



ILLINOIS

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

PRODUCTION NOTE

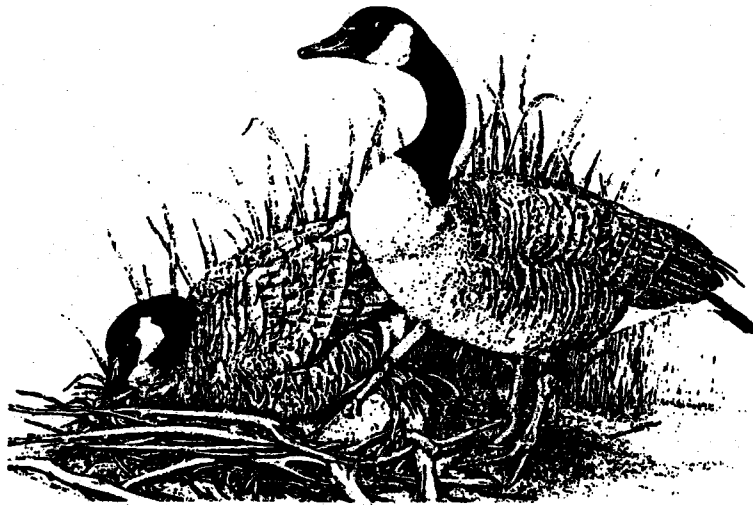
University of Illinois at
Urbana-Champaign Library
Large-scale Digitization Project, 2007.

ILLINOIS NON-RESIDENT HUNTER SURVEY, 1993-94

William L. Anderson, Linda K. Campbell, and Kerrylyne Benner

**FEDERAL AID IN WILDLIFE RESTORATION ACT
PROJECT NUMBER: W-112-R**

**JOB COMPLETION REPORT
WILDLIFE HARVEST AND HUNTER OPINION SURVEY
JOB NUMBER 1**



**Brent Manning, Director
Department of Conservation**

**John A. Tranquilli, Director
Office of Resource Management**

**Jeff Ver Steeg, Chief
Division of Wildlife Resources**

1 November 1994

Permission to Quote

This report contains tentative or preliminary findings, and as such, is subject to future revisions. Persons wishing to quote from this report or to use it in other forms should first obtain permission from the Project Leader or the Chief of the Division of Wildlife Resources, Illinois Department of Conservation.

NOTICE

THE RESULTS CONTAINED IN THIS REPORT ARE PROJECTIONS MADE FROM A SYSTEMATIC SAMPLE OF NON-RESIDENTS WHO PURCHASED ILLINOIS HABITAT STAMPS. EXCEPT FOR WATERFOWL, NO CORRECTIONS WERE MADE FOR KNOWN BIASES INHERENT IN THIS SAMPLING TECHNIQUE.

The Illinois Department of Conservation uses Federal Aid in Wildlife Restoration (Pittman-Robertson or P-R) Program funds for wildlife research, surveys, habitat enhancement, and land acquisition. Because the state uses these federal funds, it must comply with federal anti-discrimination law. Under Title VI of the 1964 Civil Rights Act and Section 504 of the Rehabilitation Act of 1973, the federal government prohibits discrimination on the basis of race, color, national origin, disability, age, or sex. If you believe you have been discriminated against in any program, activity or facility using P-R funds, please write the Office of U.S. Human Resources, U.S. Fish and Wildlife Service, Washington, D.C., 20240.

State law also prohibits discrimination on the basis of race, color, sex, national origin, age or handicap in admission to or treatment or employment in programs or activities in compliance with the Illinois Human Rights Act and the Illinois Constitution. The Equal Opportunity Officer is responsible for compliance and may be reached at (217)782-7616.

JOB COMPLETION REPORT SURVEYS AND INVESTIGATIONS PROJECT

STATE OF ILLINOIS

PROJECT NUMBER: W-112-R

JOB NO. 1 (SUPPLEMENT)

OBJECTIVE

To collect information on the annual harvest of game species in Illinois and associated hunter characteristics (non-residents).

ABSTRACT

From an estimated sale of 8,738 Illinois Habitat Stamps to non-residents, 1,000 potential hunters were selected to obtain information on hunting activities for 21 game hunting categories. A total of 660 responses were utilized to project estimates of hunting effort and harvest. Data for three additional game hunting categories (ducks, geese, and coots) were available from the Illinois Waterfowl Hunter Survey and were included. An estimated 10,051 non-resident hunters (3.51% of resident hunters) spent 105,282 days afield (2.15%) and harvested 108,329 game animals (1.95%). For selected game hunting category, the number of non-resident hunters and their harvests (in parentheses) were: rabbit 1,443 (9,307), quail 1,708 (18,668), pheasant 2,251 (8,897), dove 1,562 (34,422), squirrel 1,086 (13,398), deer-long gun 1,549 (1,099), deer-archery 1,615 (781), turkey 238 (106), ducks 2,139 (10,435), geese 2,700 (5,490), raccoon 225 (3,111), and coyote 265 (0). The distribution of harvest and hunting effort among the 10 wildlife management unit and 5 administrative regions are presented. Data for overlap among major groups of non-resident hunters, number of Illinois Habitat Stamps and non-resident hunting licenses purchased, reasons for purchasing multiple stamps or licenses (or not purchasing a license), and ages of non-resident hunters are also included.

PROCEDURES

A total of 1,000 names-addresses were obtained by systematically sampling non-resident purchasers of the 1993 Illinois Habitat Stamp. Initiated in 1993, the habitat stamp was required for most hunters who pursued any game species except waterfowl (ducks, geese, and coots). However, 92% of the non-resident waterfowl hunters claimed they purchased a habitat stamp in addition to an Illinois Migratory Waterfowl Stamp (W.L. Anderson, unpubl. data).

An initial mailing (Figures 1-3) and a follow-up mailing to non-respondents (Figure 4) were made. Postage paid return envelopes were included with both mailings. Computer printed Cheshire labels were provided by the Department's Data Processing Office. A commercial mailing service was utilized to attach the name-address labels to the questionnaire and to stuff and seal envelopes.

A computer program was utilized to transfer data from the questionnaires to a computer file. Data were analyzed and a hard copy of the results obtained. Number

of hunters, number of days afield, and mean kill per hunter were calculated for the entire state, and their distribution among the 10 wildlife management units (Figure 5) and 5 administrative regions (Figure 6) were determined. Data for ducks, geese, and coots were taken from the 1993-94 Illinois Waterfowl Hunter Survey (Anderson and Williamson 1994; W.L. Anderson, unpubl. data) .

