconsin	Yes	No
Midwest Total	8 of 13	1 of 13
3-Region Total	15 of 30	4 of 31
Arizona	Yes	Yes
California	*	*
Colorado	*	*
Idaho	No	No
Montana	No	No
Nevada	No	No
New Mexico	Yes	No
Oregon	*	*
Utah	Yes	Yes
Washington	Yes	Yes
Wyoming West Total	No <mark>4 of 8</mark>	No <b>3 of 8</b>
U.S. Total	19 of 38	7 of 39
Alberta	*	*
	*	*
British Columbia		
Manitoba	Yes	No
New Brunswick	Yes	No
Nova Scotia	Yes	Yes
Ontario	*	*
Quebec	No	No
Saskatchewan	No	No
Canada Total	3 of 5	1 of 5
		eer hunts on State Parks and all deer hunt-

\*Data not provided/available <sup>a</sup>It is required for special deer hunts on State Parks and all deer hunting on Scientific and Natural Areas.

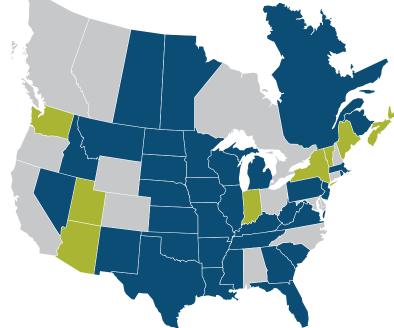


#### EDUCATION CAMPAIGN FOR USING NON-LEAD AMMUNITION FOR BIG GAME HUNTING BY STATE/PROVINCE

Education campaign



Data not provided/available



#### **NDA's Recommendations**

While environmental concerns surrounding lead ammunition and tackle should be considered and monitored, the NDA believes that current science on these subjects does not warrant a full ban on the use of lead ammunition while big-game hunting in the vast majority of cases. In fact, an outright ban is neither logical nor feasible. Rather, the NDA believes that any transition from lead to non-lead ammunition for hunting should be voluntary and incentive based. We believe resources would be better spent educating hunters and shooters about non-lead alternatives, the efficacy and availability of non-lead ammunition and providing incentives for hunters and shooters to switch from lead to non-lead ammunition.

#### "Learn to Hunt" and Adult Mentored Hunting 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 the National R3 (Recruitment, Retention and Reactivation) Plan was initiated by the Council to Advance Hunting and the Shooting Sports (CAHSS).

Though R3 programs abound, they have achieved 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, multipronged marketing and outreach efforts are needed, and those efforts should focus more on nontraditional user groups, especially adults with non-hunting backgrounds.

To gain a better understanding of these opportunities available today, we surveyed state and provincial wildlife agencies and asked whether they currently offered any formal "learn to hunt" programs or, more specifically, an adult mentored hunting program for engaging new, non-traditional audiences for deer hunting.

#### "Learn to Hunt" Program

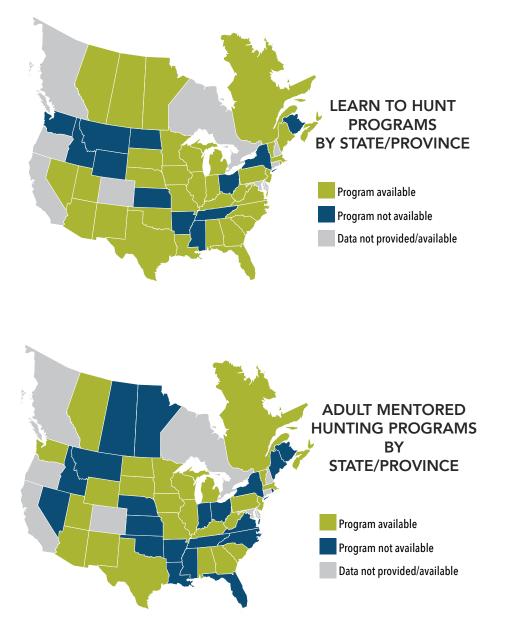
Thirty of 41 states (73%) have "learn to hunt" programs, some of which are geared for non-traditional audiences. These include programs that teach participants to shoot, hunt and cook wild game. There are several aimed at getting more women in the outdoors and others that offer apprentice hunting licenses for individuals interested in trying to hunt for the first time. According to wildlife agency responses, eight of 11 states (73%) in the Southeast, eight of nine states (89%) in the Northeast, 10 of 13 states (77%) in the Midwest and four of eight (50%) in the West have a formal "learn to hunt" program in place. In Canada, five of six provinces reported having a formal "learn to hunt" program.

#### **Adult Mentored Hunting Program**

Only about half of the states that responded to our survey (23 of 41, 56%) and three of six (50%) Canadian provinces offer an adult mentored hunting program. The Midwest leads all regions with nine of 13 states (69%) specifically targeting adults in their R3 efforts, followed closely by the Northeast (eight of 12, 67%) and the West (five of eight, 63%). The Southeast has few states participating with only four of 11 (36%) providing adult mentored hunting programs. In Canada, only half of the reporting provinces (three of six) have an adult mentored hunting program.

