



# ARCHER SURVEY 2016 REPORT



During the past 25 years, Illinois bowhunters have helped the Department of Natural Resources by reporting types and numbers of animals observed while hunting. This information is used to detect major changes in wildlife populations over time based on a “sighting index” (number of sightings per 1,000 hours of field time).

During 2016, 1,250 volunteers reported 48,601 hours of wildlife observations. Numbers of squirrels and wild turkeys observed during 2016 were lower than the previous year. Changes in sighting indices for other species were considered nominal. Long-term (1992-2016) increases in sighting indices occurred for bobcat, coyote, white-tailed deer, squirrel, and wild turkey (Table 1). Long-term decreases occurred for red fox and gray fox.

**Table1.** Trends in statewide Archery Deer Hunter Survey sighting index in Illinois, 1992-2016, using hunter-location method of analysis.

Year	Species							
	Bobcat	Coyote	Deer	Gray fox	Raccoon	Red fox	Squirrel	Turkey
1992 (1,239) <sup>a</sup>	0.5	27.1	655.3	2.5	30.1	9.3	972.7	93.4
1993 (2,877)	0.6	29.7	611.2	1.9	49.4	8.1	1017.3	123.8
1994 (1,814)	0.4	28.4	586.5	1.7	46.7	5.7	1089.0	146.3
1995 (2,278)	0.8	30.6	696.9	1.6	52.5	6.6	995.3	138.2
1996 (1,458)	0.8	27.5	662.9	1.2	45.7	4.7	938.5	144.4
1997 (1,411)	1.3	26.5	662.0	0.6	47.2	5.5	981.1	139.2
1998 (2,052)	1.1	30.8	736.2	0.8	49.2	6.0	929.0	201.5
1999 (1,931)	1.4	32.3	729.2	1.4	63.0	3.5	989.0	241.5
2000 (1,854)	1.1	30.6	853.6	0.7	65.9	4.1	1087.0	272.6
2001 (1,366)	1.6	32.3	918.7	0.8	66.6	4.4	1266.3	311.2
2002 (1,780)	2.0	34.5	995.2	0.6	55.1	3.7	1081.1	348.1
2003 (1,569)	2.1	29.8	1033.5	0.8	65.7	3.5	1177.4	308.0
2004 (1,216)	1.3	35.9	1143.4	0.6	64.1	3.5	1219.5	345.0
2005 (1,544)	3.7	32.0	1145.7	0.6	53.1	3.6	1045.1	280.1
2006 ( 791)	3.1	35.5	1104.1	0.5	70.3	3.9	1255.0	342.6
2007 (1,075)	2.9	47.6	1104.2	0.8	60.7	4.0	1076.2	332.9
2008 ( 649)	3.4	32.1	930.5	0.3	60.4	2.7	1007.8	267.5
2009 (1,067)	2.8	27.4	815.8	0.4	52.3	4.1	1098.0	287.1
2010 ( 700)	3.8	41.0	915.5	1.0	91.9	3.2	1223.8	279.7
2011 ( 936)	4.1	32.5	856.2	1.3	- <sup>b</sup>	3.8	1225.7	273.9
2012 ( 896)	5.9	43.6	940.7	0.7	- <sup>b</sup>	4.1	1173.8	279.1
2013 ( 886)	5.9	31.2	764.5	0.4	- <sup>b</sup>	2.3	1135.5	225.3
2014 (1,002)	5.6	34.6	802.6	0.1	- <sup>b</sup>	3.9	1223.3	253.6
2015 (1,089)	11.1	44.9	871.7	0.4	- <sup>b</sup>	5.6	1403.7	323.7
2016 (1,250)	7.8	38.5	810.8	0.3	- <sup>b</sup>	3.0	1082.9	245.0

<sup>a</sup> Number of observers in parentheses following year.

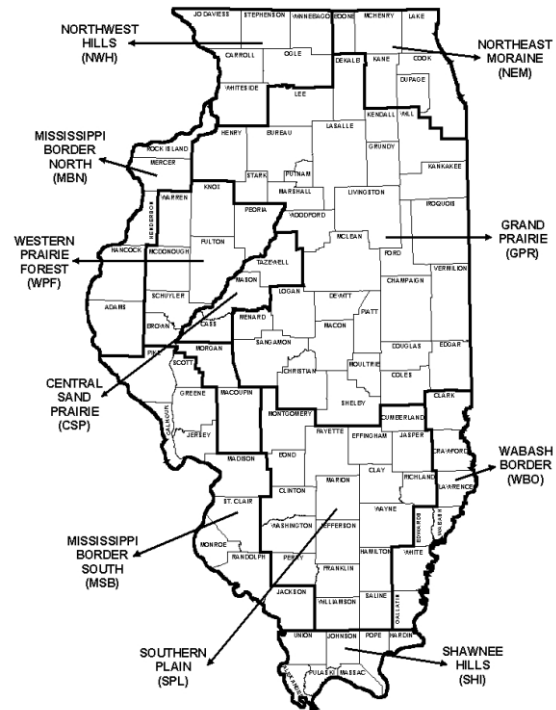
<sup>b</sup> Raccoon dropped from survey in 2011.

Archers harvested 53,468 deer during the 2016-17 season, down slightly from 2015-16 (56,767). The top 5 counties were Pike (2,062), Fulton (1,492), Jefferson (1,231), Adams (1,202) and Randolph (1,005). Archery accounted for 37% of deer harvested by all methods during 2016-17. Combined harvest was 144,303 deer.

Table 2. Numbers of hunter locations and deer seen per 1,000 hours for the 2016 Archery Deer Hunter Survey using hunter-location method of analysis.

Sample area	Number of hunter locations	Deer seen per 1,000 hours
Central sand prairie	57	523
Grand prairie	405	760
Mississippi border (N)	74	926
Mississippi border (S)	200	707
Northeast moraine	58	561
Northwest hills	137	670
Shawnee hills	75	982
Southern plain	353	955
Wabash border	56	1,045
Western prairie forest	181	861
Statewide	1,596	811

Figure 1. Locations and names of Illinois wildlife management units.



Hunters' wildlife observations are influenced by habitat characteristics. For example, hunters in heavily forested areas of the Shawnee Hills might not detect deer as easily as hunters in agricultural areas of the Grand Prairie. Other factors that affect sighting indices include weather, timing of the crop harvest, food supplies and the number of hunters participating in the survey.

Differences in sighting rates among wildlife management units (Table 2) must be interpreted cautiously, especially for a particular year or a particular area. Variations in weather, food supplies and other factors tend to cancel each other out over time, providing a reliable indicator of long-term population trends. This is the best and most important use of data from the survey.

We thank all bowhunters who participated in 2016 and ask that they consider continuing their participation in 2017. If you haven't had an opportunity to help collect data for the Archer Survey, we ask that you strongly consider doing so. Information provided by the Archer Survey becomes more reliable as the number of observers increases. Thanks again, and good hunting!

For more information about past deer seasons and harvest levels, visit:  
<http://www.dnr.illinois.gov/conservation/wildlife/Pages/DeerManagement.aspx>

For more information about ecology and management of white-tailed deer in Illinois, visit:  
<https://deer.wildlifeillinois.org/>