Confidence intervals at the 95% level of significance were calculated for the number of hunters, average season bag, and total harvest. Formulas for these calculations were presented in Hubert (1977) and Anderson (1983). Information found in Cochran (1953) and Snedecor and Cochran (1967) were also utilized.

The formulas utilized are:

- a. Number of hunters for a species, a binomial:

$$\pm 2N \sqrt{\frac{pq}{n}}$$

Where N = total habitat (waterfowl) stamp sales to non-residents
 n = number of habitat (waterfowl) stamp holders in sample
 p = proportion of habitat (waterfowl) stamp holders in sample hunting
 a species
 q = 1 - p

- b. Mean season kill per hunter for a species:

$$\pm \frac{1.96 s}{\sqrt{n_1}}$$

Where s = standard deviation of mean kill per hunter
 n₁ = number of habitat (waterfowl) stamp holders in sample hunting
 a species

- c. Total kill:

$$\pm 2N \times \frac{s}{\sqrt{n}} \times \frac{N-n_1}{N}$$

FINDINGS AND ANALYSIS

1993 Season The 1993-94 hunting regulations for Illinois game species are presented in Table 1. Season lengths and bag limits were similar to those in 1992-93.

The Illinois Habitat Stamp was implemented in 1993 and was required for most hunters (disabled veterans, ex-POWs, and those <16 years of age were exempt) who pursued any game species except waterfowl (ducks, geese, and coots). The habitat stamp cost \$5.00 plus \$0.50 vendor's fee. State law required non-residents to have a hunting license plus migratory waterfowl stamp to hunt waterfowl, a deer permit plus habitat stamp to hunt deer, a turkey permit plus habitat stamp to hunt turkey, and a hunting license plus habitat stamp to hunt all other game species. Sales to non-residents for the 1993 season included an estimated 8,738 habitat stamps, 3,454 migratory waterfowl stamps, 6,524 deer permits, and 272 turkey permits (DOC Permit Office Records: W.L. Anderson, unpubl. data) . By making appropriate reductions for multiple-stamp buyers and for overlap among major groups of hunters, the total number of potential non-resident hunters was estimated at 10,637. This estimate is conservative because 11,013 non-resident hunting licenses were sold for the 1993

season; plus, many non-resident deer hunters were exempt from the hunting license.

1993 Hunter Harvest

From habit stamp stubs returned by vendors, 1,000 names-addresses of non-residents were systematically selected for the survey. The initial questionnaire mailing was on 17 February 1994, which was followed by another mailing to non-respondents on 31 March. A total of 60 (6.00%) questionnaires were undeliverable by the U.S. Postal Service. From the 940 delivered questionnaires, 660 were returned for a response rate of 70%. Almost two-thirds (63.5%) of the respondents resided in the 5 states adjacent to Illinois--Missouri accounted for 28.7% (Table 2). The remaining 36.5% lived in 34 different states.

The 1993 non-resident hunter survey included all game species legally hunted in Illinois. Ducks, geese, and coot were included so that overlap among major groups of hunters could be determined. However, hunter activity and harvest for these three game hunting categories were taken from the 1993-94 Illinois Waterfowl Hunter Survey. The percentage of non-residents who purchased a 1993 Illinois Migratory Waterfowl Stamp but did not hunt waterfowl was 7.18%. The percentage of non-residents who purchased a 1993 Illinois Habitat Stamp but did not hunt any of the other game species was 4.71%. The number of active non-resident hunters in 1993 was estimated to be $10,051 \pm 189$ (95% confidence interval). The number of non-hunting stamp (habitat and waterfowl combined) buyers was estimated at 586.

Data were recorded for active hunters in 18 of the 24 game hunting categories. Estimates of the number of hunters, total harvest, average daily and seasonal bags, and average and total days afield for these 18 categories are presented in Table 3. Total deer (firearms and archery combined) hunters was estimated to be 2,807. Confidence intervals at the 95% level of significance for the estimated number of hunters, mean season kill per hunter, and total harvest are presented in Table 4.

The 10,051 non-resident hunters spent a total of 105,282 days afield and harvested a total of 108,329 game animals. These estimates equate to 3.51% of the resident hunters, 2.15% of the resident days afield, and 1.95% of the resident harvest of game animals during the 1993 season (Anderson et al. 1994). As concluded by Hubert (1980 and 1982) for the 1979 and 1981 seasons, non-resident hunting pressure is of little consequence on a statewide basis.

The distribution of non-resident hunters and their harvest of game species among the 10 wildlife management units and 5 administrative regions are summarized in Tables 5-9. Percentage changes in statewide harvest of selected species from 1979-80 to 1993-94 and from 1981-82 to 1993-94 are presented in Table 10. Compared to the 2 earlier years, harvests of quail, pheasant, and squirrel exhibited increases in 1993-94. The harvest of raccoon was less in 1993-94 than during the earlier years. For rabbit and dove, the harvests in 1993-94 were greater than the harvests in 1979-80 but less than the harvests in 1981-82.

The distribution of hunting effort (percent of days afield) and success (percent of harvest) for 9 of the game hunting categories are presented in Table 11. Days afield ranged from 2.00 (woodcock) to 14.11 (deer-archery), and for the 18 game species categories that had active hunters, averaged 5.82 per category. Average season bag ranged from 0.45 (turkey) to 22.04 (dove) and 23.29 (crow).

Related Issues

Percentage overlaps among major groups of non-resident hunters are presented in Table 12. For the 1993 season, there were an estimated 3,826 upland, 5,049 migratory bird, 3,749 forest game (including 2,807 deer), and 447 furbearer hunters among the non-residents. It is noteworthy that 62% of the upland game hunters, 50% of the migratory bird hunters, and 66% forest game hunters were associated with no other

major group of hunters. It is perhaps more noteworthy that 76% of the deer hunters pursued no other game species.

The non-residents purchased an average of 1.0061 Illinois Habitat Stamps for their personal use (Table 13). Of those who purchased >1 stamp, all purchased 2 stamps. The reasons they purchased a 2nd stamp included "for collecting" and "1st stamp lost or destroyed". Thus, the estimated 8,738 habitat stamps sold to non-residents for the 1993 season were held by 8,685 individuals. Stated another way, the number of non-resident habitat stamp holders equaled 99.39% of the number of habitat stamps sold to non-residents. (The remaining stamps [261,894 from a total sales of 270,632] were purchased by residents [W.L. Anderson, unpubl. data]).