#### **NDA's Recommendations**

Although we're pleased to see these new hunter programs exist in every region in the United States and Canada, there is room for improvement for both "learn to hunt" and adult mentored hunting programs. We encourage all state and provincial agencies that currently do not offer these programs which specifically targets non-traditional audiences (urban/suburban, locavores, adults from non-hunting backgrounds, women, and minorities) to make them available in the future.



	NEW HUNTER PROGRAMS
	Does your agency offer a Formal Learn to Hunt Educational Program or have an Adult Mentored Hunt Program?
	Alabama: www.outdooralabama.com/hunting/adult-mentored-hunting-program
	Florida: www.myfwc.com/education/programs/youth-hunting-program
	Georgia: www.georgiawildlife.com/LearntoHuntFish
	Louisiana: www.wlf.louisiana.gov/page/hunter-and-trapper-education
	North Carolina: No link provided
	Oklahoma: www.youtube.com/watch?v=kbhsPEgK6iw&list=PLPdKLnhMDmy4-37IrsIrQhH0z8nTOaWc3&pp=iAQB
	South Carolina: www.dnr.sc.gov/education/tomo/index.html
	Texas: https://tpwd.texas.gov/huntwild/hunt/public/mentored_hunting_workshops/
	Southeast Total: Learn to Hunt Educational Program 8 of 11, Adult Mentored Hunt Program 4 of 11
	Maine: www.maine.gov/ifw/programs-resources/educational-programs/outdoor-programs/next-step-hunting-programs.html
	Massachusetts: www.mass.gov/learntohunt and www.mass.gov/info-details/becoming-an-outdoors-woman-bow
	New Jersey: www.dep.nj.gov/njfw/hunting/r3-program/
	Pennsylvania: https://www.pgc.pa.gov/InformationResources/GetInvolved/GetStartedHunting/Pages/default.aspx
	Rhode Island: www.dem.ri.gov/natural-resources-bureau/fish-wildlife/outreach-education/hunter-education/about-person-testing
	Vermont: https://register-ed.com/programs/vermont/133-vermont-fish-and-wildlife-seminars
	Virginia: www.dwr.virginia.gov/hunting/help-for-new-hunters/
	West Virginia: https://wvdnr.gov/programs-publications/hunter-education/. Persons who wish to try hunting and/or trapping without taking a hunter education course may buy an Apprentice or Apprentice Junior Hunting License at any license agent or online at the link above.
	Northeast Total: Learn to Hunt Educational Program 8 of 9, Adult Mentored Hunt Program 5 of 9
	Illinois: www.publish.illinois.edu/hunttrapillinois/
	Indiana: www.in.gov/dnr/fish-and-wildlife/education-programs/learn-to-hunt-trap-and-shoot/
	lowa: www.iowadnr.gov/About-DNR/DNR-News-Releases/ArticleID/4488/Learn-to-Hunt-program-opens-registration-for-Field-To-Fork-Deer-Hunting-Program and https://www.iowadnr.gov/ Hunting/Hunter-Education/Learn-to-Hunt
	Kentucky: www.fw.ky.gov/Education/Pages/Learn-to-Hunt-Deer.aspx and www.fw.ky.gov/Education/Pages/FieldtoFork.aspx
	Michigan: www.michigan.gov/dnr/things-to-do/hunting/learn-hunt and www.michigan.gov/dnr/education/public/outdoor-skills-academy-events#g=42.7065344 -84.3743232
	Minnesota: www.dnr.state.mn.us/gohunting/index.html
	Missouri: www.mdc.mo.gov/hunting-trapping/events and www.mdc.mo.gov/hunting-trapping/hunter-education/apprentice-hunter-program
	Nebraska: www.outdoornebraska.gov/hunt/learn-to-hunt/
	South Dakota: https://gfp.sd.gov/hunter-education/
	Wisconsin: https://dnr.wisconsin.gov/Education/OutdoorSkills/Ith
	Midwest Total: Learn to Hunt Educational Program 10 of 12, Adult Mentored Hunt Program 9 of 12
-	3-Region Total: Learn to Hunt Educational Program 26 of 32,Adult Mentored Hunt Program 18 of 32
	Arizona: https://www.azgfd.com
	Nevada: No links provided. New Mexico: No links provided.
	Utah: www.wildlife.utah.gov/hunting/hunter-education.html and www.wildlife.utah.gov/mentoring.html
	Washington: www.wdfw.wa.gov/hunting/requirements/hunting-clinics
	Wyoming: https://wgfd.wyo.gov/WGFD/media/content/PDF/Hunting/Hunter-Mentor-Program-Step-by-step-(1).pdf
	WestTotal: Learn to Hunt Educational Program 4 of 8,Adult Mentored Hunt Program 5 of 8
	U.S. Total: Learn to Hunt Educational Program 30 of 40, Adult Mentored Hunt Program 23 of 40
	Alberta: www.huntingfortomorrow.ca/mentorship#:~:text=The%20'Outdoor%20Bound'%20Mentorship%20Program,and%20ethics%20from%20experienced%20adults
	Manitoba: www.huntercourse.com/canada/manitoba/?gclid=EAlalQobChMI7Pap6sq8gQMVSCGzAB3rwgl-EAAYASAAEglvTPD_BwE
	Nova Scotia: https://novascotia.ca/natr/hunt/education.asp
	Quebec: www.fedecp.com/media/7616/icaf-en-28-10-2020.pdf and www.quebec.ca/en/tourism-and-recreation/sporting-and-outdoor-activities/sport-hunting/deer-hunting-introductory
	Saskatchewan: www.huntercourse.com/canada/saskatchewan/?msclkid=823a6f402ee9166a3c940a55e24a8386
	Canada Total: Learn to Hunt Educational Program 5 of 6, Adult Mentored Hunt Program 3 of 6
Lea	arn to Hunt Educational Program — Adult Mentored Hunt Program Information not provided/available for states and provinces not listed

