

**HumanDimensions**  
Research Program

# Results of the 2006 Illinois Conservation Order Snow Goose Hunter Survey



Federal Aid Project  
Number W-112-R-15  
Job Number 101.6  
Wildlife Restoration  
Oct. 1, 2005-Sept. 30, 2006

**Sam Flood**, Acting Director  
Illinois Department of Natural  
Resources

**Paul Vehlow**  
Federal Aid Coordinator

**John E. Buhnerkempe**  
Chief, Division of Wildlife  
Resources

William L. Anderson  
Program Leader and Principal Investigator  
Human Dimensions Research Program  
Illinois Natural History Survey

Prepared by  
William L. Anderson,  
and Linda K. Campbell



November 3, 2006

RESULTS OF THE  
2006 ILLINOIS CONSERVATION ORDER SNOW GOOSE  
HUNTING SEASON SURVEY

JOB COMPLETION REPORT

WILDLIFE HARVEST AND  
HUMAN DIMENSIONS RESEARCH PROGRAM

STATE OF ILLINOIS

PROJECT NUMBER: W-112-R-15  
STUDY 101  
JOB NO. 101.6

Prepared by  
William L. Anderson and Linda K. Campbell  
Illinois Natural History Survey  
Champaign, IL  
November 3, 2006

Federal Aid in Wildlife Restoration  
W-112-R-15

Illinois Department of Natural Resources

Sam Flood, Acting Director  
Illinois Department of Natural Resources

John E. Buhnerkempe, Chief  
Division of Wildlife Resources

Equal opportunity to participate in programs of the Illinois Department of Natural Resources (IDNR) and those funded by the U.S. Fish and Wildlife Service and other agencies is available to all individuals regardless of race, sex, national origin, disability, age, religion or other non-merit factors. If you believe you have been discriminated against, contact the funding source's civil rights office and/or the Equal Employment Opportunity Officer, IDNR, One Natural Resources Way, Springfield, IL 62702-1271; 217/785/0067; TTY 217/782/9175.

## ABSTRACT

Participant surveys are necessary to estimate harvest during the Conservation Order snow goose hunting season and overall effectiveness of this conservation program. We selected a random sample of 2,000 goose hunters, and mailed them a 4-page questionnaire. From this sample, 81 questionnaires were undeliverable, and 1,198 were filled out, returned, and useable (62% response). The 2006 estimate of 5,543 conservation order snow goose hunters was similar to the 5,689 hunters estimated for the 2005 season. Days of hunting were estimated at 53,154 in 2006, which is 26% greater than the estimate of 42,349 days in 2005. An estimated 74,268 snow geese were harvested during the 2006 Conservation Order snow goose season. This represents a 69% increase over the 2005 estimated harvest of 43,839 snow geese. Fifty-nine percent of the 2006 harvest occurred in the Central and South Zones during February. We examined hunting activities and tactics of snow goose hunters during the Conservation Order season, plus some personal characteristics of these hunters.

## OBJECTIVE

To determine activity, harvest, and attitudes of hunters participating each year in the Light Goose Conservation Action.

## METHODS

A sample of 2,000 goose hunters was randomly selected from the population of residents who registered with the National Migratory Bird Harvest Information Program (HIP) in Illinois for the 2005-2006 season. On 31 March 2006, these potential Conservation Order snow goose hunters were mailed a 4-page, self-administered questionnaire and cover letter (Appendices A and B). Nonrespondents were mailed a postcard reminder (Appendix B), a second copy of the questionnaire, and finally another postcard reminder, at 14-25 day intervals. The questionnaire was not deliverable to 81 recipients, thus the sample population was reduced to 1,919 individuals. A total of 1,200 questionnaires were returned, of which 1,198 were usable (62% response). Estimates of number of hunters, days of hunting, and snow geese harvested were based on confirmed sales of

55,734 Illinois Migratory Waterfowl Stamps (2005-2006 series) as of 13 September 2006. The estimated snow goose harvest was adjusted for reporting bias with the adjustment factor 0.478 (Anderson et al. 1996). We entered and analyzed data using SPSS.

## SEASON LENGTHS AND BAG LIMITS

Dates for the 2006 Conservation Order Light Goose seasons were 9 January-31 March in the North Zone and Northern Illinois Quota Zone, and 1 February-31 March in the Central Zone, Central Illinois Quota Zone, South Zone, and Southern Illinois Quota Zone. The regular Canada goose season closed 31 January in the Central and South Zones, thereby allowing the Conservation Order season to open 1 February in these zones.