The number of hunting licenses purchased by non-resident holders of the 1993 Illinois habitat stamp, and their reasons for purchasing multiple licenses or no license, are summarized in Table 14. In this sample, 74.0% of the stamp holders purchased ≥ 1 licenses, with the average being 1.0186 licenses per purchaser. Of those who purchased >1 license, all obtained 2 licenses, and they did so because their 1st license was a 5-day license that had expired. These data suggest that the 11,013 non-resident hunting licenses sold for the 1993 season were held by a total of 10,812 individuals. Or, the number of non-resident license holders equaled 98.17% of the number of non-resident licenses sold.

Of the non-residents who did not purchase a hunting license, the vast majority hunted exclusively for deer (92.9%) or turkey (1.2%) and were license exempt (i.e., the non-resident deer permits and turkey permits served as hunting licenses). Other reasons for not purchasing a non-resident hunting license included "landowner" (2.9%), "did not hunt" (2.4%), and "lifetime license holder" (0.6%). Thus, the data in Table 14 indicate that 2,092 deer hunters, 105 turkey hunters, 66 landowners, and 13 lifetime license holders were non-residents and legally hunted in Illinois without a 1993 license (per se) during the 1993 season.

The mean age of respondents was 39.9 years for non-resident habitat stamp holders and 40.1 years for non-resident active hunters (15). Junior (<16 years) hunters represented 9.2% of the total sample and senior (≥ 65 years) hunters made up 7.1%. When viewed relative to those 16-64 years of age, junior stamp holders equated to 11.0% and senior holders equated to 8.5%.

RECOMMENDATIONS

Mail surveys designed to monitor hunting effort and success in Illinois, and provide indicators of annual trends in hunter interest for game animals, should be continued. Such surveys are essential to generate supply-demand data for the various species addressed in the wildlife portion of the Comprehensive Fish and Wildlife Plan for Illinois. Non-resident hunters should be surveyed every 5-10 years.

LITERATURE CITED

- Anderson, W.L. 1983. Illinois waterfowl harvests, hunting activities, and attitudes toward shooting hours, lead poisoning, and steel shot in 1981. Ill. Dep. Conserv., Waterfowl Program, Period. Rep. 39. 36pp.
- _____, L.K. Campbell, and K. Benner. 1994. Illinois Hunter Harvest Survey, 1993-94. Ill. Dep. Conserv., Job Completion Rep., Project W-112-R(3), Job 1. 73pp.

_____, and R.A. Williamson. 1994. Preliminary results of the 1993-94 Illinois Waterfowl Hunter Survey. Ill. Dep. Conserv., Div. Wildl. Res., Admin. Rep. dated 29 June 1994. 27pp.

Cochran, W.G. 1977. Sampling techniques, 3rd ed. John Wiley & Sons, New York, Chichester, Brisbane, Toronto, Singapore. 428pp..

Hubert, Jr., G.F. 1977. Hunter mail survey, 1976-77. Ill. Dep. Conserv., Job Completion Rep., Project W-49-R(24), Job 1. 32pp.

_____. 1980. Non-resident hunter survey, 1979-80. Ill. Dep. Conserv., Job Completion Rep., Project W-49-R(27), Job 5. 20pp.

_____. 1982. Non-resident hunter survey, 1981-82. Ill. Dep. Conserv., Job Completion Rep. Project W-49-R(29), Job 5. 20pp.

Snedecor, G.W., and W.G. Cochran. 1967. Statistical methods, 6th ed. Iowa State University Press, Ames. 593pp.

DATA AND REPORTS

Original data included in this report are on file in the Investigations and Surveys Program offices, NRSA, 607 E. Peabody, Champaign, Illinois 61820.

PREPARED BY

William L. Anderson, Linda K. Campbell, and K. Benner
Investigations and Surveys Program
Division of Wildlife Resources

APPROVED BY

Jeffrey M. Ver Steeg, Chief
Division of Wildlife Resources

ILLINOIS DEPARTMENT OF CONSERVATION
DIVISION OF WILDLIFE RESOURCES
HUNTER HARVEST SURVEY (NON-RESIDENTS) --- 1993-94 SEASON

INSTRUCTIONS:

Please fill out the attached questionnaire for last hunting season (February 1993 - January 1994).

- Only include the game taken and days hunted IN ILLINOIS.
- If you did not hunt any of the game species listed, answer the first two questions at the top of the page and the questions on the back, and return the questionnaire in the postage-paid envelope provided. Your response is just as important as someone who may have hunted every day.
- List only your retrieved kill, not those hit and assumed dead, but not found.
- Do NOT list any upland game killed or days hunted on licensed shooting preserves or controlled hunting areas.
- Fill in the number of days on which you hunted each kind of game listed, including unsuccessful days. If you hunted more than one kind of game on a particular day, count it as one day for EACH kind of game you hunted.
- If you can not remember exact figures, please give your best estimates.
- Fill in only the blanks that apply to you. Leave other blanks unmarked.

Your comments are welcome, but please write them on separate paper to receive prompt attention.

THANK YOU FOR YOUR COOPERATION!

Postage-Paid, Return Envelope is Provided

The Department of Conservation is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under the Illinois Revised Statutes, The Wildlife Code, Chapter 61. Disclosure of this information is voluntary.

Figure 1. Instructions for filling out and returning the questionnaire for the 1993-94 Illinois Non-resident Hunter Survey.

<---- Detach at perforation, place into enclosed postage-paid envelope, and mail.

HOW OLD WERE YOU ON DECEMBER 31, 1993? _____ years

DID YOU HUNT ANY OF THE KINDS OF GAME LISTED BELOW LAST SEASON (Feb. 1993 - Jan. 1994)?
 YES _____ NO _____

Fill in all 3 blanks for each kind of game you hunted. Leave other blanks unmarked.

Game Species	Number killed during season	County where you hunted most for each kind of game.	Number of days hunted
UPLAND WILDLIFE			
Rabbits.....	_____	_____	_____
Quail.....	_____	_____	_____
Pheasants.....	_____	_____	_____
Doves.....	_____	_____	_____
Gray (Hungarian) Partridge..	_____	_____	_____
Woodcock.....	_____	_____	_____
Snipe.....	_____	_____	_____
Rails.....	_____	_____	_____
Crows.....	_____	_____	_____
Groundhog (Woodchuck).....	_____	_____	_____
FOREST WILDLIFE			
Fox Squirrels.....	_____	_____	_____
Gray Squirrels.....	_____	_____	_____
Deer-Long gun*	_____	_____	_____
Deer-Handgun.....	_____	_____	_____
Deer-Archery.....	_____	_____	_____
Turkey.....	_____	_____	_____
WATERFOWL			
Ducks.....	_____	_____	_____
Geese.....	_____	_____	_____
Coots.....	_____	_____	_____
FURBEARERS (Hunted only - <u>not</u> trapped)			
Raccoons.....	_____	_____	_____
Red Fox.....	_____	_____	_____
Gray Fox.....	_____	_____	_____
Coyotes.....	_____	_____	_____
Opossums.....	_____	_____	_____

*Shotgun with slug or muzzleloading rifle.

