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Prairie Research Institute  
University of Illinois at  
Urbana-Champaign



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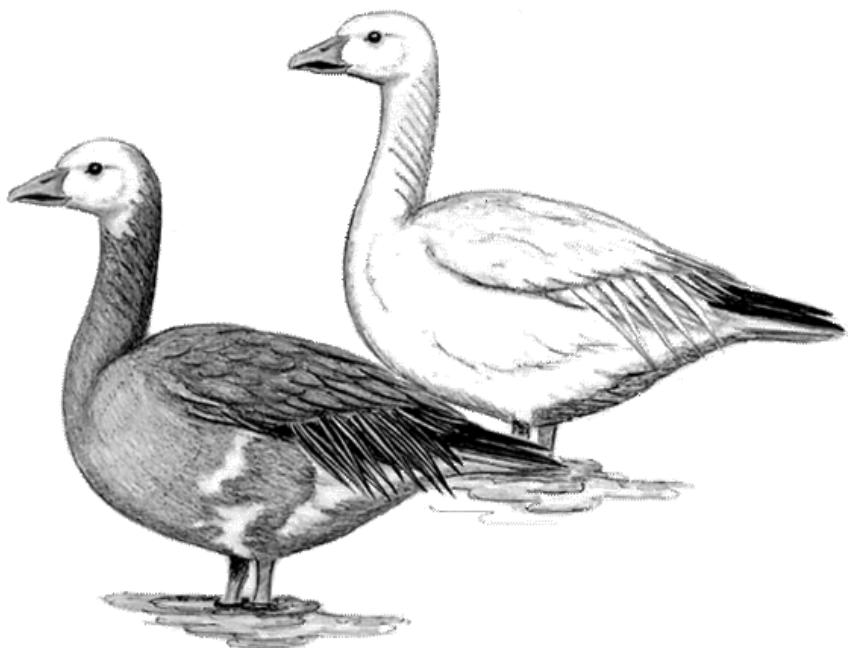
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# Hunter Participation, Harvest, and Hunting Behavior During the 2016 Illinois Conservation Order Season



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# **HUNTER PARTICIPATION, HARVEST, AND HUNTING BEHAVIOR DURING THE 2016 ILLINOIS CONSERVATION ORDER SEASON**

## **JOB COMPLETION REPORT**

### **WILDLIFE HARVEST AND HUMAN DIMENSIONS RESEARCH PROGRAM**

**STATE OF ILLINOIS**

**PROJECT NUMBER: W-112-R-25  
STUDY 101  
JOB NO. 101.4**

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Illinois Natural History Survey  
Champaign, IL  
November 1, 2016

Federal Aid in Wildlife Restoration  
W-112-R-25

Illinois Department of Natural Resources

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Division of Wildlife Resources

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## **ABSTRACT**

Harvest of light geese (*Chen caerulescens*, *Chen rossii*) during the 2016 Illinois Light Goose Conservation Order season was estimated at 121,689. An estimated 2,187 hunters participated in the 2016 Illinois Light Goose Conservation Order season. Hunters spent an estimated 33,048 days afield during 2016, and the majority (61%) of the snow goose harvest occurred during the month of February. Due to changes in sampling of addresses and calculation of estimates, comparisons should not be made to years 2013 and before in figures and tables. Addresses were sampled from Harvest Information Program (HIP) registrants who reported they hunted snow and other light geese (including Ross' and Blue geese) during the 2015 Light Goose Conservation Order seasons. Electronic calls were used by 82% of hunters, 79% used unplugged shotguns, and 67% reported hunting between sunset and ½ hour after sunset. Forty-nine percent of snow goose hunters indicated an increase in effort over the past five years, and 37% of hunters perceived an increase in snow goose abundance during the regular goose seasons. A majority of the hunters were interested in snow goose hunting to enjoy the outdoors (91%) and extend their hunting season (86%)

## **OBJECTIVE**

To survey hunters participating in the Conservation Order Light Goose (hereafter, spring) seasons to determine their activities and harvests in Illinois, as well as their opinions toward specific waterfowl management issues.

## **METHODS**

The sampling method for this survey changed in 2014 and we recommend closely examining confidence intervals when making any comparisons of results between the different sampling methods. The 2014 Harvest Information Program (HIP) registration was the first year in which hunters were asked if they hunted snow geese during the Conservation Order Light Goose seasons the previous year. Addition of this question allowed for more precise sampling of likely participants during the 2015 and 2016 Illinois Conservation Order Light Goose seasons than a random sample of Illinois State Waterfowl Stamp purchasers, the sampling method used in previous snow goose hunter surveys in Illinois (Williams et al. 2013). A sample of 2,146 waterfowl hunters

was randomly selected from HIP registrants who reported they hunted snow geese during the 2015 Conservation Order Light Goose seasons in Illinois and purchased a state waterfowl stamp this year. Potential Conservation Order Light Goose (*Chen caerulescens*, *Chen rossii*) hunters were mailed an 8-page mail-back questionnaire (Appendix A) and cover letter (Appendix B) 14 June 2016. Non-respondents were mailed a thank you/reminder postcard (Appendix C) 29 June 2016, a second copy of the questionnaire and cover letter (Appendix D) 20 July 2016, and another thank you/reminder postcard 03 August 2016. A third copy of the questionnaire and cover letter (Appendix D) was mailed 12 August 2016. The number of snow goose hunters ( $Hunt_{sp}$ ), days afield ( $Days_{sp}$ ), birds crippled but not retrieved ( $Crip_{sp}$ ) and harvest ( $Harv_{sp}$ ) were calculated as follows:

$$Hunt_{sp} = Hunt_r \frac{L_t}{n}, \quad Days_{sp} = Days_r \frac{L_t}{n},$$

$$Crip_{sp} = Crip_r \frac{L_t}{n}, \quad Harv_{sp} = Harv_r \frac{L_t}{n}$$

Where:

$Hunt_r$  = number of respondents to the 2016 Illinois Spring Snow Goose Hunter Survey who reported hunting snow geese (adjustment for non-hunters is inherent),

$L_t$  = total number of Harvest Information Program (HIP) registrants who indicated they hunted snow geese in Illinois during 2014-15 waterfowl hunting season,

$n$  = number of respondents to the 2016 Illinois Spring Snow Goose Hunter Survey,

$Days_r$  = total number of days spent hunting reported by respondents,

$Crip_r$  = total number of birds crippled but not retrieved reported by respondents,

$Harv_r$  = total harvest of each species reported by respondents.

The 2016 estimates of number of hunters, days hunted, and snow geese harvested were based on 3,124 HIP registrants who reported they hunted during the 2015 Conservation order Light Goose seasons. Estimated snow goose harvest was not adjusted for reporting bias using 0.478 as has been done in previous years

(Anderson et al. 1996). Ninety-five percent confidence intervals were calculated for number of hunters, days hunted, and geese harvested, as described in Lischka et al. (2006). We entered and analyzed data using SPSS 24.0 (IBM SPSS Inc. 2015). Due to changes in number of hunters sampled and calculation of estimates, comparisons to previous years' figures must be done with caution.

## SEASON DATES AND BAG LIMITS

The 2016 spring goose season took place from 15 January to 31 March in the North Zone and from 1 February to 31 March in the Central, South Central, and South Zones. The season began in each zone the day after regular Canada goose (*Branta canadensis*) season closed. Hunters during the spring light goose season were required to have a state waterfowl stamp and hunting license, but were exempt from needing a federal waterfowl stamp, and daily bag or possession limits. Hunters were permitted to use unplugged shotguns and electronic calls, and to hunt from half-hour before sunrise to half-hour after sunset; these liberalized regulations were not permitted during other waterfowl seasons.

## RESULTS

### *Harvest Results*

The questionnaire was undeliverable to 12 addresses, thus reducing our mailing list to 2,134 individuals. A total of 1,279 questionnaires were returned, of which 1,244 were considered usable for a 59% response rate. Three-fourths of respondents reported that they hunt waterfowl other than light geese every year (Figure 1). Less than one-tenth (6.7%) of respondents reported they did not hunt during the regular waterfowl season (Figure 2). Eighty-six percent of respondents indicated they participated in the 2015-16 regular duck season, 81% participated in the regular goose season, 49% participated in the September Canada goose season, and 47% in the September teal season (Figure 3). When asked about which species they hunted most often, slightly less than half (46.3%) of waterfowl hunters reported ducks, whereas 37% reported they hunted ducks and geese equally (Figure 4). Of those who hunted during the regular goose season, 68.5% harvested snow geese (Figure 5). Fifty-eight percent of respondents hunted the Central Zone most often (Figure 6).

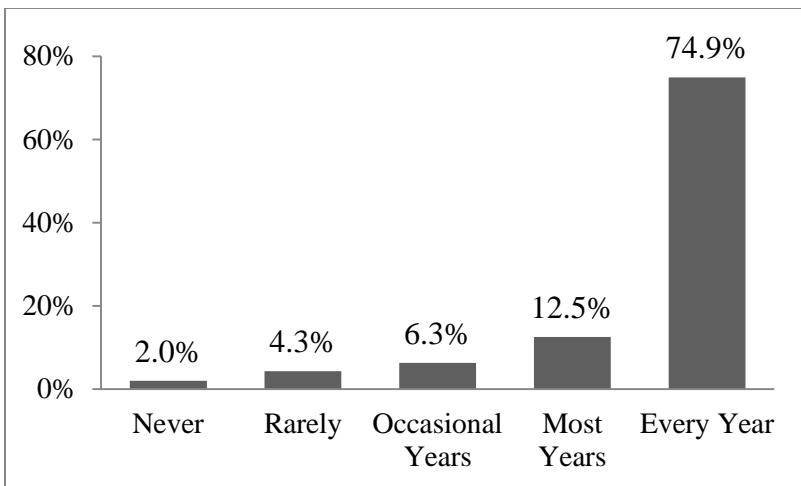


Figure 1. How often survey respondents hunt waterfowl other than light geese in Illinois ( $n=1225$ ).

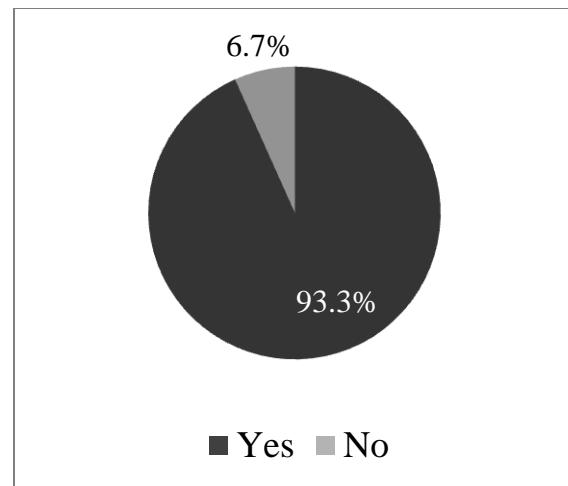


Figure 2. Percentage of survey respondents who hunted waterfowl in Illinois during the 2015-16 waterfowl season ( $n=1187$ ).

