

**Hunting Estimates Report  
2020-21 Hunter Harvest  
Region: Statewide**

Species	Total Hunters					Total Days					Total Harvest					Mean Days Per Hunter	Mean Harvest Per Hunter	Mean Harvest Per Day
	Total Hunters	Confidence Limits (+)	PSE	Credibility Rating	% of incidental hunters	Total Days	Confidence Limits (+)	PSE	Credibility Rating	Total Harvest	Confidence Limits (+)	PSE	Credibility Rating	% of harvest taken incidentally				
All Deer	241,110	3,858	0.008	G	0.06%	3,611,779	126,262	0.018	G	178,364	8,500	0.024	G	0.04%	14.98	0.74	0.05	
All Squirrels	53,108	3,577	0.034	G	1.00%	304,164	25,475	0.043	G	334,398	33,204	0.051	G	0.75%	5.73	6.30	1.10	
Antlered Buck	241,110	3,858	0.008	G	0.06%	3,611,779	126,262	0.018	G	101,228	5,483	0.028	G	0.07%	14.98	0.42	0.03	
Antlered/Buttton Buck	241,110	3,858	0.008	G	0.06%	3,611,779	126,262	0.018	G	111,480	5,808	0.027	G	0.07%	14.98	0.46	0.03	
Bobcat	2,276	811	0.182	F	26.67%	10,324	5,653	0.279	P	1,669	880	0.269	P	68.18%	4.54	0.73	0.16	
Bobwhite Quail	6,828	1,395	0.104	G	0.00%	46,340	18,600	0.205	P	20,645	6,846	0.169	F	0.00%	6.79	3.02	0.45	
Button Buck	241,110	3,858	0.008	G	0.06%	3,611,779	126,262	0.018	G	10,252	1,829	0.091	G	0.00%	14.98	0.04	0.00	
Canada Geese	12,822	1,892	0.075	G	2.96%	75,633	12,574	0.085	G	39,300	10,398	0.135	G	1.16%	5.90	3.07	0.52	
Common Snipe	835	493	0.301	P	9.09%	5,463	4,768	0.445	P	6,449	6,831	0.540	P	2.35%	6.55	7.73	1.18	
Coyote	25,644	2,617	0.052	G	11.83%	211,656	39,479	0.095	G	35,289	6,684	0.097	G	13.76%	8.25	1.38	0.17	
Crow	7,966	1,504	0.096	G	5.71%	35,379	7,039	0.102	G	75,563	42,854	0.289	P	2.61%	4.44	9.49	2.14	
Doe	241,110	3,858	0.008	G	0.06%	3,611,779	126,262	0.018	G	98,874	6,912	0.036	G	0.00%	14.98	0.41	0.03	
Dove	65,247	3,868	0.030	G	0.00%	171,578	12,395	0.037	G	750,493	67,872	0.046	G	0.00%	2.63	11.50	4.37	
Ducks	49,163	3,468	0.036	G	0.00%	384,779	31,598	0.042	G	533,257	66,541	0.064	G	0.00%	7.83	10.85	1.39	
Feral Swine	7,435	1,454	0.100	G	5.10%	47,924	10,692	0.114	G	20,989	16,288	0.396	P	2.89%	6.45	2.82	0.44	
Fox	2,124	784	0.188	F	17.86%	7,612	3,296	0.221	P	3,035	1,411	0.237	P	20.00%	3.58	1.43	0.40	
Fox Squirrel	4,856	1,180	0.124	G	7.81%	17,621	4,611	0.134	G	5,387	2,500	0.237	P	8.45%	3.63	1.11	0.31	
Gray Squirrel	51,667	3,538	0.035	G	0.88%	298,194	25,330	0.043	G	329,022	32,931	0.051	G	0.71%	5.77	6.37	1.10	
Grouse	3,111	947	0.155	F	0.00%	22,941	9,716	0.216	P	1,442	906	0.321	P	0.00%	7.38	0.46	0.06	
Rabbit	30,196	2,816	0.048	G	0.25%	203,592	29,838	0.075	G	163,865	25,186	0.078	G	0.05%	6.74	5.43	0.80	
Raccoon	7,587	1,468	0.099	G	6.00%	127,196	45,609	0.183	F	45,904	14,702	0.163	F	3.47%	16.77	6.05	0.36	
Turkey	75,413	4,070	0.028	G	0.00%	439,267	25,074	0.029	G	28,403	3,002	0.054	G	0.00%	5.82	0.38	0.06	
Woodcock	3,186	959	0.153	F	2.38%	21,471	11,101	0.264	P	16,321	10,235	0.320	P	25.57%	6.74	5.12	0.76	

Total # of license holders	675,381
Deceased license holder rate	0.0143328
Adj Total # of license holders	665,700
Total # of surveys sent	27,001
Undeliverables	1,795
Deceased	387
Sample size	24,819
Sample rate	3.73%
Total Survey Returns	9,558
Refused	48
Total Survey Responses	9,510
Response rate	38.32%
Total Not Responding	15,309