(continued on following page)

<---- Detach at perforation, place into enclosed postage-paid envelope, and mail.

Figure 2. The questionnaire used for the 1993-94 Illinois Non-resident Hunter Survey.
 Figure 2 - continued.

YOUR OPINION

The Department of Conservation would like to have information about some subjects that may influence your hunting activities in Illinois. Please take an extra minute to answer the following questions.

- 1. As a non-resident of Illinois, did you purchase a 1993 Illinois non-resident hunting license (either 5-day hunting license or full-season hunting license) for your personal use? (circle appropriate number)

Yes.....1 (go to 1a) No.....2 (go to 1d)

- 1a. If you purchased a hunting license(s), was the license a 5-day hunting license or a full-season hunting license, or did you happen to purchase both types of hunting licenses for the 1993 season? (circle appropriate number)

*5-day hunting license.....1

*Full-season hunting license.....2

*I purchased both types of hunting licenses.....3

- 1b. If you purchased a hunting license(s), how many hunting licenses did you purchase?

*Number of 5-day hunting licenses.....(write in)_____

*Number of full-season hunting licenses....(write in)_____

- 1c. If you purchased more than 1 hunting license (5-day and/or full-season), what was the reason? (write in)_____

- 1d. If you did not purchase a hunting license, why were you exempt? (write in)_____

- 2. Did you purchase a 1993 Illinois Habitat Stamp for your personal use? (circle appropriate number)

Yes.....1 (go to 2a) No.....2 (go to 2c)

- 2a. If YES, how many Habitat Stamps did you purchase?.....(write in)_____

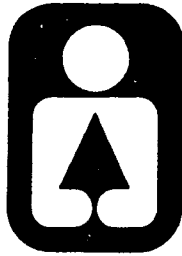
- 2b. If you purchased more than 1 Habitat Stamp, what was the reason? (write in)_____

- 2c. If you did not purchase a Habitat Stamp, why were you exempt? (write in)_____

Thank you for your cooperation
 RETURN ENVELOPE IS PROVIDED - POSTAGE IS PREPAID

The Illinois Department of Conservation receives federal assistance and therefore must comply with the 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 of 1973 as amended, and the U.S. Constitution, the Illinois Department of Conservation 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 Conservation, 524 S. Second St., Springfield, IL 62701-1787, (217) 782-7616 or the Office of Human Resources, U.S. Fish & Wildlife Service, Washington, D.C. 20240.

Illinois



Department of Conservation

life and land together

Brent Manning
DirectorJohn W. Comerio
Deputy DirectorBruce F. Clay
Assistant DirectorLINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787
CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH 60601

Dear Fellow Sportsman:

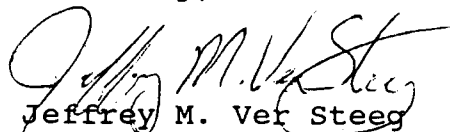
You are one of a select group of hunters asked to provide information about your hunting activities in Illinois during the past hunting season, February 1993 - January 1994.

The information you and other selected hunters supply to our biologists is vital for proper game management within the state for: safeguarding game populations, maximizing hunting opportunities, and maintaining attractive levels of hunter success. The information allows us to better understand the welfare of various game populations and the hunting recreation they provide, including distribution of total harvests, numbers of hunters, and hunting success.

Only a limited number of hunters can be contacted, thus your reply is **VERY important, even if you did not hunt or were not successful**. Please take a few minutes to fill out the parts of the enclosed questionnaire that apply to you. If you do not remember exact figures, please give your best estimates. Return the completed questionnaire in the envelope provided - postage is prepaid.

Thank you for your time and assistance.

Sincerely,

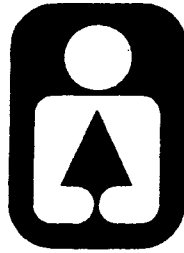


Jeffrey M. Ver Steeg
Chief, Wildlife Resources

JMV:WLA
Enclosure
H1-NR

Figure 3. The cover letter that accompanied the initial mailing of the questionnaire used for the 1993-94 Illinois Non-resident Hunter Survey.

Illinois



Department of Conservation

life and land together

Brent Manning
DirectorJohn W. Comerio
Deputy DirectorBruce F. Clay
Assistant DirectorLINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787
CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH 60601

Dear Fellow Sportsman:

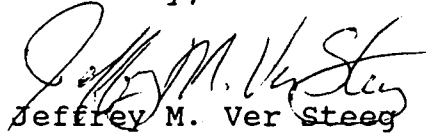
Recently, we mailed you a "Hunting Questionnaire" and requested that you fill out and return the completed form. We have not received your form at this time. Perhaps you have misplaced the questionnaire or have not found time to complete it and return it to us.

We are providing another questionnaire which we hope you will complete and return as soon as possible. If you have already returned the first questionnaire, please throw this one away. The information supplied by you and other hunters being sampled will be of great value to the Conservation Department in better directing the management of Illinois' game resources.

Only a limited number of hunters have been contacted to provide information, thus your reply is **VERY important, even if you did not hunt or were not successful**. Please take just a minute and fill out the parts of the enclosed questionnaire that apply to you. Return the completed questionnaire in the envelope provided - postage is prepaid. Your prompt attention will be greatly appreciated.

Thank you for your time and assistance.

Sincerely,


Jeffrey M. Ver Steeg
Chief, Wildlife Resources

JMV:WLA
Enclosure
H2-NR

Figure 4. The cover letter that accompanied the follow-up mailing (to non-respondents) of the questionnaire used for the 1993-94 Illinois Non-resident Hunter Survey.