#### Habitat Enhancement Efforts

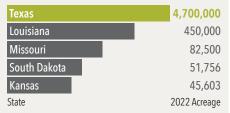


Habitat is defined as a collection of resources within adequate space required to support a particular wildlife species. Ensuring that deer and other wildlife have access to food, water and cover is a crucial component of any wildlife management program. Most state and provincial wildlife agencies actively manage and improve habitat to make sure there is an abundance of resources for both game and non-game species. To better understand their habitat management efforts, we asked state and provincial wildlife agencies if they have an estimate of the annual habitat enhancement efforts on private and public lands, and if so, what is the total acreage of those efforts. We also asked if they could provide a breakdown of habitat enhancement efforts into four categories: food plots, forest/timber stand improvement, old-field/ early successional vegetation/grasslands, and "other."

On private lands, only 10 of 41 states (24%) that responded to our survey track these efforts. Combined, these 10 states enhance 5,365,792 acres of wildlife habitat annually, providing a minimum national estimate of privately-owned habitat improvement. More agencies in the Midwest keep these records (five of 13; 38%) than any other region, followed by the Southeast (three of 11; 27%). Virginia and West Virginia are the only states in the Northeast that track it, and no state in the West records habitat enhancement efforts on private lands. Kudos to Kansas and South Dakota for being the only states that break down the total acreage of habitat

# **TOP STATES:**

Highest Number of Acres of Private Land Habitat Enhancement in the 2022 Season



#### Highest Number of Acres of Public Land Habitat Enhancement in the 2022 Season

Missouri	285,000
Florida	237,139
Louisiana	150,000
Oklahoma	146,460
Iowa	100,000
State	2022 Acreage

enhancement efforts across all four categories. It can be difficult for wildlife agencies to keep accurate records on habitat projects conducted on private lands outside of costshare initiatives and deer management assistance programs (DMAP).

On public lands, 17 of 47 states (36%) keep track of their habitat enhancement efforts. The Southeast leads all regions with seven of 11 states (64%) keeping records, followed by the Midwest (five of 11; 45%) and the Northeast (three of nine; 33%). Montana and Nevada are the only states in the West that record this data for public land. Much credit is due to the six states (see table) that track habitat enhancement efforts on public lands across all categories. Also, kudos to Iowa, Louisiana, Missouri, South Dakota, Tennessee, and West Virginia for tracking both private and public land wildlife habitat enhancement efforts. In all, the 17 states that provided estimates are responsible for the improvement of at least 1,431,591 acres of wildlife habitat on public lands throughout the United States. Monitoring habitat enhancement efforts on public land is often more realistic for wildlife agencies than on private lands as they are the primary entity

prescribing and implementing natural resource management projects.

It is important to note that agencies reporting no annual estimate of wildlife habitat improvement on private or public land does not mean extensive work isn't being conducted in these jurisdictions. Many agencies perform the work under a specific wildlife program that is easily tracked, such as federal grants through the Wildlife Restoration Act, State Wildlife Grants, and technical assistance or cost share initiatives, whereas others do so through other means. Also, many habitat projects are landscape dependent; for example, Oklahoma invests more heavily on early succession/grassland management, while a state like Louisiana will have more extensive forest management efforts.

#### **NDA's Recommendations**

We encourage all hunters, landowners, and managers to familiarize themselves with the habitat composition of their state/province and the programs offered by their agency. The NDA also encourages all state and provincial wildlife agencies to do their best to track habitat enhancement projects on both private and public lands on an annual basis and highlight these efforts to the general public.