## RESULTS

The 1,198 respondents included in this survey are listed by county of residence in Appendix C. Of these respondents, 119 (9.9%) reported hunting during the Conservation Order snow goose season in Illinois in 2006. These hunters were 100% male (n=119), and their average age was 41 years (n=116). Forty-eight percent were 31 to 50 years old.

The 119 hunters in the sample equates to an estimated 5,543 active hunters statewide during the Conservation Order snow goose season in Illinois in 2006 (Table 1). These hunters expended 53,154 days hunting, and they harvested an estimated 74,268 snow geese. An estimated 8,892 snow geese were hit but not retrieved. The 2006 estimates indicated a small decrease in the number of snow goose hunters, but a 26% increase in days of hunting, and a 69% increase in harvest, compared to the previous (2005) season. Seventy-two percent of hunters were successful in harvesting  $\geq 1$  snow goose during the season. The harvest rate during the 2006 hunt was 13.4 snow geese per hunter or 18.6 snow geese per successful hunter, compared to 7.7 geese per hunter and 10.7 geese per successful hunter in 2005. The South Zone accounted for 47% of total days of hunting and 56% of total harvest (Table 2).

For the 1,079 respondents who did not hunt during the Conservation Order snow goose season, the most frequent reasons given for not participating included “No place to hunt snow geese”, “No snow geese in my area”, “Did not have the proper equipment” , and “Not enough time” (Table 3).

Conservation Order snow goose hunters reported harvesting 0 geese on 38% of their days of hunting (Table 4). They harvested more than 20 geese per day on about 4% of their days. Almost all of the snow goose hunters used either pump action (43%) or auto loading (53%) shotguns (Table 5). Most snow goose hunters took advantage of the liberal regulations that allow the use of electronic calls (83%) and unplugged shotguns (82%), and to hunt until ½ hour after sunset (73%). The use of electronic calls and unplugged shotguns contributed more to total harvest than hunting until ½ hour after sunset (Table 6). Thirty-eight percent of snow geese harvested during the Conservation Order season were taken with the first shell in the gun (Table 7). The 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> shells in aggregate accounted for only 16% of harvest.

In terms of hunting technique, “Decoying over land” was by far the most popular for the Conservation Order season in 2006, being used by 82% of the hunters (Table 8). Although the hunters reported variable success with the various techniques listed (Sneaking/creeping, Decoying over water, Decoying over land, and Pass shooting), at least 59% of them indicated that each method was either Moderately or Extremely successful. Snow goose hunters reported using large numbers of decoys, with rags and silhouettes being used in the largest numbers (average per hunter was 266 and 315, respectively, Table 9). Similar to the reported success of hunting techniques, snow goose hunters reported variable success using different types of decoys, with majorities of hunters reporting moderate success with all decoy types (Table 9). Eleven snow goose hunters (9% of hunters) reported hunting without any type of decoy. Hunters that did not use decoys accounted for 3% of Conservation Order snow goose harvest.

The unlimited bag limit on snow geese during the Conservation Order season contributed “Greatly” to the satisfaction of 40% of the hunters. At the other extreme, 41% of the hunters said the unlimited bag limit did not contribute at all to their satisfaction (Table 10).

Ninety-three percent of 2006 Conservation Order snow goose hunters said they plan to participate in the Conservation Order season in Illinois in 2007 (Table 11). For all survey respondents, 54% (n = 1,022) said they plan to hunt snow geese during the 2007 Conservation Order season.

## REFERENCES

Anderson, W.L., D.D. Thornburg, and R.M. Whitton. 1996. Estimating Canada goose harvest in southern Illinois quota zones. *Wildlife Society Bulletin* 24:233-237.

Table 1. Estimates of hunters, days hunted, and snow goose harvest during the Conservation Order snow goose seasons in Illinois in 1999-2006.

Category	1999	2000	2001	2002	2003	2004	2005	2006
Hunters	1,076	865	4,665	5,107	3,111	5,976	5,689	5,543
Days Hunted	3,756	6,643	32,634	31,204	27,177	44,306	42,349	53,154
Harvest	2,254	7,612	36,830	17,875	30,564	37,189	43,839	74,268

Table 2. Reported snow goose harvest and days hunted by waterfowl zone and month during the Conservation Order season, in Illinois in 2006. Percentage of total harvest and days hunted for each zone and month combination are presented in parentheses in each cell.