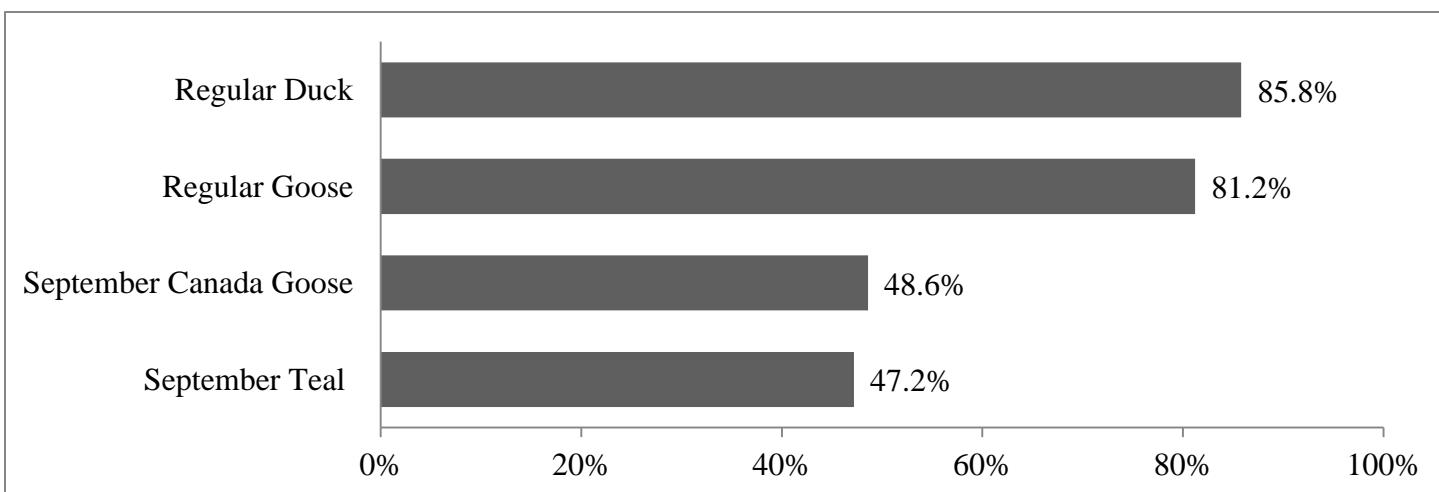


Figure 3. The seasons that survey respondents participated in during the 2015-16 hunting season ( $n=1244$ ).

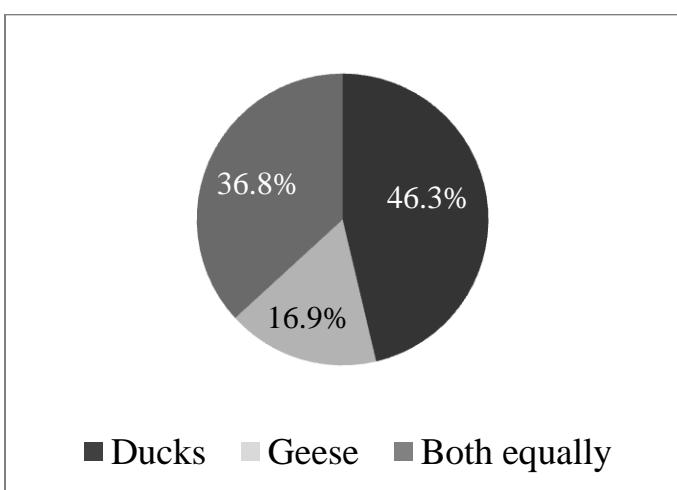


Figure 4. Species hunted most often in Illinois during the 2015-16 waterfowl season ( $n=1109$ ).

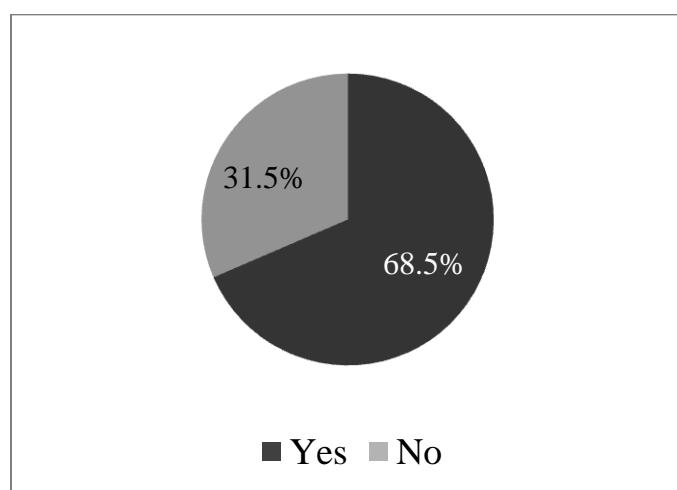


Figure 5. Percentage of hunters who harvested any snow geese during the 2015-16 regular goose season ( $n=1102$ ).

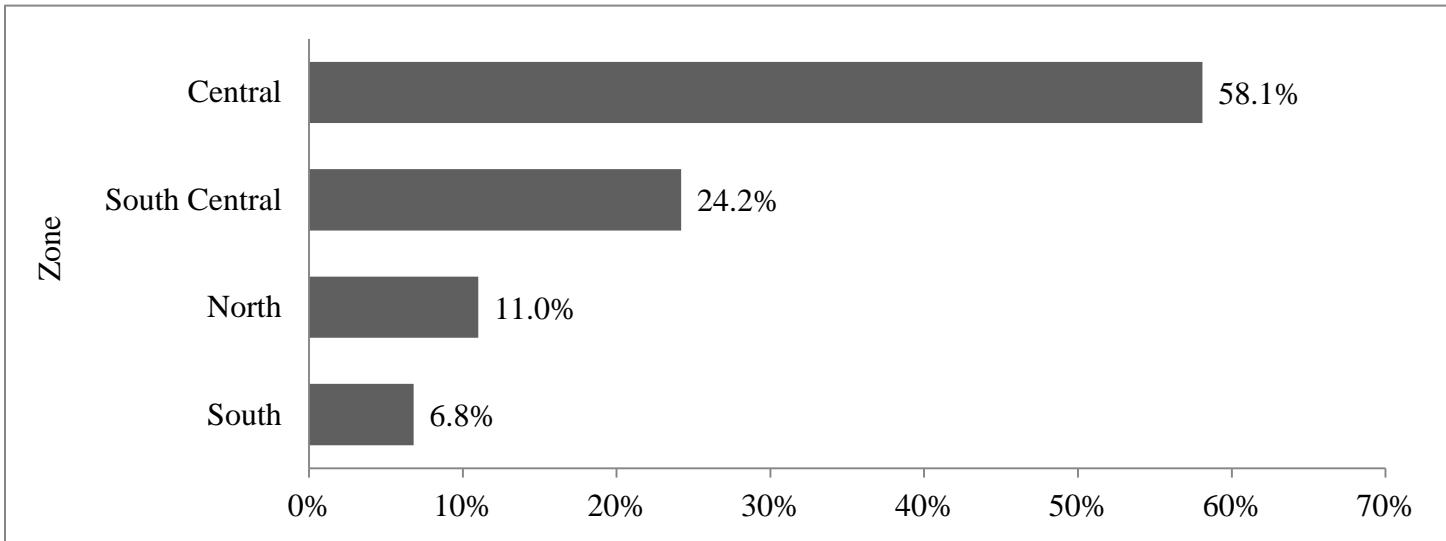


Figure 6. Zone hunted most often during the 2015-16 regular waterfowl seasons ( $n=1092$ ).

Slightly less than seventy percent (67.5%) of respondents reported hunting snow geese during the 2016 Conservation Order Light Goose season (Figure 7). Nearly all (94.7%) snow goose hunters indicated they also hunted during the regular waterfowl seasons (Figure 8). Approximately 51% of those who hunted reported they hunted snow geese every year (Figure 9), and more than half (61.3%) hunted the Central Zone most often for snow geese (Figure 10).

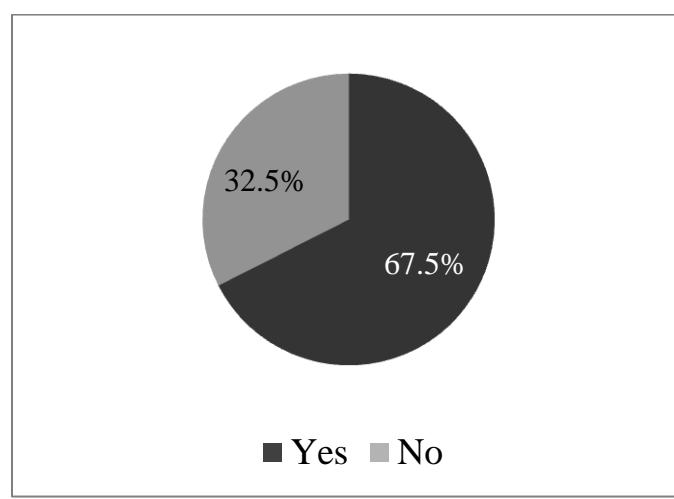


Figure 7. Percentage of survey respondents who hunted snow geese in Illinois during the 2016 spring snow goose season ( $n=1244$ ).

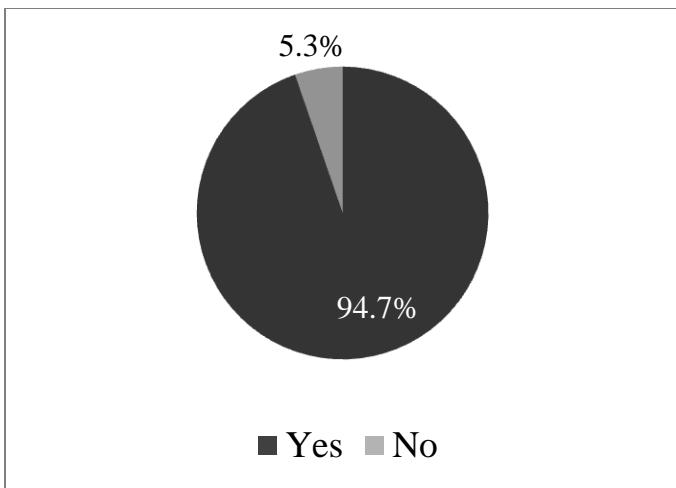


Figure 8. Percentage of snow goose hunters who hunted waterfowl in Illinois during the 2015-16 regular waterfowl season ( $n=815$ ).

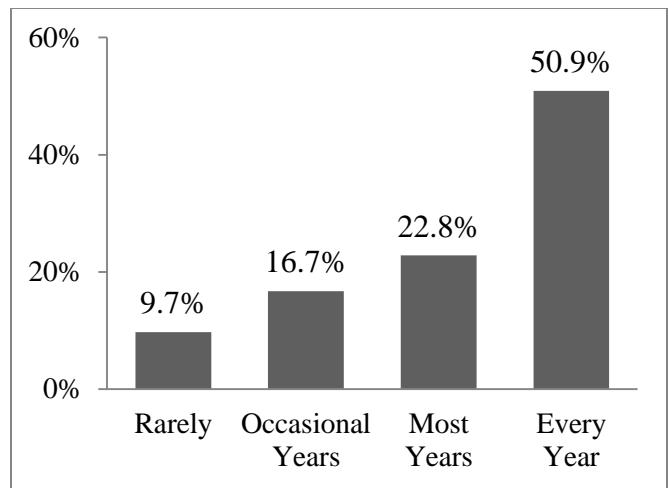


Figure 9. How often snow goose hunters hunt the spring snow goose season in Illinois ( $n=839$ ).