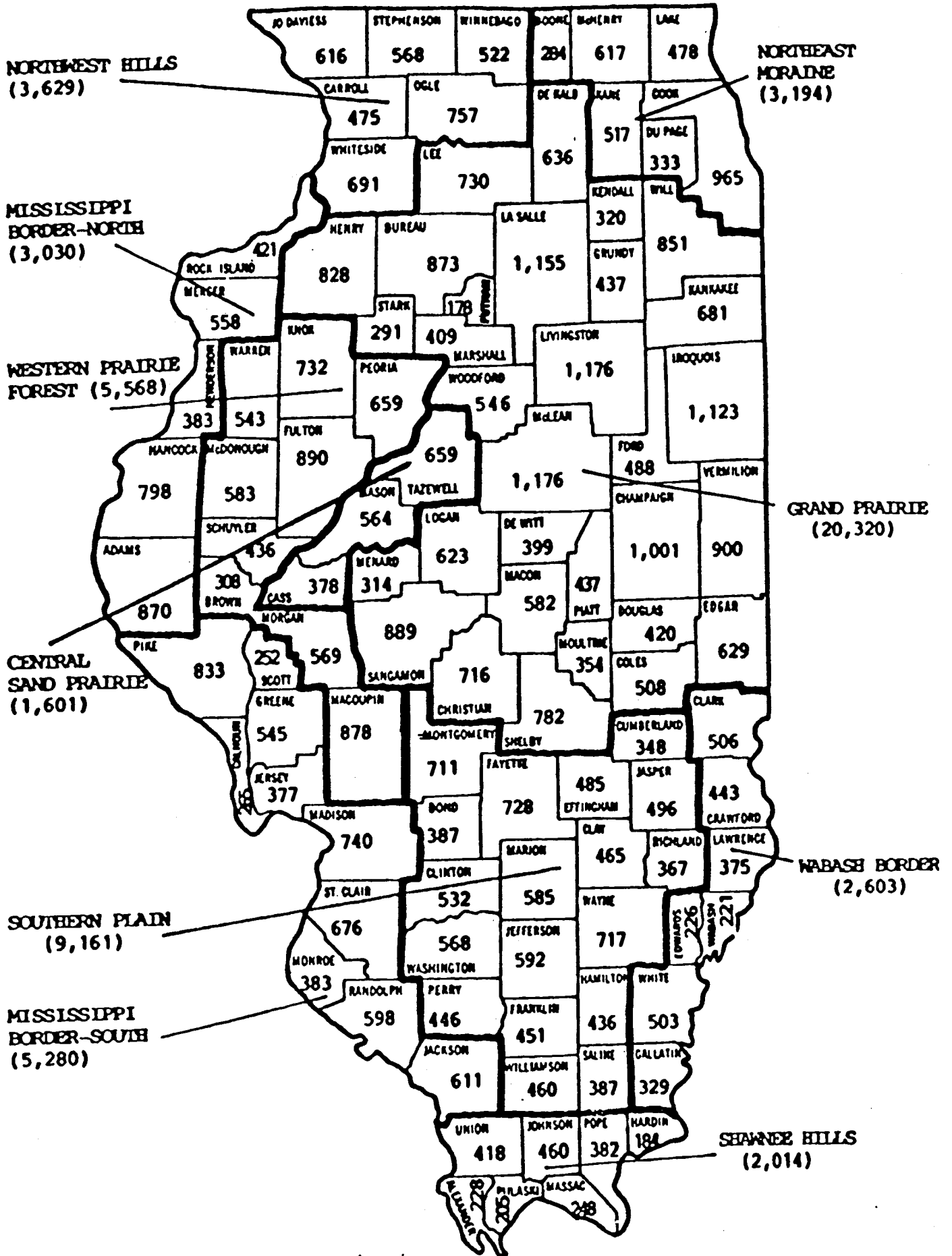


Figure 5. Wildlife management units in Illinois (square miles in parentheses).

Table 1: Illinois hunting seasons for resident and migratory wildlife species, 1993-94.

<u>SPECIES</u>	<u>ZONE</u>	<u>DURATION</u>	<u>BAG LIMIT DAILY</u>	<u>BAG LIMIT POSSESSION</u>
<u>Upland Wildlife</u>				
Rabbit	North	Nov. 6-Jan. 5	4	10
	South	Nov. 6-Jan. 9	4	10
Quail	North	Nov. 6-Jan. 5	8	20
	South	Nov. 6-Jan. 9	8	20
Pheasant	North	Nov. 6-Jan. 5	2	6
	South	Nov. 6-Jan. 9	2	6
Gray Partridge	North	Nov. 6-Jan. 5	2	6
	South	Nov. 6-Jan. 9	2	6
Woodchuck	Statewide	June 1-March 31*	None	None
<u>Migratory Wildlife</u>				
Dove	Statewide	Sept. 1-Oct. 30	15	30
Woodcock	Statewide	Oct. 1-Dec. 4	5	10
Snipe	Statewide	Sept. 4-Dec. 19	8	16
Rail	Statewide	Sept. 4-Nov. 12	25	25
Crow	Statewide	July 1-Aug. 15 & Dec. 15 - March 1	None	None
Ducks	North	Oct. 16 - Nov. 14	3	6
	Central	Oct. 30 - Nov. 28	3	6
	South	Nov. 6 - Dec. 5	3	6
Coot	(Same as for ducks)		15	30
Geese	North	Oct. 16 - Oct. 24 & Nov. 13 - Dec. 19	7	14
	Central	Oct. 30 - Nov. 7 & Nov. 27 - Jan. 2	7	14
	South	Nov. 27 - Jan. 16	7	14
<u>Forest Wildlife</u>				
Squirrels	North	Sept. 1 - Dec. 31*	5	10
	South	Aug. 1 - Dec. 31*	5	10
Deer (Long gun)	Statewide	Nov. 19-21 & Dec. 2-5	1 per permit	
Deer (M Only)	Statewide	Dec. 2-5 & Dec. 10-12	1 per permit	
Deer (H Only)	Selected counties	Jan. 14-16	1 per permit	
Deer (A)	Statewide	Oct. 1-Jan. 13*	1 per permit	
Turkey	Selected counties(N)	Apr. 12 - May 12	1 per permit	
	Selected counties(S)	Apr. 5 - May 5	1 per permit	
Turkey(F)	Selected counties	Oct. 16 - Oct. 24	1 per permit	
Turkey(A)	Selected counties	Oct. 1 - Jan. 13*	1 per permit	
<u>Furbearers</u>				
Raccoon	North	Nov. 5-Jan. 20*	None	None
	South	Nov. 15-Jan. 30*	None	None
Opossum	North	Nov. 5-Jan. 20*	None	None
	South	Nov. 15-Jan. 30*	None	None
Fox	Statewide	Nov. 15-Jan. 31*	None	None
Coyote	Statewide	Year-Round*	None	None

* Closed during deer firearm (long gun) season except in Kane, Dupage, Cook, & Lake Counties. However, hunters with an unused firearms deer permit may harvest coyotes during the firearms deer seasons.

Table 2. State of residence of non-residents who purchased a 1993 Illinois Habitat Stamp. Sample sizes are in parentheses.