Waterfowl Zone	January		February		March		Season	
	Harvest	Days Hunted	Harvest	Days Hunted	Harvest	Days Hunted	Harvest	Days Hunted
North	3 (1%)	6 (1%)	0 (0%)	7 (1%)	0 (0%)	5 (1%)	3 (1%)	18 (2%)
Central	365 (11%)	165 (14%)	655 (20%)	262 (23%)	434 (13%)	162 (14%)	1,454 (44%)	589 (51%)
South	286 (9%)	113 (10%)	1,316 (39%)	330 (29%)	282 (8%)	93 (8%)	1,884 (56%)	536 (47%)
Statewide	654 (20%)	284 (25%)	1,971 (59%)	599 (52%)	716 (21%)	260 (23%)	3,341 (100%)	1,143 (100%)

Table 3. Reasons for not hunting during the Conservation Order snow goose season in Illinois in 2006 (n=1,079).

Reason	Percent of Respondents	n
No place to hunt snow geese	40%	434
No snow geese in my area	36	384
Did not have the proper equipment	31	331
Not enough time	31	337
Did not know any other hunters who hunted snow geese	20	219
Not enough knowledge of snow goose habits	18	189
Not interested	18	199
Other	5	54

Table 4. Daily hunting success of hunters during the Conservation Order snow goose season in Illinois in 2006 (n = 119).

Habitat	Days Hunted	% of Reported Days
Harvesting 0 geese	370	38%
Harvesting 1-5 geese	321	33
Harvesting 6-10 geese	181	19
Harvesting 11-20 geese	60	6
Harvesting 21-30 geese	26	3
Harvesting $\geq$ 31 geese	15	1

Table 5. Types of shotguns used by hunters during the Conservation Order snow goose season in Illinois in 2006 (n=113).

Type of Shotgun	Percentage of Hunters
Auto loader	53%
Pump action	43
Double barrel	3
Single shot	1

Table 6. Methods used to hunt snow geese and harvest using each method during the Conservation Order snow goose season in Illinois in 2006.

Method	n	% Used	Estimated Hunters That Used Each	% Successful <sup>a</sup>	Estimated Harvest
Electronic calls	103	83%	3,929	56%	30,787
Unplugged shotgun	101	82	3,874	61	35,655
Hunting from sunset to ½ hour after sunset	89	73	3,044	51	17,294

<sup>a</sup> Harvested  $\geq$ 1 snow goose.

Table 7. Snow geese harvested with each shell in the shotgun during the Conservation Order snow goose season in Illinois in 2006.

Shotgun Shell Number	n	% of Harvest	Estimated Harvest
1 <sup>st</sup>	73	38%	28,222
2 <sup>nd</sup>	64	29	21,538
3 <sup>rd</sup>	58	17	12,626
4 <sup>th</sup>	38	9	6,684
5 <sup>th</sup>	22	5	3,713
6 <sup>th</sup>	8	2	1,485

Table 8. Percentages of hunters using various hunting techniques and the effectiveness of each technique during the Conservation Order snow goose season in Illinois in 2006.

Technique	% of snow goose hunters that used each	Effectiveness		
		Not	Moderately	Extremely
Sneaking/creeping	30%	14%	53%	33%
Decoying over water	33	41	46	13
Decoying over land	82	31	50	19
Pass shooting	43	28	55	18
Other	2	50	50	0

Table 9. Types of decoys used during the Conservation Order snow goose season in Illinois in 2006 and effectiveness of each.

Decoy Type	n	Total Used	Average Used	Effectiveness		
				Not	Moderately	Extremely
Rags	74	19,655	266	39%	53%	8%
Shells	80	10,601	133	20	63	17
Silhouettes	70	22,057	315	26	64	10
Wind socks and/or kites	70	13,245	189	21	61	18
Mechanical, rotating-wing snow goose decoy	20	177	9	30	60	10
Did not use decoys	11	(9% of hunters)				

Table 10. The extent to which the unlimited bag limit contributed to the satisfaction of hunters during the Conservation Order snow goose season in Illinois in 2006 (n=114).

Level of Satisfaction	Percentage of Hunters
Not at all	41%
Greatly	40
Somewhat	18

Table 11. Would snow goose hunters participate in the Conservation Order snow goose season in Illinois next year (2007) (n=117).

Response	Percentage of Hunters
Yes	93%
No	7

# 2006 Illinois Conservation Order Snow Goose Hunting Season Survey



Your comments are welcome but please write them on a separate sheet of paper to receive proper attention.