Pages 46-47: See how they compare! Private vs. Public Lands Habitat Enhancement



#### PRIVATE LANDS HABITAT ENHANCEMENT

	PRIVATE LANDS HADITAT ENHANCEMENT						
	All Acreage Combined			Acreage by Land Use Category			
<b>State/Province</b> Alabama	Estimate of Annual Habitat Enhancement No	Total Acreage	Food Plots	Forest/Timber Stand Improvement	Old-Field/Early Successional Vegetation/ Grassland	Other *	
Arkansas	No	*	*	*	*	*	
Florida	No	*	*	*	*	*	
Georgia	No	*	*	*	*	*	
Louisiana	Yes	450,000	*	437,000	*	13,000	
Mississippi	No	*	*	*	*	*	
North Carolina	Yes	*	*	*	*	*	
Oklahoma	No	*	*	*	*	*	
South Carolina	No	*	*	*	*	*	
Tennessee	Yes	3,972	*	*	*	*	
Texas Southeast Total	Yes 3 of 11	4,700,000	*	437,000	*	13,000	
Southeast lotal	3 01 1 1	5,153,972		437,000		13,000	
Connecticut	*	*	*	*	*	*	
Delaware	*	*	*	*	*	*	
Maine	No	*	*	*	*	*	
Maryland	*	*	*	*	*	*	
Massachusetts	No	*	*	*	*	*	
New Hampshire	*	*	*	*	*	*	
New Jersey	No	*	*	*	*	*	
New York	No No	*	*	*	*	*	
Pennsylvania Rhode Island	No	*	*	*	*	*	
Vermont	No	*	*	*	*	*	
Virginia	Yes	13,200	*	*	*	*	
West Virginia	Yes	1,761	0	1,227	534	*	
Northeast Total	2 of 9	14,961	0	1,227	534	*	
•••••	•••••		• • • • • • • • • • • • • • • • • • • •		•••••••••••••••••••••••••••••••••••••••		
Illinois	No	*	*	*	*	*	
Indiana	No	*	*	*	*	*	
lowa	Yes	11,000	5,009	584	29,738	10,855	
Kansas	Yes No	45,603	5,009	584 *	29,738 *	10,855	
Kentucky Michigan	No	*	*	*	*	*	
Minnesota	No	*	*	*	*	*	
Missouri	Yes	82,500	*	27,500	11,000	*	
Nebraska	No	*	*	*	*	*	
North Dakota	No	*	*	*	*	*	
Ohio	Yes	6,000	*	*	*	*	
South Dakota	Yes	51,756	11,389	109	40,241	17	
Wisconsin	No	*	1( 200	*	*	*	
Midwest Total	5 of 13	196,859	16,398	28,193	80,979	10,872	
3-Region Total	10 of 33	5,365,792	16,398	466,420	81,513	23,872	
Arizona	No	*	*	*	*	*	
California	*	*	*	*	*	*	
Colorado	*	*	*	*	*	*	
Idaho	No	*	*	*	*	*	
Montana Nevada	No No	*	*	*	*	*	
Nevada New Mexico	No	*	*	*	*	*	
Oregon	*	*	*	*	*	*	
Utah	No	*	*	*	*	*	
Washington	No	*	*	*	*	*	
Wyoming	No	*	*	*	*	*	
West Total	0 of 8	*	*	*	*	*	
U.S. Total	10 of 41	5,365,792	16,398	466,420	81,513	23,872	
Alberta	*	*	*	*	*	*	
British Columbia	*	*	*	*	*	*	
Manitoba	No	*	*	*	*	*	
New Brunswick	No	*	*	*	*	*	
Nova Scotia	No	*	*	*	*	*	
Ontario	*	*	*	*	*	*	
Quebec	No	*	*	*	*	*	
Saskatchewan	No	*	*	*	*	*	
Canada Total	0 of 5						

\*Data not provided/available

## PUBLIC LANDS HABITAT ENHANCEMENT

	All Acreage	Combined		Acreage by Land Use Category			
		Combined		Old-Field/Early			
<b>State/Province</b> Alabama	Estimate of Annual Habitat Enhancement No	Total Acreage	Food Plots	Forest/Timber Stand Improvement	Successional Vegetation/ Grassland	Other	
Arkansas	No	*	*	*	*	*	
Florida	Yes	237,139	3,332	233,594	213	*	
Georgia	Yes	94,127	1,770	10,000	777	140,000	
Louisiana Mississippi	Yes No	150,000	*	10,000	*	140,000	
North Carolina	Yes	*	*	*	*	*	
Oklahoma	Yes	146,460	5,100	8,360	133,000	*	
South Carolina	Yes	25,000	*	*	*	*	
Tennessee	Yes	56,281	*	*	*	*	
Texas Southeast Total	No <mark>7 of</mark> 11	709,007	10,202	251,954	133,990	140,000	
Connecticut	*	*	*	*	*	*	
Delaware Maine	No	*	*	*	*	*	
Maryland	*	*	*	*	*	*	
Massachusetts	No	*	*	*	*	*	
New Hampshire	*	*	*	*	*	*	
New Jersey	Yes	* 4 250	*		5,300	*	
New York Pennsylvania	Yes No	6,250 *	*	450 *	5,500	500 *	
Rhode Island	No	*	*	*	*	*	
Vermont	No	*	*	*	*	*	
Virginia	No	*	*	*	*	*	
West Virginia Northeast Total	Yes 3 of 9	5,777 <b>12,027</b>	800 800	0 <b>450</b>	2,760 <mark>8,060</mark>	2,217 <mark>2,717</mark>	
			• • • • • • • • • • • • • • • • • • • •				
Illinois	No	*	*	*	*	*	
Indiana Iowa	No Yes	100,000	36,000	2,500	40,000	21,500	
Kansas	No	*	*	*	*	*	
Kentucky	No	*	*	*	*	*	
Michigan	*	*	*	*	*	*	
Minnesota	Yes	88,592	1,701	4,776	56,095	26,020	
Missouri Nebraska	Yes No	285,000	80,000 *	20,000	25,000	160,000	
North Dakota	No	*	*	*	*	*	
Ohio	*	*	*	*	*	*	
South Dakota	Yes	18,965	4,500	70	13,400	995	
Wisconsin	Yes	98,000	19	15,085	30,000	53,000	
Midwest Total	5 of 11	590,557	122,220	42,431	164,495	261,515	
3-Region Total	15 of 39	1,311,591	133,222	294,835	306,545	404,232	
Arizona	No	*	*	*	*	*	
California	*	*	*	*	*	*	
Colorado Idaho	No	*	*	*	*	*	
Montana	Yes	40,000	*	5,959	*	34,000	
Nevada	Yes	80,000	*	25	75	*	
New Mexico	No	*	*	*	*	*	
Oregon	*	*	*	*	*	*	
Utaĥ Washington	No No	*	*	*	*	*	
Wyoming	No	*	*	*	*	*	
West Total	2 of 8	120,000	*	5,984	75	34,000	
U.S. Total	17 of 47	1,431,591	133,222	300,819	306,620	438,232	
Alberta	*	*	*	*	*	*	
British Columbia	*	*	*	*	*	*	
Manitoba	No	*	*	*	*	*	
	No						
New Brunswick	No No	*	*	*	*	*	
New Brunswick Nova Scotia	No No *		*	*	*	*	
New Brunswick Nova Scotia Ontario Quebec	No * No	* * *	* * *	* *	*	* * *	
New Brunswick Nova Scotia Ontario	No *		* * * *	* * * *	* * * *	* * * *	