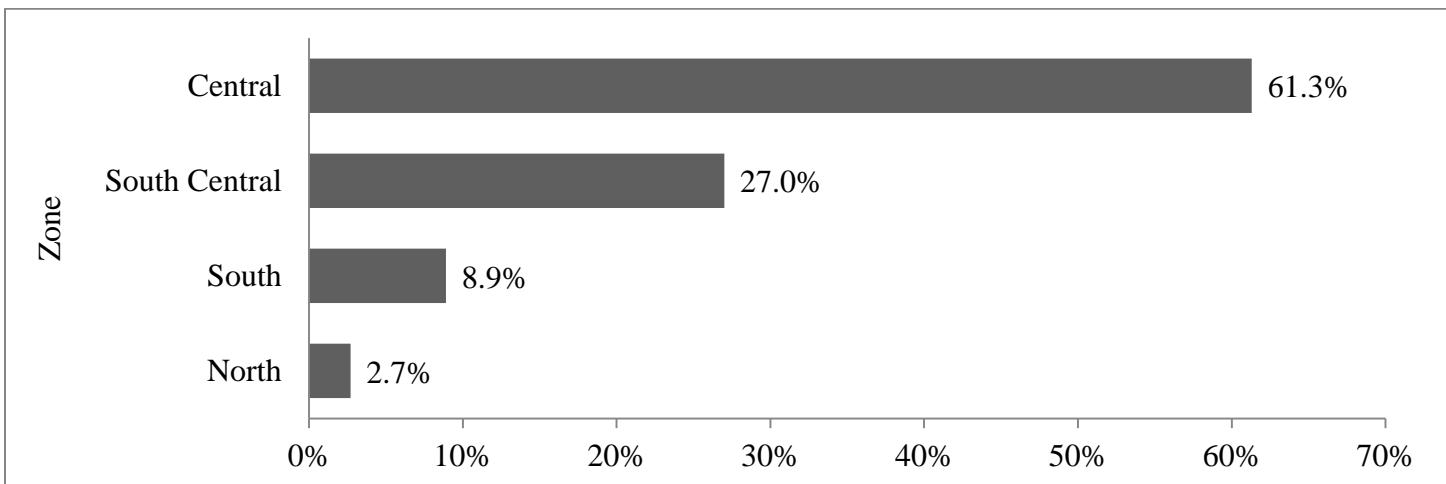


Figure 10. Zone hunted most often during the 2016 spring snow goose season ( $n=840$ ).

During the 2016 Illinois spring snow goose season, an estimated 2,187 snow goose participants hunted for 33,048 days and harvested 121,689 snow geese (Table 1). Of respondents who indicated hunting snow geese  $\geq 1$  day, 49% hunted 5 days or less (Figure 11). About fourteen percent of hunters reported not harvesting any snow geese, whereas 10% harvested  $\geq 100$  snow geese (Figure 12). The fewest number geese were harvested in January (<1%), more than half (61%) of the harvest occurred during February, and thirty-nine percent occurred in March (Table 2).

Mean harvest per hunter was 42.84 geese, and 47.25 geese per successful hunter (harvested  $\geq 1$  goose).

When hunters who harvested  $>100$  geese are excluded, mean geese harvested per hunter and geese harvested per successful hunter drop to 21.78 and 24.27 geese, respectively. A total of 5,570 snow geese were estimated to be downed but not retrieved by hunters this season. Almost half (48.7%) of respondents reported that harvesting snow geese is important, very important, or extremely important to their hunting experience (Table 3).

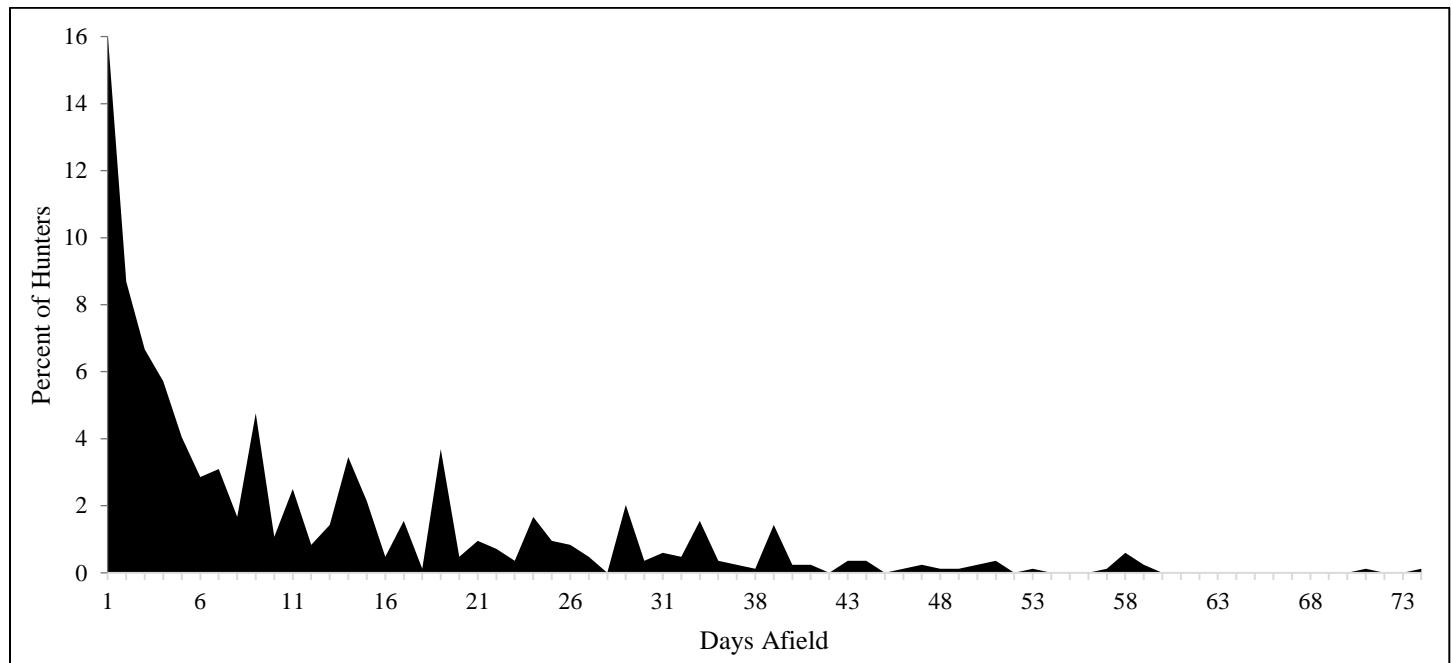


Figure 11. Distribution of days afield per hunter for Illinois' 2016 Conservation Order Light Goose season.

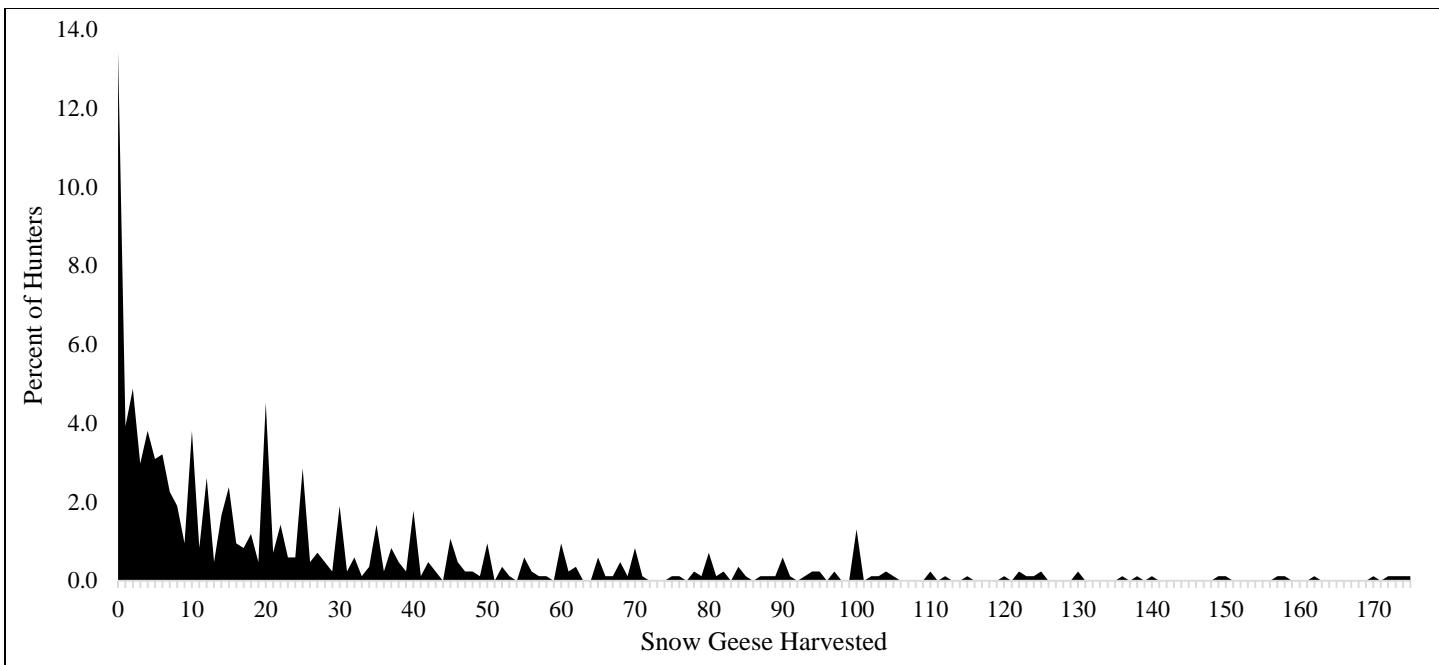


Figure 12. Distribution of snow geese harvested per hunter for Illinois' 2016 Conservation Order Light Goose season (Figure includes 95% of respondents; 5% harvested more than 175 snow geese).

Electronic calls were used by 82% of snow goose hunters; 79% reported using an unplugged shotgun during the spring snow goose season. A majority (66.5%) of hunters reported hunting up to  $\frac{1}{2}$  hour after sunset (Table 4). Thirty-five percent of hunters used magazine extensions when hunting snow geese (Figure 13), and 74% of them reported it resulted in greater harvest (Figure 14). Snow goose hunters hunted most frequently on private land with permission (69%), followed by private land for a fee (24%) (Figure 15). The general locations in Illinois in which snow goose hunters live and concentrated their efforts is presented in Appendix E.

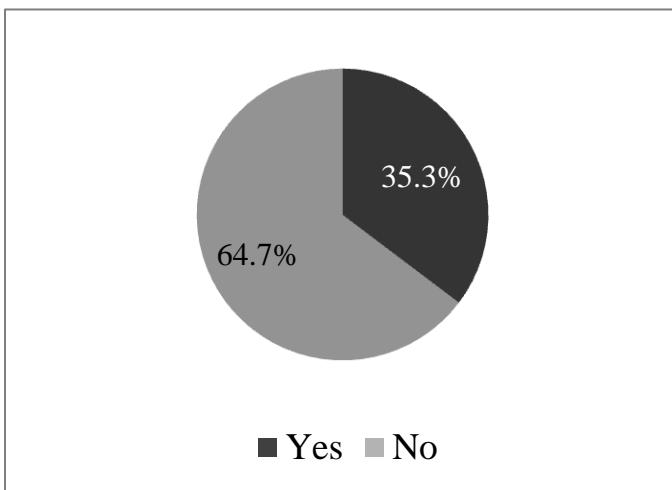


Figure 13. Hunters who used a magazine extension while hunting snow geese in 2016 ( $n=815$ ).