ALL RESPONSES ARE CONFIDENTIAL  
THANK YOU FOR YOUR COOPERATION!  
Postage-paid return envelope provided



**Illinois Department of Natural Resources  
Division of Wildlife Resources  
and the  
Illinois Natural History Survey**



This study is funded with federal Wildlife Restoration dollars through your purchase of hunting arms and ammunition.

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.

Please take a few minutes to complete the following questionnaire to help us evaluate the recent **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 2006 spring Conservation Order season that occurred after Canada goose season closed? (Please answer "No" if you hunted snow geese only during the regular Canada goose season).

\_\_\_\_\_ Yes (Please go to Question 3)                      \_\_\_\_\_ No

2. If you did not hunt snow geese during the spring Conservation Order season, what were your reasons for not doing so? (Please check all that apply and go to Question 11).

- \_\_\_\_\_ Did not have the proper equipment (decoys, calls, etc.)
- \_\_\_\_\_ Did not know any other hunters who hunted snow geese
- \_\_\_\_\_ Not enough knowledge of snow goose habits
- \_\_\_\_\_ No place to hunt snow geese
- \_\_\_\_\_ No snow geese in my area
- \_\_\_\_\_ Not enough time
- \_\_\_\_\_ Not interested
- \_\_\_\_\_ Other (Please identify) \_\_\_\_\_

3. If you answered "Yes" to Question 1, please indicate the **months you hunted, counties hunted, number of days hunted, and geese harvested**. (Respond for Illinois only during the spring Conservation Order season. Fill out one row for each month and county combination you hunted)

Month Hunted	County Hunted	Days Hunted	Geese Harvested	Geese Hit/Not Retrieved
January:	_____	_____ days	_____ geese	_____ geese
	_____	_____ days	_____ geese	_____ geese
	_____	_____ days	_____ geese	_____ geese
February:	_____	_____ days	_____ geese	_____ geese
	_____	_____ days	_____ geese	_____ geese
	_____	_____ days	_____ geese	_____ geese
March:	_____	_____ days	_____ geese	_____ geese
	_____	_____ days	_____ geese	_____ geese
	_____	_____ days	_____ geese	_____ geese

4. We are interested in determining the daily hunting success of snow goose hunters during the spring Conservation Order season, and how many hunters are able to take advantage of the unlimited bag limit. Please report how many different **days** you harvested the following number of snow geese?

Number of days harvesting 0 geese       Number of days harvesting 11-20 geese  
 Number of days harvesting 1-5 geese       Number of days harvesting 21-30 geese  
 Number of days harvesting 6-10 geese       Number of days harvesting 31 or more geese

5. What type of shotgun did you use most for hunting snow geese during the spring Conservation Order season? (please check one)

Single shot       Double barrel       Pump action       Auto loader

6. Please indicate which of the following methods you used to hunt snow geese during the spring Conservation Order season and your harvest using each method. (Harvest using different methods may overlap)

Method	Used	Did not use	Geese Harvested
Electronic calls	1	2	<input type="text"/>
Unplugged shotgun	1	2	<input type="text"/>
Hunting from sunset to ½ hour after sunset	1	2	<input type="text"/>

7. Because unplugged shotguns are allowed during the spring Conservation Order season, shotguns can hold up to 6 shells. Please estimate how many geese you harvested using each shell.

1<sup>st</sup> shell -  geese    2<sup>nd</sup> shell -  geese    3<sup>rd</sup> shell -  geese

4<sup>th</sup> shell -  geese    5<sup>th</sup> shell -  geese    6<sup>th</sup> shell -  geese

8. Which of the following techniques did you use when hunting snow geese during the spring Conservation Order season, and how effective was each? (Place a check in the box for each method you used and circle the number to indicate the effectiveness of each method for harvesting snow geese)

Hunting Technique	Used	Not effective	Moderately	Extremely
			effective	effective
Sneaking/creeping	<input type="checkbox"/>	1	2	3
Decoying over water	<input type="checkbox"/>	1	2	3
Decoying over land	<input type="checkbox"/>	1	2	3
Pass shooting	<input type="checkbox"/>	1	2	3
Other (Please list) _____	<input type="checkbox"/>	1	2	3

9. How many of the following types of decoys did you use to hunt snow geese during the spring Conservation Order season, and in your judgment, how effective was each decoy type?

Decoy Type	Number		Moderately effective	Extremely effective
	used	Not effective		
Rags	_____	1	2	3
Shells	_____	1	2	3
Silhouettes	_____	1	2	3
Wind socks and/or kites	_____	1	2	3
Mechanical, rotating-wing snow goose decoy	_____	1	2	3

I did not use decoys (Check if no decoys used)

10. How much did the unlimited bag limit contribute to your satisfaction with snow goose hunting during the spring Conservation Order season?