Although NDA's annual *Deer Report* focuses heavily on North America's favorite game animal, the white-tailed deer (*Odocoileus virginianus*), the National Deer Association advocates for all wild deer, so this chapter is dedicated to a few other influential deer species and sub-species found in North America including mule deer, black-tailed deer, Coues deer, Columbian white-tailed deer, and Key deer.

# MULE DEER (Odocoileus hemionus)

Mule deer are another popular game species in North America and are considered the "youngest" deer species having only been around in their current form for about 10,000 years, compared to the whitetails nearly 4-million-year tenure. Mule deer are closely related to whitetails but differ in appearance, behavior, and geographical distribution. Mule deer are typically a bit larger than whitetails, averaging upwards of 200 pounds for mature bucks and 150 pounds for adult does, while whitetails average 150 and 100 pounds, respectively.

One of the most distinguishing differences is the mule deer's thin, rope-like black-tipped tail as opposed to the famous bushy white tail of their closely related cousins. Rather than running or galloping, "Muleys" commonly display what is known as stotting; the act of springing into the air with all four feet coming down together. Their larger antlers fork above the main beam whereas whitetails tines grow parallel from the main beam.

**Range:** Although parts of their ranges overlap and both are native to North America, mule deer are found exclusively in the western half of the United States while whitetails can be found just about everywhere on the continent. Mule deer also tend to have much larger home ranges than whitetails. This is due to most mule deer living in places that are exposed to extreme weather conditions, particularly deep snow, requiring them to migrate in search of food.

Status: Overall, mule deer are abundant and classified as a species of least concern; meaning their numbers are sufficient in the wild. In fact, they are managed through hunting in many places. According to the Mule Deer Working Group, half of the member agencies in the Western Association of Fish and Wildlife Agencies report stable or increasing mule deer populations. However, due to summer droughts and harsh winters over the last three years, the number of jurisdictions with decreasing mule deer populations has jumped from five to 12, including popular mule deer hunting destinations such as Colorado and North Dakota. Despite the recent dip in some areas, the range-wide population is doing well overall. With Secretarial Order 3362 entering its sixth year of implementation, funding for research projects, data analysis, mapping assistance and habitat-related projects has surpassed \$30 million

establishing a solid foundation necessary to improve big game winter range and migration corridor habitat.

For more in-depth information on mule deer, see page 52 of this report.

#### **BLACK-TAILED DEER** (Odocoileus hemionus columbianus) (Odocoileus hemionus sitkensis)

Once considered its own species, Black-tailed deer are now classified as a sub-species of mule deer. There are two groups of blacktails, Columbian and Sitka.

Although similar in appearance to common mule deer, there are a few noticeable differences that set them apart. The blacktail receives its name from, you guessed it, a black tail that expresses that coloration throughout, whereas mule deer tails only have a black tip. Antler shape is very similar to mule deer, but black-tailed deer tend to have much smaller racks and body size. Adult blacktail bucks average up to 140 pounds, while adult does average around 90 pounds, so more comparable in size to whitetails.

Range: Columbian black-tailed deer can be found in northern California, western Oregon, and Washington. Columbian blacktail and Sitka populations begin to overlap in British Columbia with the Sitka in the north and the Columbian in the south. Black-tailed deer have also been introduced to Hawaii and offer hunting opportunities on the island of Kauai.