<u>Active Hunter Estimate</u>	
# of Active Hunters from Respondents	4,032
Proportion of Responding Hunters	0.4239748
Estimated Proportion of Non-responding Hunters	0.4816000
SE	0.0050676
PSE	0.0119525
Total Active Licensed Hunters	305,902
Margin of Error @ 95% CL	7,166
Active Hunter Rate within All License Holders	45.95%

**Frequency of Hunters with Various Numbers of Kills**  
**2020-21 Hunter Harvest**  
**Region: Statewide**

**All Deer**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	125,301	51.97%	125,301	51.97%
1	61,891	25.67%	187,192	77.64%
2	29,313	12.16%	216,505	89.80%
3	14,353	5.95%	230,858	95.75%
4	6,151	2.55%	237,009	98.30%
5	2,734	1.13%	239,743	99.43%
6+	1,367	0.57%	241,110	100.00%

**All Squirrels**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	9,891	18.62%	9,891	18.62%
1	4,641	8.74%	14,532	27.36%
2	5,022	9.46%	19,554	36.82%
3	4,261	8.02%	23,815	44.84%
4	4,717	8.88%	28,532	53.72%
5	4,641	8.74%	33,173	62.46%
6+	19,935	37.54%	53,108	100.00%

**Antlered Buck**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	161,677	67.06%	161,677	67.06%
1	58,018	24.06%	219,695	91.12%
2	21,111	8.76%	240,806	99.87%
3	228	0.09%	241,034	99.97%
4	76	0.03%	241,110	100.00%
5	0	0.00%	241,110	100.00%
6+	0	0.00%	241,110	100.00%

**Antlered/Button  
Buck**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	155,525	64.50%	155,525	64.50%
1	61,663	25.57%	217,188	90.08%
2	22,023	9.13%	239,211	99.21%
3	1,823	0.76%	241,034	99.97%
4	76	0.03%	241,110	100.00%
5	0	0.00%	241,110	100.00%
6+	0	0.00%	241,110	100.00%

**Bobcat**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	986	46.43%	986	46.43%
1	910	42.86%	1,896	89.29%
2	76	3.57%	1,972	92.86%
3	76	3.57%	2,048	96.43%
4	0	0.00%	2,048	96.43%
5	76	3.57%	2,124	100.00%
6+	0	0.00%	2,124	100.00%

**Bobwhite Quail**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	3,376	50.00%	3,376	50.00%
1	322	4.76%	3,698	54.76%
2	643	9.52%	4,341	64.29%
3	482	7.14%	4,823	71.43%
4	241	3.57%	5,064	75.00%
5	322	4.76%	5,386	79.76%
6+	1,366	20.24%	6,752	100.00%

**Button Buck**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	231,693	96.09%	231,693	96.09%
1	8,581	3.56%	240,274	99.65%
2	835	0.35%	241,109	100.00%
3	0	0.00%	241,109	100.00%
4	0	0.00%	241,109	100.00%
5	0	0.00%	241,109	100.00%
6+	0	0.00%	241,109	100.00%

**Canada Geese**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	4,780	37.50%	4,780	37.50%
1	2,276	17.86%	7,056	55.36%
2	1,745	13.69%	8,801	69.05%
3	986	7.74%	9,787	76.79%
4	455	3.57%	10,242	80.36%
5	607	4.76%	10,849	85.12%
6+	1,897	14.88%	12,746	100.00%

**Common Snipe**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	228	27.27%	228	27.27%
1	228	27.27%	456	54.55%
2	152	18.18%	608	72.73%
3	0	0.00%	608	72.73%
4	0	0.00%	608	72.73%
5	0	0.00%	608	72.73%
6+	228	27.27%	836	100.00%

**Coyote**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	11,636	45.78%	11,636	45.78%
1	7,043	27.71%	18,679	73.49%
2	2,679	10.54%	21,358	84.04%
3	1,531	6.02%	22,889	90.06%
4	919	3.61%	23,808	93.67%
5	383	1.51%	24,191	95.18%
6+	1,225	4.82%	25,416	100.00%

**Crow**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	928	11.76%	928	11.76%
1	1,779	22.55%	2,707	34.31%
2	774	9.80%	3,481	44.12%
3	619	7.84%	4,100	51.96%
4	464	5.88%	4,564	57.84%
5	774	9.80%	5,338	67.65%
6+	2,553	32.35%	7,891	100.00%

**Doe**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	178,611	74.08%	178,611	74.08%
1	38,578	16.00%	217,189	90.08%
2	14,808	6.14%	231,997	96.22%
3	6,303	2.61%	238,300	98.83%
4	2,430	1.01%	240,730	99.84%
5	228	0.09%	240,958	99.94%
6+	152	0.06%	241,110	100.00%

**Dove**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	8,308	12.76%	8,308	12.76%
1	2,668	4.10%	10,976	16.86%
2	4,040	6.21%	15,016	23.07%
3	3,354	5.15%	18,370	28.22%
4	3,125	4.80%	21,495	33.02%
5	3,125	4.80%	24,620	37.82%
6+	40,475	62.18%	65,095	100.00%