Greatly	Somewhat	Not at all
1	2	3

11. If offered next year, do you plan to hunt during the spring Conservation Order snow goose season?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No (Please explain) \_\_\_\_\_

12. What is your county of residence? \_\_\_\_\_

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

14. What is your age?            \_\_\_\_\_ Years

THANK YOU FOR YOUR TIME AND ASSISTANCE!

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 62702-1271, (217) 782-7616 or the officer of Human Resources, U.S. Fish and Wildlife Service, Washington, D.C. 20240.



## ILLINOIS NATURAL HISTORY SURVEY

---



Dear Illinois Waterfowl Hunter,

You have been chosen as one of a select group of waterfowl hunters to provide information about snow goose hunting during the spring 2006 Conservation Order season in Illinois. Please take a few moments of your time 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 spring Conservation Order 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.**

If you are interested in the summary results of this survey, or other hunter and trapper surveys, please visit <http://www.inhs.uiuc.edu/cwpe/hd/>. For more information about hunting and trapping in Illinois, visit <http://dnr.state.il.us/orc/Wildlife/index.htm>.

If you have questions, please call us at (217) 244-5121. Thank you for your time and assistance.

Sincerely,

William L. Anderson  
Wildlife Harvest and Human Dimensions Research Program



## ILLINOIS NATURAL HISTORY SURVEY

---



Dear Waterfowl Hunter,

You recently received a survey questionnaire requesting information about snow goose hunting during the 2006 spring Conservation Order season in Illinois. We have not received your completed survey questionnaire at this time. If you recently returned your questionnaire, please disregard this mailing. Perhaps you misplaced the first questionnaire mailed to you. If so, we have enclosed a second one for you. Please take a few moments of your time 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 spring Conservation Order 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.**

If you have questions, please call us at (217) 244-5121. Thank you for your time and assistance.

Sincerely,

William L. Anderson  
Wildlife Harvest and Human Dimensions Research Program



Dear Illinois Waterfowl Hunter,

You have been selected to participate in the Illinois Snow Goose Hunter Survey. A survey questionnaire was recently mailed to you. We have not received your questionnaire at this time. **If you have returned the questionnaire, we thank you and please disregard this reminder. If you have not returned the questionnaire, please do so as soon as possible.** Your input is very important!

Thank you for your cooperation.

Appendix C.

County of residence of hunters that responded to the 2006 Illinois Conservation Order Snow Goose Hunting Season Survey.

n	County	n	County	n	County	n	County
25	Adams	17	Fulton	15	Macon	2	Scott
1	Alexander	0	Gallatin	19	Macoupin	2	Shelby
2	Bond	0	Greene	54	Madison	1	Stark
5	Boone	20	Grundy	1	Marion	10	Stephenson
2	Brown	9	Hancock	13	Marshall	68	Tazewell
18	Bureau		Hardin	9	Mason	13	Union
5	Calhoun	2	Henderson	6	Massac	6	Vermilion
10	Carroll	8	Henry	0	Menard	5	Wabash
7	Cass	8	Iroquois	4	Mercer	0	Warren
13	Champaign	25	Jackson	8	Monroe	6	Washington
6	Christian	3	Jasper	6	Montgomery	0	Wayne
2	Clark	12	Jefferson	14	Morgan	4	White
1	Clay	9	Jersey	4	Moultrie	19	Whiteside
17	Clinton	7	JoDavies	10	Ogle	36	Will
5	Coles	2	Johnson	57	Peoria	27	Williamson
99	Cook	15	Kane	4	Perry	17	Winnebago
5	Crawford	11	Kankakee	3	Piatt	6	Woodford
1	Cumberland	8	Kendall	3	Pike	7	Unknown
4	DeKalb	13	Knox	0	Pope	<b>1,198</b>	<b>Total</b>
3	DeWitt	23	Lake	1	Pulaski		
3	Douglas	17	LaSalle	5	Putnam		
32	DuPage	0	Lawrence	23	Randolph		
1	Edgar	7	Lee	1	Richland		
0	Edwards	9	Livingston	17	Rock Island		
9	Effingham	7	Logan	60	St. Clair		
4	Fayette	2	McDonough	4	Saline		
0	Ford	45	McHenry	34	Sangamon		
14	Franklin	20	McLean	1	Schuyler		