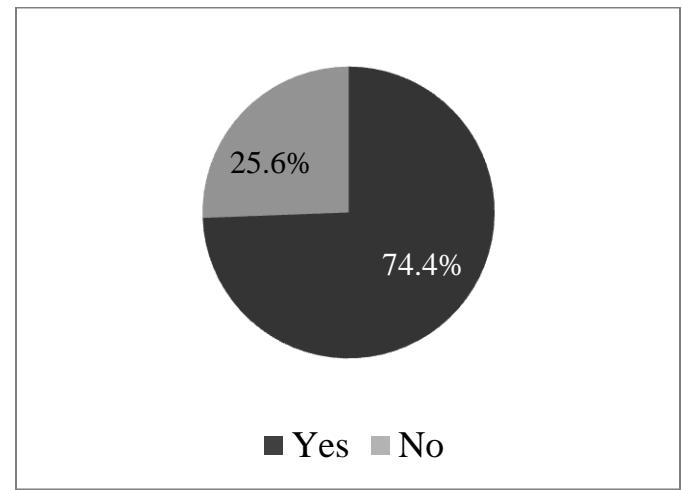


Figure 14. Did the extended magazine result in a greater harvest of snow geese? ( $n=285$ ).

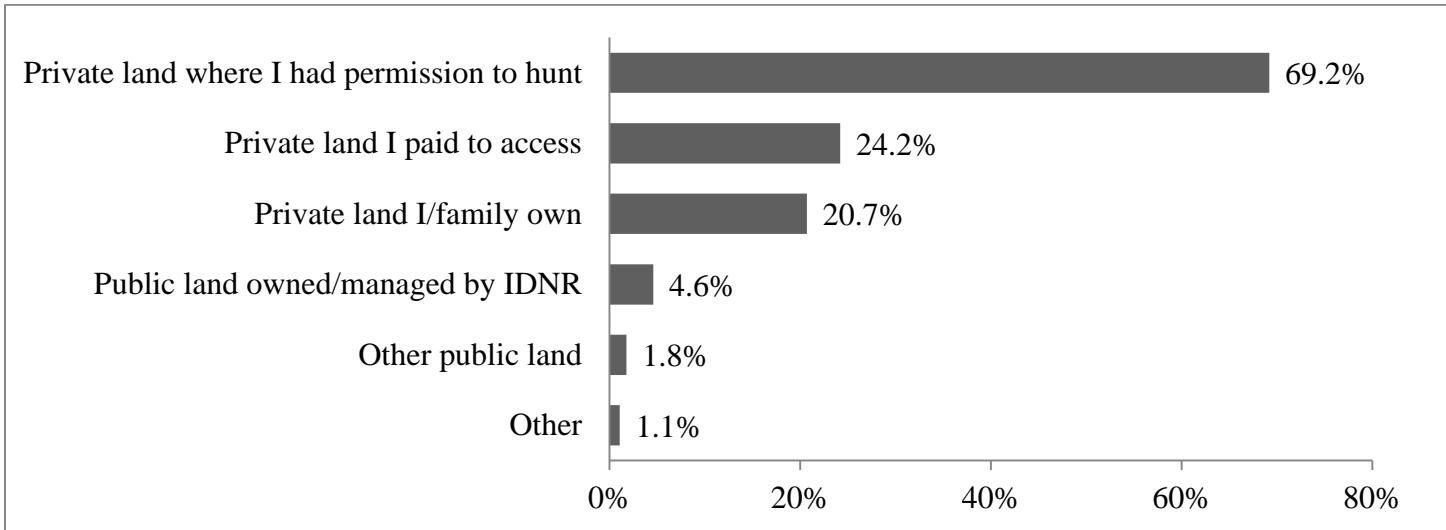


Figure 15. Type of land hunters hunt most often for snow geese ( $n=840$ ).

\*Percentages do not add up to 100 because some hunters indicated they hunted multiple types of land.

#### *Satisfaction with the 2016 Conservation Order Light Goose Season*

Most hunters who hunted snow geese during the 2016 Conservation Order seasons had either increased their snow goose hunting efforts (49.3%) or reported no change (33.4%) in effort (Table 5). Fifty-nine percent of snow goose hunters reported being satisfied with the number of snow geese they saw during the 2016 spring season and 59% were also satisfied with the weather during the 2016 spring snow goose season (Table 6).

Hunters were least satisfied with the number of snow geese they harvested (36%) and mid-season matched peak snow goose migration (39%) (Table 6). Approximately thirty-seven percent of hunters perceived an increase in the number of snow geese during the spring snow goose seasons over the past 5 years (Table 7.) However, 45.5% of hunters stated that the number of snow geese they harvested decreased over the past 5 years (Table 8). When asked to compare their hunting skills with other hunters, those that did not hunt during the 2016 spring Conservation Order seasons labeled their skills as either “Novice” (45%) or “Intermediate” (47%), whereas the majority of hunters labeled their skills as “Intermediate” (65%) (Table 9).

When asked about the dates of the 2016 Conservation light goose season, 71% of hunters felt that the dates were about right, whereas 16% thought they were too late (Figure 16). Active hunters’ top reasons why they are interested in snow goose hunting were to enjoy the outdoors (91.0%), extend their hunting season (86.4%) and to spend time with friends and family (84.5%) (Table 10). Most common reasons that prevent

respondents from hunting during the spring snow goose season were not enough time (56.2%), equipment is too much money (36.2%), and there is no place to hunt snow geese (22.9%) (Table 11). A majority of this year's hunters agreed that they enjoy discussing waterfowl hunting with friends (94.0%), waterfowl hunting is an important way for them to spend time with friends (92.4%), and they have close friendships based on a common interest in waterfowl hunting (89.1%) (Table 12).

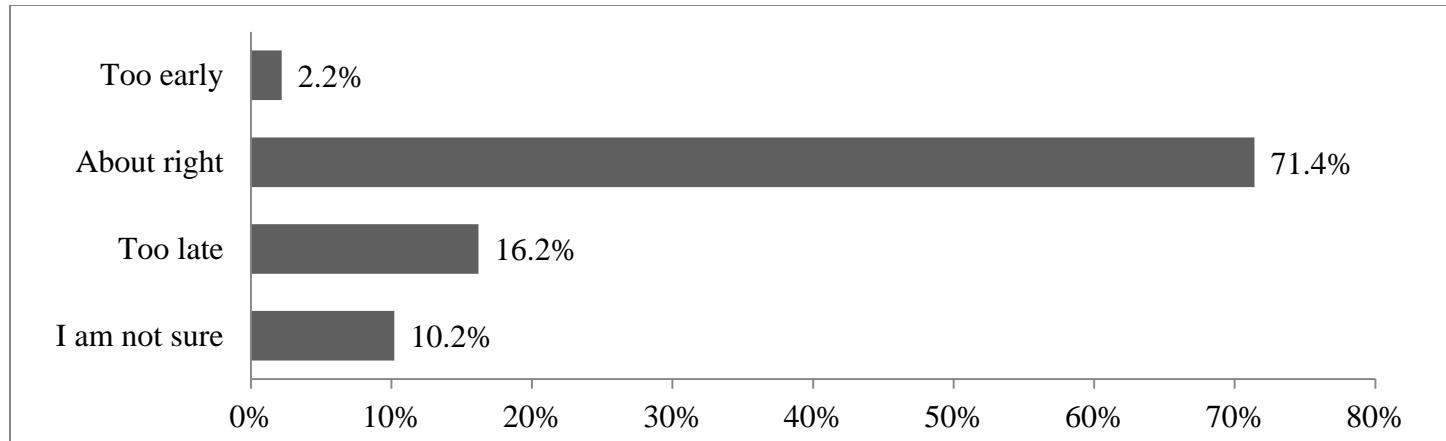


Figure 16. How hunters feel about the dates of the 2016 spring snow goose season for the area they hunted ( $n=811$ ).

Conservation Order season goose hunters were younger ( $M = 45$  years old) than non-hunters ( $M = 50$  years old), almost all (98.7%) were male (Figure 17), and most (74%) have introduced someone to snow goose hunting (Figure 18). These hunters have been hunting snow geese during the spring in Illinois for an average of 6.3 years, and have hunted regular waterfowl in Illinois for an average of 23.5 years. About seventeen percent of snow goose hunters used a guide or outfitter while hunting snow geese during the 2016 season (Figure 19). Almost thirty percent of snow goose hunters used spinning wing decoys, at an average of 6.6 decoys per hunter (Figure 20), and nearly half (48%) used a moving multi-decoy system (Vortex, etc.) to hunt snow geese (Figure 21). When asked what type(s) of snow goose decoys they use during a typical hunt: 84% had full-body decoys, 83% had rags/sock decoys, and 77% had shell decoys (Table 13).

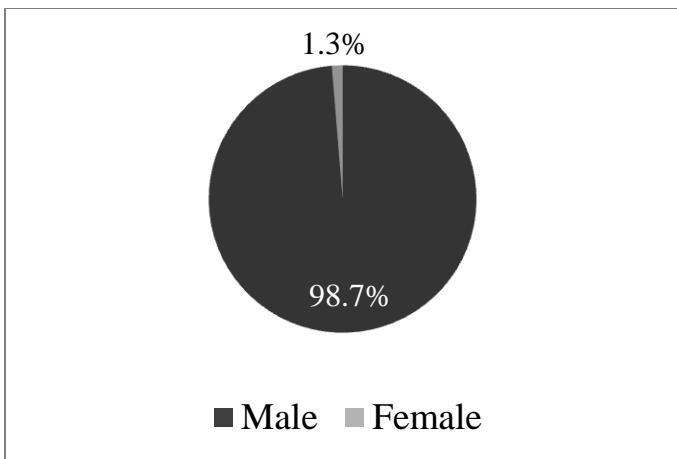


Figure 17. Gender of hunters ( $n=840$ ).

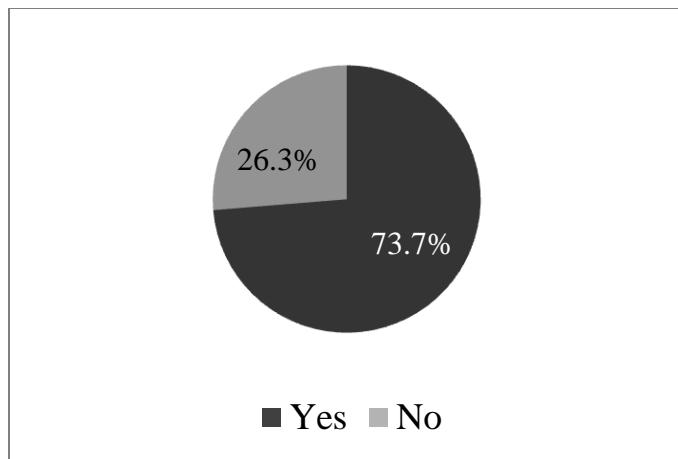


Figure 18. Hunters who have introduced someone to snow goose hunting ( $n=816$ ).