**Ducks**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	8,067	16.43%	8,067	16.43%
1	3,881	7.91%	11,948	24.34%
2	4,338	8.84%	16,286	33.18%
3	3,653	7.44%	19,939	40.62%
4	3,196	6.51%	23,135	47.13%
5	2,435	4.96%	25,570	52.09%
6+	23,516	47.91%	49,086	100.00%

**Feral Swine**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	3,566	50.00%	3,566	50.00%
1	1,861	26.09%	5,427	76.09%
2	465	6.52%	5,892	82.61%
3	388	5.43%	6,280	88.04%
4	155	2.17%	6,435	90.22%
5	78	1.09%	6,513	91.30%
6+	620	8.70%	7,133	100.00%

**Fox**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	607	30.77%	607	30.77%
1	683	34.62%	1,290	65.38%
2	304	15.38%	1,594	80.77%
3	152	7.69%	1,746	88.46%
4	76	3.85%	1,822	92.31%
5	0	0.00%	1,822	92.31%
6+	152	7.69%	1,974	100.00%

**Fox Squirrel**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	2,200	46.03%	2,200	46.03%
1	1,517	31.75%	3,717	77.78%
2	683	14.29%	4,400	92.06%
3	76	1.59%	4,476	93.65%
4	152	3.17%	4,628	96.83%
5	0	0.00%	4,628	96.83%
6+	152	3.17%	4,780	100.00%

**Gray Squirrel**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	9,055	17.63%	9,055	17.63%
1	4,185	8.15%	13,240	25.78%
2	5,022	9.78%	18,262	35.56%
3	4,413	8.59%	22,675	44.15%
4	4,566	8.89%	27,241	53.04%
5	4,642	9.04%	31,883	62.07%
6+	19,480	37.93%	51,363	100.00%

**Grouse**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	2,276	75.00%	2,276	75.00%
1	304	10.00%	2,580	85.00%
2	304	10.00%	2,884	95.00%
3	76	2.50%	2,960	97.50%
4	76	2.50%	3,036	100.00%
5	0	0.00%	3,036	100.00%
6+	0	0.00%	3,036	100.00%

**Rabbit**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	7,015	23.35%	7,015	23.35%
1	4,499	14.97%	11,514	38.32%
2	3,813	12.69%	15,327	51.02%
3	1,983	6.60%	17,310	57.61%
4	2,059	6.85%	19,369	64.47%
5	1,754	5.84%	21,123	70.30%
6+	8,922	29.70%	30,045	100.00%

**Raccoon**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	1,456	19.19%	1,456	19.19%
1	1,533	20.20%	2,989	39.39%
2	1,073	14.14%	4,062	53.54%
3	613	8.08%	4,675	61.62%
4	536	7.07%	5,211	68.69%
5	536	7.07%	5,747	75.76%
6+	1,839	24.24%	7,586	100.00%

**Turkey**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	52,403	70.26%	52,403	70.26%
1	16,252	21.79%	68,655	92.06%
2	5,696	7.64%	74,351	99.69%
3	152	0.20%	74,503	99.90%
4	76	0.10%	74,579	100.00%
5	0	0.00%	74,579	100.00%
6+	0	0.00%	74,579	100.00%

**Woodcock**

<b>Number Killed</b>	<b>Number of Hunters</b>	<b>Percent of Hunters</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
0	1,554	48.78%	1,554	48.78%
1	389	12.20%	1,943	60.98%
2	389	12.20%	2,332	73.17%
3	155	4.88%	2,487	78.05%
4	0	0.00%	2,487	78.05%
5	0	0.00%	2,487	78.05%
6+	699	21.95%	3,186	100.00%

## Hunter Harvest Survey Regional Credibility Measures

Although the Hunter Harvest Survey (HHS) database provides a huge amount of information about regional hunting activity for many species, there are a variety of possible problems with estimates derived from HHS data. Small sample sizes, low relative harvest or hunting effort rates, imprecise estimates, and missing data all can compromise HHS results. Often, users do not take these problems into account when viewing HHS results, and use the results inappropriately.

To provide some guidance into the interpretation of HHS data, we have implemented a series of checks for some minimum criteria that we view as cause for caution. We categorize HHS results into 3 credibility categories:

	Total Hunters	Total Days	Total Harvest
<b>Poor</b>	> 30% of counties have < 3 records within the selected region* < 20 individual hunter responses Total hunter PSE > 20%	> 30% of counties have < 3 records within the selected region* < 20 individual hunter responses Total Days PSE > 20% <0.1 days per hunter	> 30% of counties have < 3 records within the selected region* < 20 individual hunter responses Total hunter PSE > 20% <0.002 animals per hunter
<b>Fair</b>	>=20 and <30 individual hunter responses 15% < Total Hunter PSE <= 20%	>=20 and <30 individual hunter responses 15% < Total Harvest PSE <= 20% <10.0 days per hunter	>=20 and <30 individual hunter responses <0.02 animals per hunter
<b>Good</b>	>= 30 individual hunter responses Total Hunter PSE < 15%	>= 30 individual hunter responses Total Harvest PSE < 15% >= 10.0 days per hunter	>= 30 individual hunter responses >= 0.02 animals per hunter

\*Does not apply to statewide summary