Status: According to the Mule Deer Working Group, black-tailed deer populations have been recovering to various degrees over the last decade or so and are considered a keystone species in the native California ecosystem. In general, habitat loss due to human encroachment and development as well as frequent vehicle collisions poses the most substantial threat to black-tailed deer populations, but habitat conservation activities as a result of Secretarial Order 3362 and organizations such as the Mule Deer Foundation and the California Deer Association are beginning to provide positive benefits. It can be difficult to effectively survey black-tailed deer populations, but most states, provinces and territories estimate their populations are stable or increasing in many jurisdictions. Protection Island National Wildlife Refuge in northwestern Washington has experienced some issues with high densities of blacktail deer as they are known to collapse seabird burrows and hinder the growth of vegetation.

# COLUMBIAN WHITE-TAILED DEER (Odocoileus virginianus leucurus)

The Columbian whitetailed deer is the westernmost subspecies of white-tailed deer and are geographically isolated from other populations. They are virtually identical in size, appearance, and behavior to other eastern whitetails, sporting the prominent white tail and large symmetrical antlers.

Range: They are the only variety of white-tailed deer west of the Cascade Mountain range and earned their namesake from their distribution along the Columbia River in Washington and Oregon. They are separated into two distinct populations: the Columbian River population in Washington and the Umpqua River population in southern Oregon. The Umpqua River population is often referred to as the Roseburg or Douglas County population.

Status: The Columbian whitetail was listed

as a federally endangered species in 1968, but thanks to extensive conservation efforts, the Umpqua River Valley population was removed from the endangered species list and federally reclassified as threatened in 2003. In 2016, The Columbian River population was also reclassified as threatened thanks to the establishment of wildlife refuges and improved habitat. Some of these deer were translocated to the Columbia Stock Ranch as an effort to expand the population following extensive habitat improvements such as native tree and forage plantings and the removal of invasive species. Recent deer counts also suggest that the translocation of deer from the Julia Butler Hansen to Ridgefield National Wildlife Refuges has been successful in increasing the population by over 240%. Some of these deer have also moved across the Columbia River and are beginning to populate new areas.

# COUES DEER (Odocoileus virginianus couesi)

Coues deer (pronounced "cows") are a small subspecies of white-tailed deer named after Army physician Elliot Coues who first described them in the 1860's while stationed at Ft. Whipple, Arizona. Often referred to as the Arizona whitetail or "fantails," they appear similar to other whitetails apart from disproportionate ears and tails for their small frame and a slightly lighter greyish coat coloration. The Arizona Game and Fish Department describes them as much smaller than traditional whitetails - with mature bucks rarely topping 100 pounds and adult does averaging about 65 pounds.

**Range**: Coues deer are abundant in Arizona and the southwestern part of New Mexico, with their range extending south into the western Mexican states of Sonora and Chihuahua. The Arizona whitetail is most abundant in the southeastern mountains of the state but ranges up into the Mogollon Rim and into the White mountains, particularly in areas that receive predictable summer rain. They are hunted regularly throughout their range, especially in Arizona and New Mexico.

Status: Coues deer offer one of the most challenging deer hunting opportunities in North America due to their expertise at using cover and their constant movement once startled. New Mexico and Arizona indicate their Coues deer populations appear to be increasing over the last few years, offering hunters more opportunities for successful hunts. In fact, Arizona reports that Coues deer account for over 40% of the state's overall deer harvest today as compared to 15% in the 1960s. Predation, fawn survival, and drought all pose a threat to Coues deer populations, but trends suggest that fawn recruitment and survival is increasing, and the adult sex ratio is well balanced, presenting hunters more chances to pursue the elusive "gray ghost of the desert."

# **OTHER DEER SPECIES & SUB-SPECIES**

# KEY DEER (Odocoileus virginianus clavium)

One of the most intriguing and distinctive of the approximately 38 subspecies of whitetails is the Key deer. Sometimes referred to as "toy deer" they resemble common whitetails almost exactly except for one specific trait: their size. Key deer are substantially smaller than what is standard of a whitetail, with mature bucks averaging only 80 pounds and adult does rarely exceeding 65 pounds. They are by far smallest North American deer and the largest bucks stand less than three feet tall at the shoulders!

**Range:** Key deer live exclusively in the Florida Keys, predominately on Big Pine Key, but are often seen swimming from island to island. According to the U.S. Fish and Wildlife Service (USFWS) they have adopted a distinct lack of fear of humans resulting in unnatural feeding habits and increased car-deer collisions. These collisions account for nearly 70% of their annual mortality.

Status: A combination of habitat destruction, poaching and human interaction resulted in the addition of Key deer to the endangered species list in 1967 - where they still

about Other Deer Species

remain. In 2019, the USFWS recommended the Key deer be delisted, but the recommendation was dropped due to public resistance. Estimates vary, but the Florida Fish and Wildlife Conservation Commission suggests there are approximately 800 individuals in the population today. Although their numbers are extremely low, the population is still stable.

In the fall of 2023, prescribed burns were conducted on Big Pine Key, where most of the population resides, to remove the over accumulation of vegetation along wildlifeurban interface and create a defensible space between refuge lands and private property. These efforts are essential for the restoration and maintenance of the fire-dependent habitat that Key deer and other species rely on. The USFWS encourages everyone in the Florida Keys to drive slowly, secure trash and yard waste and refrain from feeding Key deer.