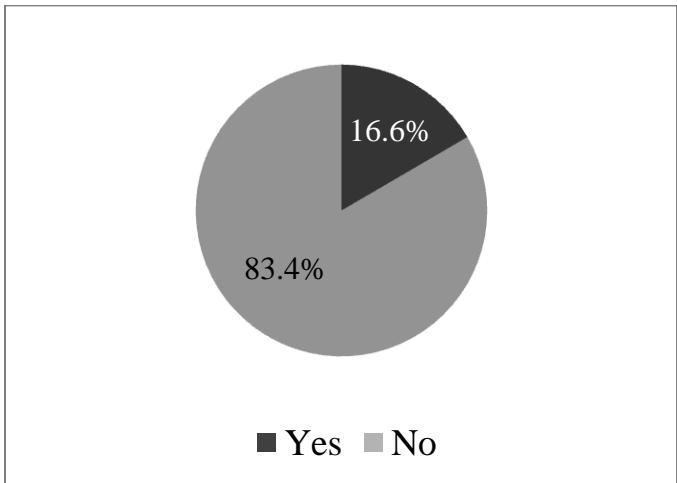


Figure 19. Hunters who used a guide or outfitter while hunting snow geese during 2016 ( $n=824$ ).

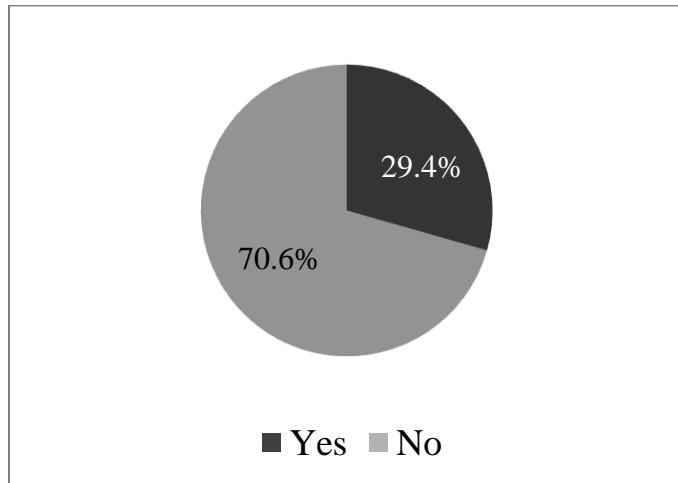


Figure 20. Hunters who used spinning-wing decoys ( $n=812$ ).

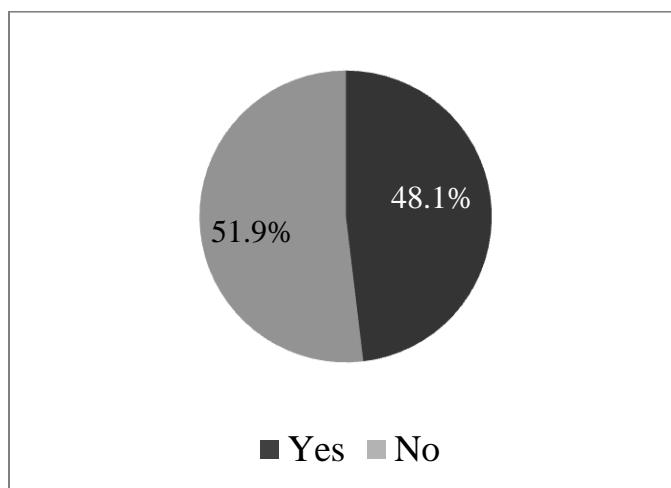


Figure 21. Hunters who used a moving multi-decoy system (Vortex, etc.) to hunt snow geese ( $n=792$ ).

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Table 1. Estimates of the number of hunters, days afield, and harvest of snow geese from 2001-2016 during the Illinois Conservation Order Light Goose season.

	Hunters	Days Afield	Harvest
2001	4,665	32,634	36,830
2002	5,107	31,204	17,875
2003	3,111	27,177	30,564
2004	5,976	44,306	37,189
2005	5,689	42,349	38,183 <sup>b</sup>
2006	5,543	53,154	59,799 <sup>b</sup>
2007	5,962 ± 1,147 <sup>a</sup>	39,170 ± 15,221	44,514 ± 25,794
2008	6,409 ± 1,046 <sup>a</sup>	50,471 ± 10,331	97,021 ± 40,811
2009	4,663 ± 950 <sup>a</sup>	33,947 ± 8,403	85,635 ± 36,479
2010	3,702 ± 820 <sup>a</sup>	25,581 ± 6,297	65,987 ± 42,519
2011	3,825 ± 826 <sup>a</sup>	30,753 ± 8,902	66,406 ± 30,962
2012	5,726 ± 943 <sup>a</sup>	51,763 ± 11,376	87,558 ± 41,316
2013	4,477 ± 1,192 <sup>a</sup>	45,724 ± 16,642	73,495 ± 52,191
2014	1,962 ± 188 <sup>a</sup>	21,170 ± 3,151	82,161 ± 22,291 <sup>b</sup>
2015	2,599 ± 206 <sup>a</sup>	30,360 ± 3,213	123,944 ± 29,265 <sup>b</sup>
2016 <sup>c</sup>	2,187 ± 81 <sup>a</sup>	33,048 ± 1,822	121,689 ± 9,716 <sup>b</sup>

<sup>a</sup>95% confidence intervals

<sup>b</sup>Harvest data are estimates for Conservation Order Season only.

<sup>c</sup>In January, hunters spent an estimated 728 days harvesting 3,042 Snow Geese in Central, South Central, and South zones.

Table 2. Estimated snow goose harvest by month during the Illinois Conservation Order Light Goose season from 2006-2016<sup>a</sup>.

	January <sup>a,b</sup>	February	March
2006	67	43,815	15,917
2007	2,006	32,564	9,944
2008	295	61,376	35,351
2009	77	58,761	26,797
2010	249	44,755	20,983
2011	-	48,323	18,082
2012	55	60,625	26,878
2013	476 <sup>c</sup>	45,080	22,233
2014	97	39,969	42,094
2015	20	65,454	58,470
2016	402 <sup>d</sup>	74,269	47,018

<sup>a</sup>January estimates include only North Zone harvest unless otherwise noted.

<sup>b</sup>Harvest data are estimates for Conservation Order Season only.

<sup>c</sup>Revised from reported 2013-14 harvest.

<sup>d</sup>In January, hunters spent an estimated 728 days harvesting 3,042 Snow Geese in Central, South Central, and South zones.

Table 3. The importance of harvesting snow geese to your hunting experience (*n*=1169).

	Number of Hunters	Percentage of Hunters (%)
Not at all important	137	11.7
Slightly important	200	17.1
Moderately important	263	22.5
Important	319	27.3
Very important	171	14.6
Extremely important	79	6.8

Table 4. Methods utilized by hunters to hunt snow geese during the 2016 hunting season (*n*=840).

Method	Number of Hunters	Percentage of Hunters (%)	Estimated Total Hunters in IL
Electronic calls	686	81.7	2,460
Unplugged shotguns	660	78.6	2,367
Hunting from sunset to 1/2 hour after sunset	559	66.5	2,005

Table 5. Change in Illinois hunters' spring snow goose hunting effort over the past 5 years (*n*=806).

	Number of Hunters	Percentage of Hunters (%)
Decreased Considerably	21	2.6
Decreased Moderately	47	5.8
Decreased Slightly	71	8.8
No Change	269	33.4
Increased Slightly	205	25.4
Increased Moderately	117	14.5
Increased Considerably	76	9.4

Table 6. Satisfaction with the 2016 Conservation Order Light Goose season in Illinois.

	Hunters*				Non-Hunters			
	n	Dissatisfied %	Unsure %	Satisfied %	n	Dissatisfied %	Unsure %	Satisfied %
Number of snow geese you saw.	834	25.8	15.0	59.2	274	30.3	37.2	32.5
Mid-season matched peak of snow goose migration.	829	26.7	34.7	38.6	266	30.5	51.1	18.4
Amount of shooting you got in.	832	48.2	11.1	40.8	261	55.2	29.1	15.7
Amount of time you spent snow goose hunting.	827	38.1	15.2	46.7	261	56.3	29.9	13.8
Number of snow geese you harvested.	827	51.3	12.6	36.1	259	57.2	30.1	12.7
The weather during the Conservation Order season.	828	22.1	19.3	58.6	263	29.7	42.2	28.1
Number of snow geese that migrated through areas you hunted.	829	30.6	18.6	50.8	265	35.8	36.6	27.6

\*People who reported they hunted snow geese 1 day or more in Illinois during the 2016 spring season.

Table 7. Illinois hunter comparison between the number of snow geese observed during 2015-16 to the last 5 years (n=840).

	Number of Hunters	Percentage of Hunters (%)
Decreased Considerably	58	7.2
Decreased Moderately	99	12.3
Decreased Slightly	162	20.2
No Change	187	23.3
Increased Slightly	134	16.7
Increased Moderately	100	12.5
Increased Considerably	62	7.7

Table 8. Illinois hunter comparison between the number of snow geese harvested during 2015-16 to the last 5 years ( $n=802$ ).

	Number of Hunters	Percentage of Hunters (%)
Decreased Considerably	81	10.1
Decreased Moderately	105	13.1
Decreased Slightly	179	22.3
No Change	209	26.1
Increased Slightly	140	17.5
Increased Moderately	51	6.4
Increased Considerably	37	4.6

Table 9. Ratings of skills compared to other hunters during the 2016 Conservation Order Light Goose season in Illinois.

	Hunters*				Non-Hunters			
	<i>n</i>	Novice %	Intermediate %	Expert %	<i>n</i>	Novice %	Intermediate %	Expert %
Skill calling in snow geese.	829	38.8	50.3	10.9	363	59.2	36.1	4.7
Snow geese harvested per shots taken.	828	15.3	59.0	25.7	349	42.7	43.5	13.8
Overall skill as a snow goose hunter.	826	18.7	65.0	16.3	355	45.1	46.5	8.4

\*People who reported they hunted snow geese 1 day or more in Illinois during the 2016 spring season.

Table 10. Reasons for wanting to hunt snow geese during the spring snow goose season.

	Hunters* ( $n=818$ )		Non-Hunters ( $n=339$ )	
	Number	Percentage (%)	Number	Percentage (%)
Enjoy the outdoors	744	91.0	272	80.2
Extend my hunting season	707	86.4	226	66.7
Spend time with friends/family	691	84.5	223	65.8
Protect the tundra	525	64.2	172	50.7
Reduce the population	483	59.0	174	51.3
To eat them	465	56.8	134	39.5
No bag limits	460	56.2	174	51.3
Get to use electronic calls	278	34.0	67	19.8
Other	35	4.3	12	3.5

\*People who reported they hunted snow geese 1 day or more in Illinois during the 2016 spring season.

Table 11. Reasons that prevent you from hunting during the spring snow goose season.

	Hunters* (n=603)		Non-Hunters (n=356)	
	Number	Percentage (%)	Number	Percentage (%)
Not enough time	339	56.2	152	42.7
Equipment is too much money	218	36.2	81	22.8
No place to hunt snow geese	138	22.9	142	39.9
No snow geese where I live/hunt	100	16.6	91	25.6
They're too hard to hunt	85	14.1	40	11.2
Other	78	12.9	43	12.1
Not enough people to hunt with	60	10.0	31	8.7
Don't know how to hunt them	21	3.5	20	5.6
Hunting techniques conflict with my ethics	4	0.7	6	1.7

\*People who reported they hunted snow geese 1 day or more in Illinois during the 2016 spring season.