State	Habitat Stamp Holders	
	All	Active Hunters
	(658)	(627)
Alabama	0.8	0.8
Arizona	0.9	0.8
Arkansas	1.5	1.3
Colorado	0.9	0.8
Florida	2.9	2.9
Georgia	0.6	0.6
Indiana	15.0	15.2
Iowa	7.4	7.7
Kansas	1.7	1.6
Kentucky	7.1	7.5
Louisiana	0.8	0.6
Michigan	2.9	3.0
Minnesota	2.4	2.6
Mississippi	0.6	0.6
Missouri	28.7	28.1
New York	0.9	0.8
Ohio	4.3	4.5
Oklahoma	0.6	0.6
Pennsylvania	2.4	2.6
South Carolina	0.9	1.0
Tennessee	2.7	2.7
Texas	3.0	3.2
Virginia	0.8	0.8
Wisconsin	5.3	5.1
Wyoming	0.8	0.8
Others ^a	4.9	4.6

^aIncludes 14 states.

Table 3. Summary of statewide data from 1993-94 Non-Resident Illinois Hunter Survey (n = 660).

Species	Total Estimated Hunters	Percentage of Stamp Sales	Average Bag		Total Estimated Harvest	Days Afield	
			Daily	Season		Average	Total
Rabbit	1,443	16.5	1.27	6.45	9,307	5.06	7,308
Quail	1,708	19.5	2.16	10.92	18,668	5.05	8,632
Pheasant	2,251	25.8	1.01	3.95	8,897	3.93	8,844
Dove	1,562	17.9	5.02	22.04	34,422	3.66	5,719
Gray Partridge	0						
Woodcock	53	0.6	0.38	0.75	40	2.00	106
Common Snipe	0						
Rail	0						
Crow	79	0.9	7.73	23.29	1,840	3.01	238
Groundhog	26	0.3	0.25	3.04	79	12.22	318
Fox squirrel ^a	992	11.4	2.06	8.10	8,036	3.94	3,906
Gray squirrel ^a	728	8.3	1.80	7.37	5,362	4.09	2,979
Deer-Long gun	1,549	17.7	0.18	0.71	1,099	3.93	6,090
Deer-Handgun	0						
Deer-Archery	1,615	18.5	0.03	0.48	781	14.11	22,785
Turkey	238	2.7	0.13	0.45	106	3.50	834
Ducks ^b	2,139	---	0.59	4.88	10,435	8.21	17,566
Geese ^b	2,700	---	0.34	2.03	5,490	5.94	16,035
Coots ^b	53	---	1.28	11.63	616	9.08	481
Raccoon	225	2.6	1.63	13.83	3,111	8.47	1,906
Red Fox	0						
Gray Fox	0						
Coyote	265	3.0	0.00	0.00	0	5.50	1,456
Opossum	26	0.3	0.50	1.52	40	3.06	79

^aFor the 2 species combined, there were 1,086 hunters (12.4% of stamp sales).

^bData for ducks, geese, and coots were from 1993-94 Illinois Waterfowl Hunter Survey (Anderson and Williamson 1994, W.L.Anderson, unpubl. data). The category "ducks" includes teal taken during the September season.

Table 4. Estimated number ($\pm 95\%$ confidence interval) of non-resident hunters and their harvests of game species in Illinois during the 1993-94 season. Sample sizes are in parentheses.

	Total Estimated Hunters	Estimated Average Season Bag	Total Estimated Harvest
Rabbit	1,443 \pm 253 (109)	6.45 \pm 1.92	9,307 \pm 6,872
Quail	1,708 \pm 270 (129)	10.92 \pm 2.42	18,668 \pm 9,415
Pheasant	2,251 \pm 297 (170)	3.95 \pm 0.76	8,897 \pm 3,383
Dove	1,562 \pm 261 (118)	22.04 \pm 4.57	34,422 \pm 16,997
Woodcock	53 \pm 53 (4)	0.75 \pm 0.94	40 \pm 652
Crow	79 \pm 65 (6)	23.29 \pm 27.75	1,840 \pm 23,574
Groundhog	26 \pm 37 (2)	3.04 \pm 5.88	79 \pm 2,885
Squirrel	1,086 \pm 224 (82)	11.95 \pm 2.53	13,398 \pm 7,885
Deer-long gun	1,549 \pm 260 (117)	0.71 \pm 0.11	1,099 \pm 424
Deer-archery	1,615 \pm 264 (122)	0.48 \pm 0.12	781 \pm 460
Turkey	238 \pm 111 (18)	0.45 \pm 0.24	106 \pm 342
Ducks	2,139 \pm 285 (80)	4.88 \pm 1.18	10,435 \pm 3,008
Geese	2,700 \pm 269 (98)	2.03 \pm 0.60	5,490 \pm 1,685
Coots	53 \pm 67 (2)	11.63 \pm 21.80	616 \pm 9,014
Raccoon	225 \pm 108 (17)	13.83 \pm 8.97	3,111 \pm 12,806
Coyote	265 \pm 117 (20)	0.00	0
Opossum	26 \pm 37 (2)	1.52 \pm 0.98	40 \pm 481

Table 5. Distribution of non-resident hunters by administrative region and wildlife management unit in Illinois during the 1993-94 season. Sample sizes are in parentheses.

Administrative Region		Wildlife Management Unit	
	(629)		(629)
1	19%	Northwest Hills	3%
2	4	Northeast Moraine	2
3	30	Mississippi Border-North	9
4	12	Mississippi Border-South	17
5	29	Western Prairie/Forest	9
Unknown	6	Central Sand Prairie	3
		Grand Prairie	18
		Southern Plain	16
		Wabash Border	9
		Shawnee Hills	9
		Unknown	5

Table 6. Distribution of non-resident hunters by administrative region in Illinois during the 1993-94 season. Sample sizes are in parentheses.

Administrative Region	Rabbit	Quail	Pheasant	Dove	Squirrel	Deer-Long gun
1	(109) 17%	(129) 16%	(169) 26%	(118) 14%	(82) 20%	(117) 15%
2	6	1	7	4	0	2
3	27	24	52	23	22	26
4	16	16	4	25	17	11
5	29	37	1	28	39	43
Unknown	5	6	10	7	2	3

Administrative Region	Deer-Archery	Turkey	Ducks	Geese	Raccoon	Coyote
1	(123) 12%	(16) 17%	(80) 39%	(98) 20%	(17) 12%	(20) 30%
2	5	0	6	3	0	5
3	43	50	25	6	47	20
4	3	5	3	2	6	15
5	34	17	22	69	35	25
Unknown	3	11	5	0	0	5

Table 7. Distribution of non-resident hunter harvest of game species by administrative region in Illinois during the 1993-94 season. Sample sizes are in parentheses.