## **Mule Deer**

Mule Deer are fast! They don't run like other deer, but have a distinctive bounding leap over distances up to eight yards, with all four feet coming down together. In this fashion, they can reach a speed of 45 mph for short periods.

#### **Black-tailed Deer**

Black-tailed deer ears are very large and can move independently, giving them an excellent sense of hearing; they also have good sight and can see other animals at a distance of up to 2,000 feet.

## **Columbian White-tailed Deer**

The Columbian white-tailed deer is a non-migratory species that exists in the historic floodplain areas of the lower Columbia River from Longview, Washington, to the mouth of the Columbia River.

## **Coues Deer**

The Coues deer was named for naturalist Elliott Coues who, from 1876 to 1880 was secretary and naturalist to the United States Geological and Geographical Survey and in 1883 was a founding member of the American Ornithologists' Union. The correct pronunciation of his last name, and therefore, the deer's is "cowz" - rhymes with plows, but it is commonly mis-pronounced as "cooz."

# Key Deer

Sometimes called the "toy deer," the Key deer is the smallest subspecies of white-tailed deer.

#### Antlered Mule Deer Harvest



Mule deer are hunted in two states in the Southeast, four in the Midwest, all 11 states in the West, and four provinces in Canada. Those 17 states and provinces are included in the text and table below. We acquired data from all 17 states and four provinces.

2022 was a below average year for mule deer hunters as 14 of 17 states (82%) and three of four provinces (75%) reported fewer bucks harvested last year. The 2022 harvest was down 10% in the West, 12% in the Midwest, and 27% in the Southeast and Canada. The 2022 harvest was also 12%

# MULE DEER REGIONS

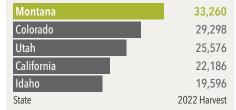
SOUTHEAST

below the running two-year average in the U.S. and 21% below in Canada.

Overall, Montana shot the most bucks (33,260) while Oklahoma reported the fewest (201). Utah harvested the most bucks per square mile (0.31), and Nevada shot the most (38 bucks) per 100 deer hunters. In Canada, British Columbia shot the most bucks (9,022), Alberta and British Columbia shot the most bucks PSM (0.03), and British Columbia and Saskatchewan shot the most per 100 deer hunters (10).

# **TOP STATES:**

#### Antlered Mule Deer Harvest



#### Antlered Mule Deer Harvest PSM

Utah	0.31
Colorado	0.28
Idaho	0.24
Montana	0.23
Wyoming	0.16
State	2022 Harvest

#### Antlered Mule Deer Harvest per 100 Deer Hunters

Nevada	38
Utah	36
Colorado	32
New Mexico	28
Wyoming	27
State	2022 Harvest

#### MULE DEER HAR FD EST FR 2022 Bucks % Change % Change 2022 2022 Buck Harvest/ State/Province 2020 2021 2022 2021-22 PSM 2020-21 Avg **100 Deer Hunters** to 2yr Avg Oklahoma 243 201 < 0.01 243 9,820 Texas 8,916 6,508 -27 0.02 9,368 -31 1 Southeast Total/Avg 6,709 9,820 0.02 9,490 -29 9,159 -27 1 1,605 0.01 1,601 6,931 1,064 5,895 -33 -11 -34 -15 -12 1,596 Kansas 1 7,236 5,252 6,626 Nebraska 0.08 6 North Dakota 5,940 4,912 -17 0.07 5,596 5 5,904 5,400 5,435 8 South Dakota 0.07 5,652 -4 1 -**12** Midwest Total/Avg 19,997 19,562 17,306 0.06 19,780 -13 5 6,928 6,700 0.06 Arizona 10,149 -3 8,539 -22 -23 -5 -5 -14 16 22,186 29,298 19,596 33,260 31,518 -30 0.14 0.28 28,690 California 25862 31,160 21,802 -6 -10 32 \* Colorado 30,341 30,751 Idaho 19,425 0.24 20,614 Montana 40,231 36,870 -10 0.23 38,551 \* 5,389 5,695 9,909 -16 -8 38 28 4,785 0.04 6,000 Nevada -11 9,093 New Mexico 11,129 8,689 0.08 5 9,779 25,576 12,349 24,628 -20 8 -24 12,081 -21 Oregon 0.10 12,215 8 22555 0.31 23,592 36 Utaĥ 4 Washington 9,665 7,917 6,677 0.10 8,791 7 -16 Ź7 18,101 Wyoming 16,133 0.16 -8 15,717 -3 17,117 West Total/Avg -10 205,539 203,383 182,667 0.16 204,461 -11 34 U.S. Total/Avg 235,356 232,104 206,682 0.11 233,730 -12 10 -11 7,838 9,827 -18 -23 6,651 -21 -34 0.03 Alberta 8,471 8,155 6 British Columbia 9,022 10 13,600 0.03 11,714 Manitoba 5,067 -20 0.02 5,079 -20 5,090 4,063 10

0

-27

9

24,955

0.02

18

-21

8

Canada Total/Avg 22,739 \* Data not provided/available

Yukon

52 · National Deer Association // DeerReport 2024

10

27,171

10

19,746

# **OTHER DEER SPECIES & SUB-SPECIES**

#### **Antlerless Mule Deer Harvest**



As stated in the Antlered Mule deer chapter, muleys are hunted in two states in the Southeast, four in the Midwest, all 11 states in the West, and four provinces in Canada. Those 17 states and provinces are included in the text and table below. We acquired data from all 17 states and four provinces.