Table 12. Hunters' attitudes toward waterfowl hunting.

	n	Hunters*			n	Non-Hunters		
		Disagree %	Unsure %	Agree %		Disagree %	Unsure %	Agree %
Waterfowl hunting is one of the most important activities in my life.	819	12.6	3.9	83.5	390	21.3	6.2	72.6
I spend a lot of time in the off-season planning for waterfowl hunting.	818	17.4	3.7	79.0	390	27.9	10.0	62.1
I would rather go waterfowl hunting than do any other recreation.	818	22.2	7.9	69.8	392	35.5	9.7	54.8
My closest friends are waterfowl hunters.	815	10.3	4.0	85.6	390	16.9	8.5	74.6
I spend a lot of time before the season scouting the area I will hunt.	815	29.8	8.0	62.2	391	40.4	10.7	48.8
I plan vacation time around waterfowl seasons.	811	26.5	8.4	65.1	385	43.6	6.5	49.9
Waterfowl hunting is an important way for me to spend time with my friends.	819	6.3	1.2	92.4	391	14.3	6.9	78.8
I enjoy discussing waterfowl hunting with friends.	817	3.7	2.3	94.0	391	10.2	4.1	85.7
Waterfowl hunting determines much of my lifestyle.	819	23.8	9.4	66.8	389	39.6	10.5	49.9
I have close friendships based on a common interest in waterfowl hunting.	819	7.4	3.4	89.1	391	19.4	7.2	73.4

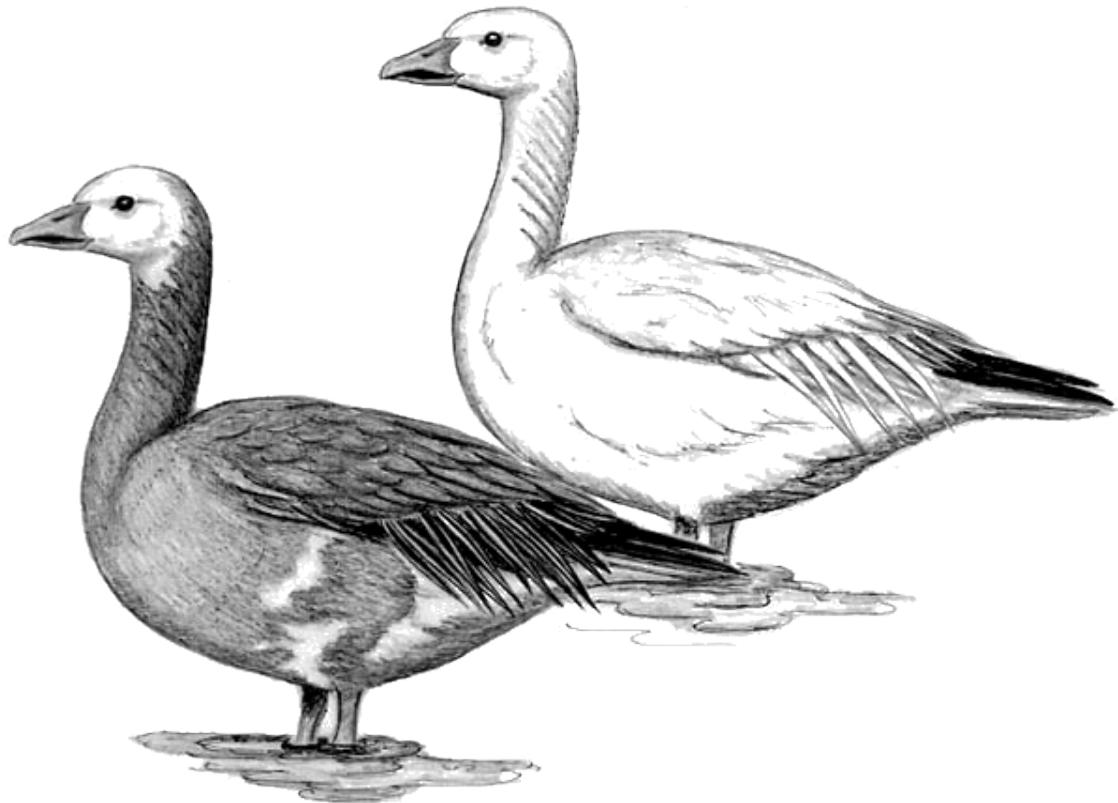
\*People who reported they hunted snow geese in Illinois during the 2016 spring season.

Table 13. Number of decoys typically used by Illinois snow goose hunters ( $n=840$ ).

Decoy Type	Number of Hunters	% of Total Hunters	Number of Decoys Used (by % of hunters)			
			0	1-500	501-1000	1001+
Full-bodied decoys	702	83.6	10.8	59.7	10.0	19.5
Rags/sock decoys	695	82.7	12.1	56.2	16.0	15.7
Shells	644	76.7	17.5	72.4	6.7	3.4
Kites/Flags	637	75.8	17.1	81.2	0.8	0.9
Silhouettes	542	64.5	43.5	50.0	3.9	2.6
Floater decoys	492	58.6	49.2	48.6	1.2	1.0

Appendix A

# Illinois Spring Snow Goose Hunter Survey 2016 Season



Illinois Department of Natural Resources

Division of Wildlife Resources  
and  
Illinois Natural History Survey



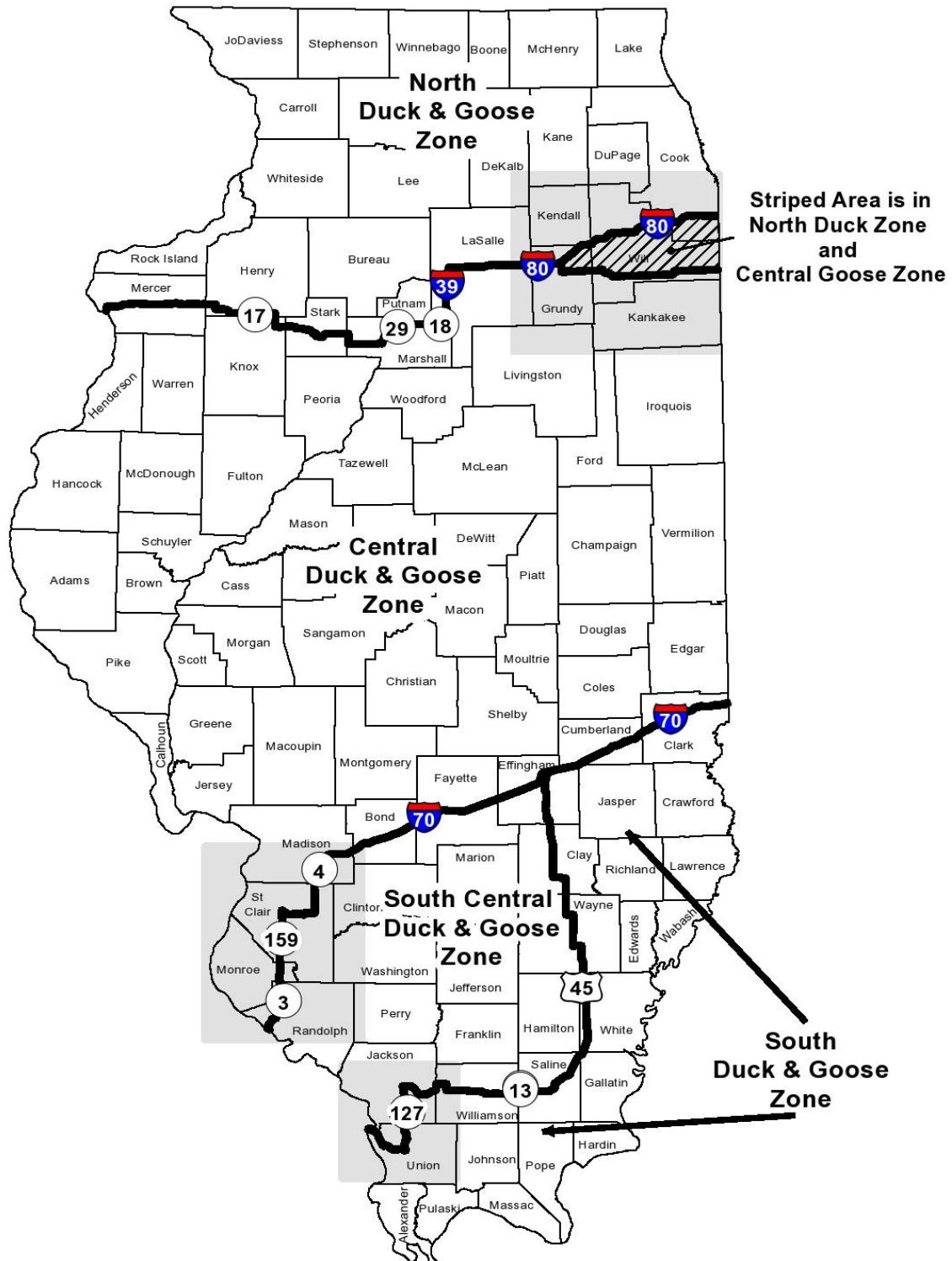
The Department of Natural Resources is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under the Illinois Compiled Statutes, The Wildlife Code, Chapter 520. Disclosure of information is voluntary. This study is funded by the federal Wildlife Restoration Fund through your purchase of sporting arms and ammunition.

**THANK YOU FOR YOUR COOPERATION!**

All of your responses will be kept confidential.

Please return this survey in the postage-paid return envelope provided.

Please refer to the county/zone map on this page to answer the question 6 in Section 1.



**Section 1. Conservation Order (Spring) Snow Goose Hunting Effort and Harvest.** Please take a few minutes to complete the following questionnaire to help us evaluate the 2016 Spring Conservation Order snow goose hunting season even if you did not hunt snow geese. All questions pertain to Illinois hunting. Please note: "Snow geese" also includes Ross' and Blue geese.

1. Did you hunt snow geese in Illinois during the **2016 Conservation Order (spring snow goose) season** (North Zone: **Jan. 16-March 31, 2016**; Central, South Central, and South Zones: **Feb. 1- March 31, 2016**)?

**Do not include** hunting snow geese during the regular Canada goose season. (Please check one.)

Yes       No (Please skip to **Question 16**)

2. Which of the following best describes how often you hunt **spring snow geese** in Illinois?

Every year       Most years       Occassional years       Rarely

3. In which zone did you **hunt snow geese most often** during the 2016 **spring snow goose season**? (Please check one.)

North Zone       Central Zone       South Central Zone       South Zone

4. On which of the following types of land did you hunt snow geese during the 2016 **spring snow goose season**? (Please check all that apply.)

Public land owned/managed by IDNR       Other public land

Private land I/family own       Private land where I had permission to hunt

Private land I paid to access       Other (Please identify): \_\_\_\_\_

5. Did you use a guide or outfitter while hunting snow geese during the 2016 **spring snow goose season**?

Yes       No

6. Please indicate **your** effort- not your hunting party's effort- and harvest in the following table. **Include only harvest that occurred during the spring snow/blue and Ross' goose season; do not include snow goose harvest during the regular Canada goose seasons.** Report the counties in which you hunted, number of days you hunted, and geese harvested for the time period in which you hunted snow geese. Include only geese you harvested and days you hunted in Illinois. Count part of 1 day as 1 day. **Please refer to the county/zone map on the inside cover to answer this question.**

	County hunted	Days hunted	Geese harvested	Geese hit, but not retrieved
January (North only):				
February:				
March:				

7. Please indicate which of the following methods you used to hunt snow geese during the **2016 spring snow goose season**? (Please check all that apply)

Electronic calls       Unplugged shotgun       Hunting from sunset to ½ hour after sunset

8. Did you use a magazine extension during the **spring snow goose season**?  Yes  No

8a. If "Yes," did the extended magazine result in a greater harvest of geese?  Yes  No

9. Approximately how many of each of the following types of decoys do you use during a typical hunt?

	Number of decoys used					
	None	1-100	101-250	251-500	501-1000	1000+
Kites/Flags						
Rags/sock decoys						
Shells						
Full-bodied decoys						
Floater decoys						
Silhouettes						

10. Did you use a **spinning-wing decoy** to hunt snow geese?  Yes  No (**skip to question 11**)

10a. If "Yes," how many spinning-wing decoys did you typically use?  Decoys

11. Did you use a moving multi-decoy system (**Vortex, etc.**) to hunt snow geese?  Yes  No

12. How does the number of snow geese you saw during the **spring snow goose season** compare to the **last 5 years**? Please circle the number that matches your response.