Administrative Region	Rabbit	Quail	Pheasant	Dove	Squirrel	Deer-Long gun
1	(703) 7%	(1,410) 10%	(666) 25%	(2,600) 10%	(980) 21%	(83) 14%
2	5	1	12	4	0	4
3	17	26	48	14	19	28
4	22	14	4	33	24	11
5	46	43	1	32	35	41
Unknown	3	6	10	7	1	2

Administrative Region	Deer-Archery	Turkey	Ducks*	Geese	Raccoon	Coyote
1	(59) 12%	(8) 13%	(833) 44%	(401) 18%	(235) 4%	(27) 22%
2	10	0	6	1	0	0
3	43	61	23	7	56	22
4	0	13	2	3	2	42
5	32	13	24	71	38	7
Unknown	3	0	1	0	0	7

*Includes teal harvested during September season.

Table 8. Distribution of non-resident hunters by wildlife management unit in Illinois during the 1993-94 season. Sample sizes are in parentheses.

Wildlife Management Unit	Rabbit	Quail	Pheasant	Dove	Squirrel	Deer-Long gun
Northwest Hills	(109) 1%	(129) 2%	(169) 5%	(118) 4%	(82) 2%	(117) 1%
Northeast Moraine	4	1	5	3	0	0
Mississippi Border-North	6	4	5	8	9	11
Mississippi Border-South	14	12	2	29	23	20
Western Prairie/Forest	11	14	6	6	12	12
Central Sand Prairie	1	1	2	3	2	0
Grand Prairie	23	13	60	8	6	10
Southern Plain	23	32	5	14	20	11
Wabash Border	12	10	0	14	17	9
Shawnee Hills	1	5	0	4	7	23
Unknown	5	6	10	7	2	3

Wildlife Management Unit	Deer-Archery	Turkey	Ducks	Geese	Raccoon	Coyote
Northwest Hills	(123) 3%	(18) 11%	(80) 5%	(98) 2%	(17) 0%	(20) 5%
Northeast Moraine	2	0	5	3	0	5
Mississippi Border-North	7	6	30	10	6	15
Mississippi Border-South	18	44	18	21	12	20
Western Prairie/Forest	10	11	4	5	12	15
Central Sand Prairie	1	0	5	1	6	0
Grand Prairie	22	0	4	1	29	10
Southern Plain	2	0	15	28	0	15
Wabash Border	8	0	4	1	35	5
Shawnee Hills	20	17	5	28	0	5
Unknown	2	11	5	0	0	5

Table 9. Distribution of non-resident hunter harvest of game species by wildlife management unit in Illinois during the 1993-94 season.

Wildlife Management Unit	Rabbit	Quail	Pheasant	Dove	Squirrel	Deer-Long gun
	(703)	(1,410)	(666)	(2,600)	(980)	(83)
Northwest Hills	0%	<1%	3%	3%	1%	1%
Northeast Moraine	3	<1	10	3	0	0
Mississippi Border-North	3	5	4	6	8	9
Mississippi Border-South	10	8	3	34	28	20
Western Prairie/Forest	6	14	4	4	6	17
Central Sand Prairie	<1	0	1	1	2	0
Grand Prairie	13	8	61	6	11	11
Southern Plain	44	49	4	13	21	10
Wabash Border	18	5	0	20	11	12
Shawnee Hills	0	5	0	3	9	18
Unknown	3	6	10	7	3	2

Wildlife Management Unit	Deer-Archery	Turkey	Ducks ^a	Geese	Raccoon	Coyote
	(59)	(8)	(833)	(401)	(235)	(27)
Northwest Hills	5%	13%	6%	2%	0%	4%
Northeast Moraine	7	0	5	1	0	0
Mississippi Border-North	5	0	34	4	32	7
Mississippi Border-South	15	50	19	18	6	26
Western Prairie/Forest	7	25	2	11	2	30
Central Sand Prairie	4	0	5	0	2	0
Grand Prairie	17	0	5	1	20	4
Southern Plain	7	0	14	37	0	22
Wabash Border	15	0	5	1	38	0
Shawnee Hills	15	12	4	25	0	0
Unknown	3	0	1	0	0	7

^aIncludes teal harvested during September season.

Table 10. Percentage change in statewide harvest of selected game species in Illinois, 1993-94 season verses previous years.

Species	Estimated Harvest in 1993-94	Change from 1979-80 ^a season to 1993-94 season	Change from 1981-82 ^b season to 1993-94 season
Rabbit	9,037	+22%	-20%
Quail	18,668	+110	+31
Pheasant	8,897	+144	+135
Dove	34,422	+112	-23
Squirrel	13,398	+47	+10
Duck	10,435	--- ^c	--- ^c
Goose	5,490	--- ^c	--- ^c
Raccoon	3,111	-27	-9
Fox	0	--- ^d	--- ^c
Coyote	0	--- ^d	--- ^c

^aFrom Hubert (1980).

^bFrom Hubert (1982).

^cComparisons are not valid because the procedures used to calculate harvests of ducks and geese in 1993-94 (via Illinois Waterfowl Hunter Survey) differed from those used for the earlier years.

^dAn estimated 56 foxes and 140 coyotes were harvested in 1979-80.

^eAn estimated 13 foxes and 101 coyotes were harvested in 1981-82.

Table 11. Distribution of hunting effort and success among non-resident Illinois hunters in 1993.

	<u>Days Afield</u>		<u>Animals Harvested</u>	
	<u>Range</u>	<u>Percent of Hunters</u>	<u>Range</u>	<u>Percent of Hunters</u>
Rabbit	0	—	0	14.7
	1-5	75.2	1-5	53.2
	6-10	15.6	6-10	16.5
	11-14	1.9	11-14	5.5
	15-19	3.6	15-19	3.7
	20-24	0.9	20-24	0.9
	25+	2.8	25+	5.5
Quail	0	—	0	14.7
	1-5	76.0	1-5	36.5
	6-10	11.6	6-10	17.0
	11-14	3.9	11-14	3.9
	15-19	5.4	15-19	6.2
	20-24	3.1	20-24	6.2
	25+	0.0	25+	15.5
Pheasant	0	—	0	20.7
	1-5	84.6	1-5	58.6
	6-10	8.9	6-10	14.8
	11-14	1.8	11-14	1.8
	15-19	3.5	15-19	2.3
	20-24	1.2	20-24	0.6
	25+	0.0	25+	1.2
Dove	0	—	0	5.9
	1-5	78.0	1-5	15.3
	6-10	17.8	6-10	15.2
	11-14	1.8	11-14	10.2
	15-19	2.4	15-19	10.2
	20-24	0.0	20-24	10.1
	25+	0.0	25+	33.1
Squirrel	0	—	0	6.1
	1-5	58.5	1-5	31.7
	6-10	25.6	6-10	24.4
	11-14	4.9	11-14	4.9
	15-19	6.1	15-19	10.9
	20-24	3.7	20-24	7.4
	25+	1.2	25+	14.6
Deer-Long gun	0	—	0	37.6
	1-5	69.2	1-5	43.4
	6-10	30.8	6-10	0.0
	11-14	0.0	11-14	0.0
	15-19	0.0	15-19	0.0
	20-24	0.0	20-24	0.0
	25+	0.0	25+	0.0