2022 was also a poor year for the majority of antlerless mule deer hunters as 11 of 17 states (65%) and two of three provinces (67%) reported reduced harvests from the prior year. The 2022 harvest was up in the Southeast thanks to a ban-

ner season in Texas, but down 12% in the Midwest, 20% in Canada, and 22% in the West. The 2022 harvest was also 21% below the running two-year average.

Overall, Montana shot the most antlerless deer (9,349) while Oklahoma reported the fewest (eight). Colorado harvested the most antlerless deer per square mile (0.08) and most (9.6 antlerless deer) per 100 deer hunters. In Canada, Alberta shot the most antlerless deer (8,466) and the most per square mile (0.04), while Saskatchewan shot the most per 100 deer hunters (12.4).

# **TOP STATES:**

Antlerless Mule Deer Harvest		
Montana	9,349	
Colorado	8,751	
Idaho	3,992	
North Dakota	3,787	
Wyoming	2,068	
State 2	022 Harvest	

#### Antlerless Mule Deer Harvest PSM

Colorado	0.08
Montana	0.06
Idaho	0.05
North Dakota	0.05
South Dakota	0.02
Utah	0.02
Wyoming	0.02
State	2022 Harvest

#### Antlerless Mule Deer Harvest per 100 Deer Hunters

p	
Colorado	9.6
Nevada	5.7
North Dakota	4.1
Wyoming	3.5
Utah	2.8
State	2022 Harvest

ANTLERLESS MULE DEER HARVEST								
<b>State/Province</b> Oklahoma	2020 *	<b>2021</b> 11	<b>2022</b> 8	% Change 2021-22 -27	2022 Antlerles PSM <0.01	s 2020-21 Avg 11	% Change 2022 to 2yr Avg -27	'22 Antlerless Harvest/ 100 Deer Hunters <0.01
Texas Southeast Total/Avg	710 <mark>710</mark>	743 <mark>754</mark>	1,254 <mark>1,262</mark>	69 <mark>67</mark>	<0.01 <0.01	727 <mark>732</mark>	73 <b>72</b>	0.2 <mark>0.1</mark>
Kansas Nebraska North Dakota South Dakota Midwest Total/Avg	167 2,202 3,219 1,530 <b>7,118</b>	128 1,949 4,510 1,165 <b>7,752</b>	174 1,493 3,787 1,381 <b>6,835</b>	36 -23 -16 19 <b>-12</b>	<0.01 0.02 0.05 0.02 <b>0.02</b>	148 2,076 3,865 1,348 <b>7,435</b>	18 -28 -2 2 -8	0.2 1.5 4.1 1.9 <b>1.8</b>
Arizona California Colorado Idaho Montana Nevada New Mexico Oregon Utah Washington Wyoming West Total/Avg	207 463 8,558 5,383 14,519 900 227 2,645 2,788 617 3,269 <b>38,906</b>	99 439 9,401 4,282 12,985 796 138 3,017 2,003 360 2,811 <b>35,793</b>	47 686 8,751 3,992 9,349 715 173 515 1,960 404 2,068 27,927	-53 56 -7 -7 -28 -10 25 -83 -2 12 -26 -22	<0.01 <0.01 0.08 0.05 0.06 0.01 <0.01 0.01 0.02 0.01 0.02 0.02 0.02	153 451 8,980 4,833 13,752 848 183 2,831 2,396 489 3,040 <b>37,350</b>	-69 52 -3 -17 -32 -16 -5 -82 -18 -17 -32 -25	0.1 0.5 9.6 2.7 * 5.7 0.5 0.4 2.8 0.4 3.5 3.4
U.S. Total/Avg Alberta British Columbia Manitoba	<b>46,734</b> 6,412 855 5,948	<b>44,299</b> 11,229 1,300 5,237	<b>36,024</b> 8,466 475 5,289	- <b>19</b> -25 -63 1	0.02 0.04 <0.01 0.03	<b>45,517</b> 8,821 1,078 5,593	-21 -4 -56 -5	<b>1.5</b> 8.1 0.5 12.4
Yukon Canada Total/Avg	0 13,215	0	0	0 -20	<0.03 <0.01 0.02	0 15,491	0 - <mark>8</mark>	* 6.0

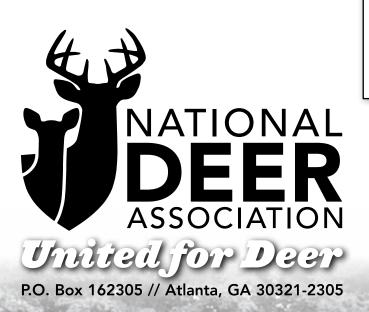
\*Data not provided/available

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#### Notes

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