Decreased Considerably	Decreased Moderately	Decreased Slightly	No Change	Increased Slightly	Increased Moderately	Increased Considerably
1	2	3	4	5	6	7

13. How does the number of snow geese you harvested during the **spring snow goose season** compare to the **last 5 years**? Please circle the number that matches your response.

Decreased Considerably	Decreased Moderately	Decreased Slightly	No Change	Increased Slightly	Increased Moderately	Increased Considerably
1	2	3	4	5	6	7

14. How has your spring snow goose hunting **effort changed over the past 5 years**? Please circle the number that matches your response.

Decreased Considerably	Decreased Moderately	Decreased Slightly	No Change	Increased Slightly	Increased Moderately	Increased Considerably
1	2	3	4	5	6	7

15. How did you feel about the dates of the 2016 Conservation light goose season for the area where you hunted most often? (Please circle **one**.)

Too early	About right	Too late	I am not sure
1	2	3	4

16. Have you ever introduced someone to snow goose hunting?

Yes       No

17. Please identify why you're interested in hunting snow geese during the **spring snow goose season**.  
(Please check **all that apply**.)

- No bag limits       Reduce the population       Get to use electronic calls  
 To protect the tundra       Extend my hunting season       To eat them  
 Enjoy the outdoors       Spend time with friends/family  
 Other (Please identify) \_\_\_\_\_

18. Please check which of the following prevents you from hunting during the **spring snow goose season**.  
(Please check **all that apply**.)

- No place to hunt snow geese       No snow geese where I live/hunt  
 Not enough time       They're too hard to hunt  
 Equipment is too much money       Don't know how to hunt them  
 Not enough people to hunt with       Hunting techniques conflict with my ethics  
 Other (Please identify) \_\_\_\_\_

**Section 2. Hunting Skills and Satisfaction.** Please tell us about yourself as a hunter by answering the following statements.

1. Please answer the following questions regarding your attitudes toward waterfowl hunting.

	Strongly Disagree	Disagree	Slightly Disagree	Unsure	Slightly Agree	Agree	Strongly Agree
Waterfowl hunting is one of the most important activities in my life.	1	2	3	4	5	6	7
I spend a lot of time in the off-season planning for waterfowl hunting.	1	2	3	4	5	6	7
I would rather go waterfowl hunting than do any other recreation.	1	2	3	4	5	6	7
My closest friends are waterfowl hunters.	1	2	3	4	5	6	7
I spend a lot of time before the season scouting the area I will hunt.	1	2	3	4	5	6	7
I plan vacation time around waterfowl seasons.	1	2	3	4	5	6	7
Waterfowl hunting is an important way for me to spend time with my friends.	1	2	3	4	5	6	7
I enjoy discussing waterfowl hunting with friends.	1	2	3	4	5	6	7
Waterfowl hunting determines much of my lifestyle.	1	2	3	4	5	6	7
I have close friendships based on a common interest in waterfowl hunting.	1	2	3	4	5	6	7

2. Please rate **your skills** as compared to other snow goose hunters.

	Novice	Intermediate			Expert	
Skill calling in snow geese	1	2	3	4	5	6
Snow geese harvested per shots taken	1	2	3	4	5	6
Overall skill as a snow goose hunter	1	2	3	4	5	6

3. Please rate how important harvesting snow geese is to your hunting experience by circling the number that matches your response.

Not at all Important	Slightly Important	Moderately Important	Important	Very Important	Extremely Important
1	2	3	4	5	6

4. Please rate your **SATISFACTION with the 2016 spring Conservation Order (snow goose) season in Illinois** for each of the following by circling the number that matches your response.

	Very Dissatisfied	Dissatisfied	Unsure	Satisfied	Very Satisfied
Number of snow geese you saw.	1	2	3	4	5
Mid-season matched peak of snow goose migration.	1	2	3	4	5
Amount of shooting you got in.	1	2	3	4	5
Amount of time you spent snow goose hunting.	1	2	3	4	5
Number of snow geese you harvested.	1	2	3	4	5
Weather during the season.	1	2	3	4	5
Number of snow geese that migrated through areas you hunted.	1	2	3	4	5

**Section 3. Regular Waterfowl Seasons.** The following questions allow us to understand more about the hunters who hunt waterfowl in Illinois. This section refers to those seasons completed before the Conservation Order Light Goose season begins.

1. Which of the following best describes how often you hunt **waterfowl other than** light geese in Illinois?

Every year     Most years     Occassional years     Rarely     Never   

**If you have never hunted for any other waterfowl in Illinois, please go to Section 4.**

2. Did you hunt waterfowl (ducks and/or geese) in Illinois during the **2015-16 regular waterfowl seasons?**

Yes     No (Please skip to **Section 4**)

3. Which of the following seasons did you participate in? (Please check **all that apply**.)

- September Teal season
- September Canada Goose season
- Regular Duck season
- Regular Goose season

4. In which zone did you hunt waterfowl most often during the 2015-16 regular waterfowl seasons?  
(Please check one.)

North Zone

Central Zone

South Central Zone

South Zone

5. Which did you hunt most often? (Please check one.)

Ducks

Geese

Both ducks and geese equally

6. Did you harvest any snow geese during the 2015-16 Regular Goose Season in Illinois?

Yes (How many? \_\_\_\_\_)       No

**Section 4. Background Information.** The following questions allow us to understand more about the people involved in snow goose hunting in Illinois. All responses are kept confidential.

1. How many years have you been waterfowl hunting in Illinois?      \_\_\_\_\_ Years

2. How many years have you been hunting during the spring snow goose season in Illinois?      \_\_\_\_\_ Years

3. Please give your age.      \_\_\_\_\_ Years

4. What is your gender?      \_\_\_\_\_ Male      \_\_\_\_\_ Female

5. What is your county of residence? \_\_\_\_\_ County

**Comments:**



**Federal Aid Project**  
funded by your purchase of  
hunting equipment

**THANK YOU FOR YOUR TIME AND ASSISTANCE!**  
**Please return this survey in the postage-paid envelope provided.**

The Illinois Department of Natural Resources receives federal assistance and therefore must comply with federal anti-discrimination laws. In compliance with the Illinois Human Rights Act, the Illinois Constitution, Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act as amended, and the U.S. Constitution, the Illinois Department of Natural Resources does not discriminate on the basis of race, color, sex, national origin, age, or disability. If you believe you have been discriminated against in any program, activity, or facility, please contact the Equal Employment Opportunity Officer, Department of Natural Resources, One Natural Resources Way, Springfield, IL 62701-1787, (217) 782-7616 or the Officer of Human Resources, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

## Appendix B



# ILLINOIS NATURAL HISTORY SURVEY

Prairie Research Institute  
University of Illinois at Urbana-Champaign

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April, 2016

Dear Snow Goose Hunter,

You have been chosen as one of a select group of Illinois snow goose hunters to provide information about your snow goose hunting activities. Enclosed is a survey questionnaire regarding your snow goose hunting experiences in Illinois during the 2016 Conservation Order (spring) season. We ask you to please take a few moments to complete this questionnaire and return it in the envelope provided **even if you were not successful or did not hunt snow geese during the Conservation Order (spring) season.**

**The information you and other selected hunters provide our biologists is vital for proper snow goose management and allows us to safeguard snow goose populations while maximizing hunting opportunities.**

This survey is limited to those hunters selected. Please take a few minutes to complete the enclosed questionnaire and return it in the postage paid envelope provided.

You may access the results of this and other studies of hunters and hunting in Illinois at <http://www.inhs.illinois.edu/programs/hd/> or like us on Facebook at the Human Dimensions Research Program - Illinois Natural History Survey page to be notified when results are available.

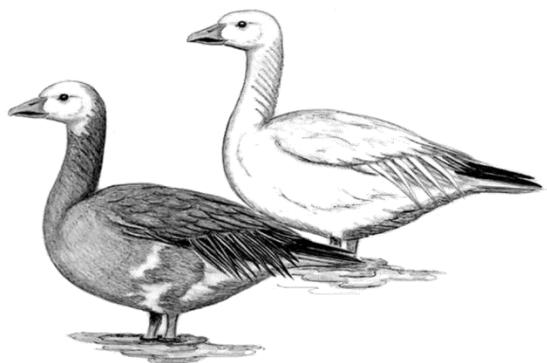
You may also find information about Illinois Department of Natural Resources wildlife management programs and wildlife in Illinois at <http://dnr.state.il.us/orc/wildliferesources/>.

If you have questions regarding this study, please call us at (217) 244-5121.

Thank you for your time and assistance.

Sincerely,  
A handwritten signature in black ink, appearing to read "Craig A. Miller".

Craig A. Miller  
Human Dimensions Research Program



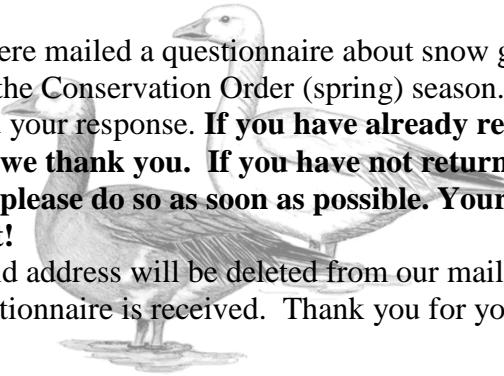
1816 South Oak Street,  
Champaign, Illinois 61820 USA

## Appendix C

Dear Waterfowl Hunter,

Recently you were mailed a questionnaire about snow goose hunting during the Conservation Order (spring) season. We have not yet received your response. **If you have already returned the questionnaire, we thank you. If you have not returned the questionnaire, please do so as soon as possible. Your input is very important!**

Your name and address will be deleted from our mailing list when your questionnaire is received. Thank you for your cooperation.



## Appendix D



# ILLINOIS NATURAL HISTORY SURVEY

Prairie Research Institute  
University of Illinois at Urbana-Champaign

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May, 2016

Dear Waterfowl Hunter,

You recently received a survey questionnaire requesting information about snow goose hunting activities during the 2016 Conservation Order (spring) season. If you recently returned your questionnaire, we thank you. If not, please take a few minutes to complete the enclosed questionnaire and return it in the envelope provided **even if you were not successful or did not hunt snow geese during the Conservation Order (spring) season.**

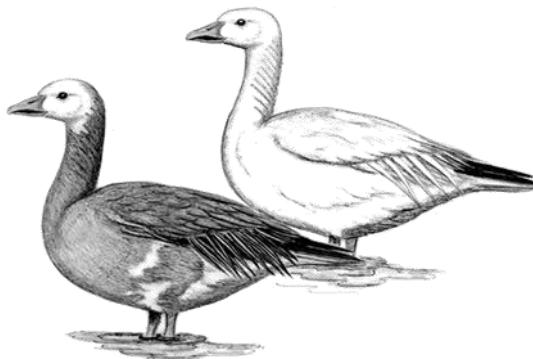
**The information you and other selected hunters furnish our biologists is vital for proper waterfowl management and allows us to safeguard waterfowl populations while maximizing hunting opportunities.**

Please take a few minutes to complete the portions of the questionnaire that pertain to you and return it in the envelope provided. If you have any questions please call 217-244-5121.