	<u>Days Afield</u>		<u>Animals Harvested</u>	
	<u>Range</u>	<u>Percent of Hunters</u>	<u>Range</u>	<u>Percent of Hunters</u>
Deer-Archery	0	—	0	61.8
	1-5	21.1	1-5	38.2
	6-10	36.6	6-10	0.0
	11-14	13.0	11-14	0.0
	15-19	7.3	15-19	0.0
	20-24	9.0	20-24	0.0
	25+	13.0	25+	0.0
Ducks	0	—	0	11.3
	1-5	42.5	1-5	52.5
	6-10	32.5	6-10	23.7
	11-14	6.3	11-14	6.3
	15-19	11.2	15-19	2.5
	20-24	5.0	20-24	1.2
	25+	2.5	25+	2.5
Geese	0	—	0	25.5
	1-5	71.4	1-5	65.3
	6-10	12.3	6-10	5.1
	11-14	5.1	11-14	4.1
	15-19	4.1	15-19	0.0
	20-24	5.1	20-24	0.0
	25+	2.0	25+	0.0

Table 12. Overlap among major groups of non-resident hunters in Illinois during the 1993-94 season.

Major Groups of Hunters	n	Percentage Who Also Hunted:						
		None	Upland Game	Migratory Birds	Forest Game	Furbearers	[Squirrel]	[Turkey]
Upland game ^a	(289)	62		25	22	6		
Migratory birds ^b	(208)	50	34		26	6		
Forest game ^c	(283)	66	22	19		6		
[Deer] ^d	(212)	[76]	[14]	[11]	[--]	[5]	[10]	[4]
Furbearers ^e	(36)	33	50	33	47			

^aIncludes rabbit, quail, pheasant, and groundhog hunters.

^bIncludes dove, woodcock, crow, duck, goose, and coot hunters.

^cIncludes squirrel, deer-long gun, deer-archery, and turkey hunters.

^dIncludes deer-long gun and deer-archery hunters.

^eIncludes raccoon, coyote, and opossum hunters.

Table 13. Number of Illinois Habitat Stamps purchased for personal use by non-resident holders of the stamp in 1993. An estimated 8,738 stamps were sold to non-residents for the 1993 season.

Parameter	Habitat Stamp Holders	
	All	Active Hunters
Number of stamps purchased	(660)	(629)
Mean	1.0061 ^a	1.0064 ^b
Distribution		
1	99.39% ^a	99.36% ^b
2	0.61	0.64
≥3	0.00	0.00
Reason for purchasing ≥2 stamps	(3)	
For collecting	66.7%/0.303% ^c	66.7%/0.318% ^d
1st stamp lost or destroyed	33.3 /0.152	33.3 /0.159

^aThere were 13 habitat stamp holders who purchased 15 additional stamps (i.e., in addition to a stamp for personal use) for relatives or friends. The additional stamps were excluded when calculating these values.

^bThere were 13 habitat stamp holders who hunted and who purchased 15 additional stamps for relatives and friends. The additional stamps were excluded when calculating these values.

^cPercentage of all non-resident holders of the habitat stamp.

^dPercentage of non-resident holders of the habitat stamp and who hunted.

Table 14. Number of Illinois non-resident hunting licenses purchased for personal use by non-resident holders of Illinois habitat stamps in 1993. A total of 11,013 hunting licenses and an estimated 8,738 habitat stamps were sold to non-residents for the 1993 season. Sample sizes are in parentheses.

Parameter	Habitat Stamp Holders	
	All	Active Hunters
Purchased hunting license	(660) 74.0%	(624) 74.0%
Type of license purchased	(484)	(462)
5-day	39.0%	39.4%
Full-season	60.6	60.2
Both types	0.4	0.4
Number of licenses purchased	(484)	(462)
Mean	1.0186 ^a	1.0195 ^a
Distribution		
1	98.14% ^a	98.05% ^a
2	1.86	1.95
≥3	0.00	0.00
Reason for purchasing ≥2 licenses	(9)	
1st license was 5-day and had expired	100% / 1.364% ^b	100% / 1.948% ^c
Reason for not purchasing license	(170)	(162)
Hunted deer only	92.9% / 23.939%	95.1% / 24.679%
Landowner	2.9 / 0.758	3.1 / 0.801
Did not hunt	2.4 / 0.606	--- / ---
Hunted turkey only	1.2 / 0.303	1.2 / 0.321
Lifetime license holder	0.6 / 0.152	0.6 / 0.160

^aThere were 14 habitat stamp holders who purchased 16 additional licenses (i.e., in addition to a license for personal use) for relatives or friends. The additional licenses were excluded when calculating these values.

^bPercentage of all non-resident holders of the habitat stamp.

^cPercentage of non-resident holders of the habitat stamp and who hunted.

Table 15. Age of non-resident holders of the Illinois Habitat Stamp in 1993. Sample sizes are in parentheses.

Parameter	Habitat Stamp Holders	
	All	Active Hunters
	(660)	(629)
Mean (years)	39.9	40.1
Range (years)	9-87	9-87
Distribution (years)		
9-15	9.2% ^a	8.3% ^b
16-20	1.6	1.6
21-30	13.1	13.5
31-40	28.7	28.9
41-50	22.9	22.9
51-60	14.2	14.5
61-64	3.2	3.3
≥65	7.1 ^c	7.0 ^d

^aEquates to 11.0% of habitat stamp holders 16-64 years of age.

^bEquates to 9.8% of habitat stamp holders who hunted and were 16-64 years of age.

^cEquates to 8.5% of habitat stamp holders 16-64 years of age.

^dEquates to 8.3% of habitat stamp holders who hunted and were 16-64 years of age.