Thank you for your time and assistance.

Sincerely,  
A handwritten signature in black ink, appearing to read "Craig A. Miller".

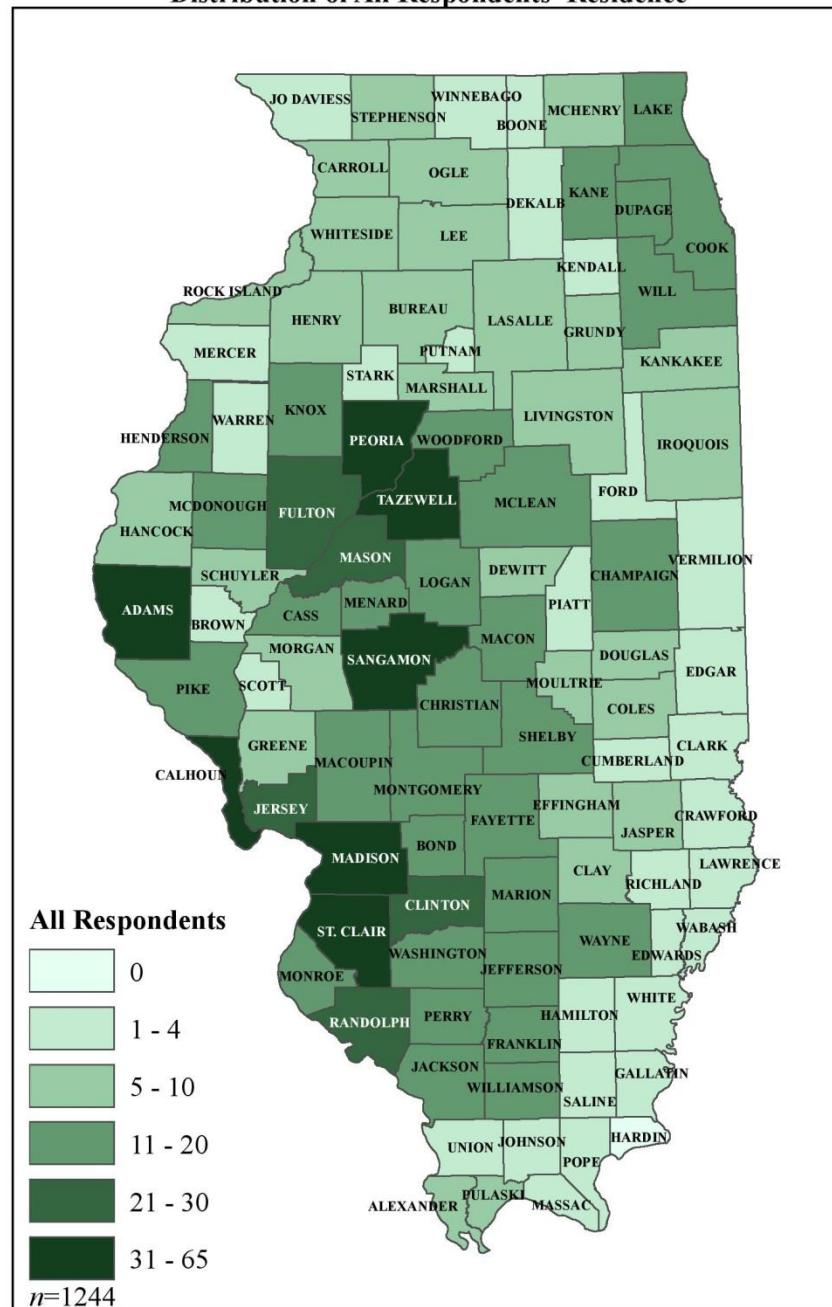
Craig A. Miller  
Human Dimensions Research Program



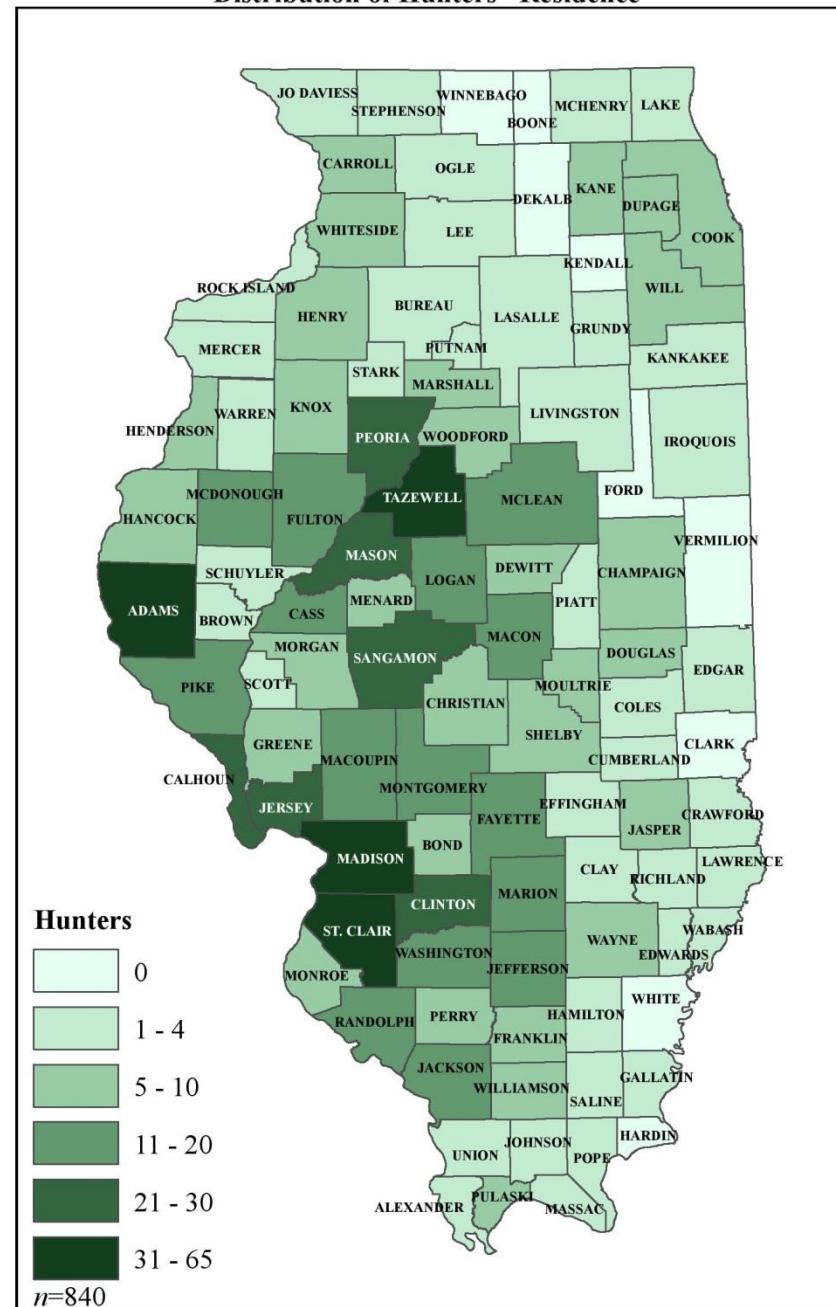
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Champaign, Illinois 61820 USA

## Appendix E

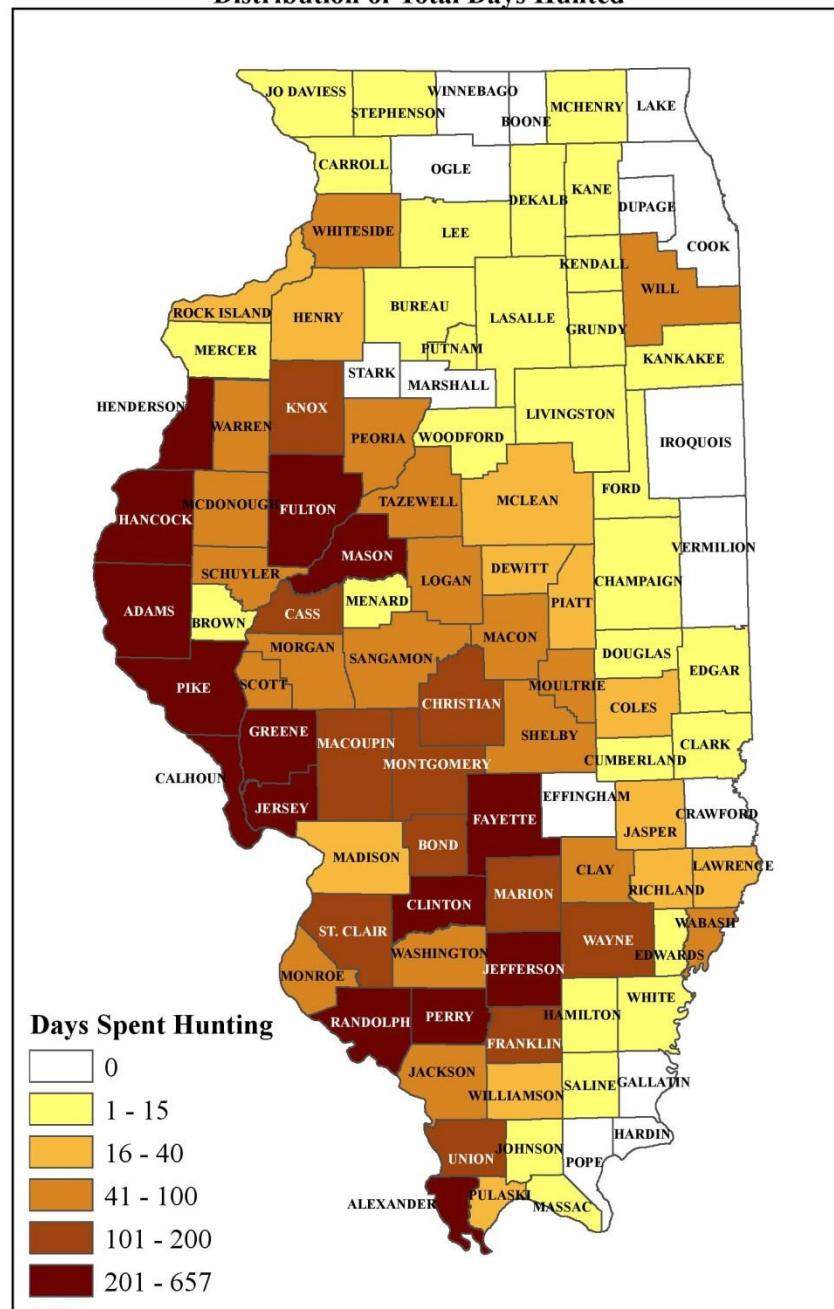
**Distribution of All Respondents' Residence**



**Distribution of Hunters' Residence**



## **Distribution of Total Days Hunted**



### **Distribution of Total Harvest**

