

August 5, 2004

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WILDLIFE RESOURCES

MIGRATORY BIRDS PROGRAM

**Canada Goose
Aerial Survey and Harvest Monitoring Programs:
2003-2004 Season**

Operational breeding ground surveys and banding programs are primary management tools used to monitor and delineate Canada goose populations. Three subspecies and five populations of Canada geese commonly are harvested in the Mississippi Flyway. Four of the five populations are adaptively managed to help ensure that their status is not jeopardized by overharvest. Restrictive hunting regulations are implemented to protect a population when it falls below a target level and regulations are liberalized to allow for increased harvest when populations exceed management objectives.

Regular season Canada goose harvest levels in Illinois currently are established to control the take of interior Canada geese belonging to the Mississippi Valley Population (MVP). In years when the MVP is above their population objective, liberal hunting regulations are offered. In years when there is concern about the MVP's status, restrictive regulations are used to ensure protection from overharvest. All five Canada goose populations commonly harvested in the Mississippi Flyway occur in Illinois, however, and the status of individual populations may vary in a given year, with some below, at, and above management goals. When the MVP is above their population goal and liberal regulations are set in Illinois, other Canada goose populations (Giant, Eastern Prairie, Southern James Bay, and Tall Grass Prairie) also typically are harvested at increased rates. Relatively long seasons and liberal bag limits may provide less protection for non-MVP goose populations that are below management goals. Conversely, when concern about the status of MVP geese prompts restrictive hunting regulations, harvest opportunity for other Canada goose populations that are above management goals may be reduced.

Regulations that provide increased hunting opportunity for certain Canada goose populations and protection for others become increasingly complex as the number of goose populations in an area increases. A combination of zones, quota zones, and harvest monitoring systems along with annual adjustments to maximum allowable harvest levels, daily bag limits, and season length, timing, and structure are primary regulatory options used to manage Illinois' Canada goose harvest.

Annual surveys of Canada goose numbers and distribution on migration and wintering areas are

used to help determine impacts of management activities on populations and provide a biological basis for recommending new management initiatives or improvements to established management programs. Information from population and harvest monitoring programs provide the basis for evaluating how effective these tools are in controlling harvest and accomplishing other management objectives.

Population and Migration Summary

Aerial surveys are used extensively in Illinois to provide information about the status of habitats and waterfowl populations needed for establishing hunting regulations and evaluating management programs and policies. Two Offices in the Illinois Department of Natural Resources (IDNR) are responsible for collecting waterfowl inventory data; the Office of Scientific Research

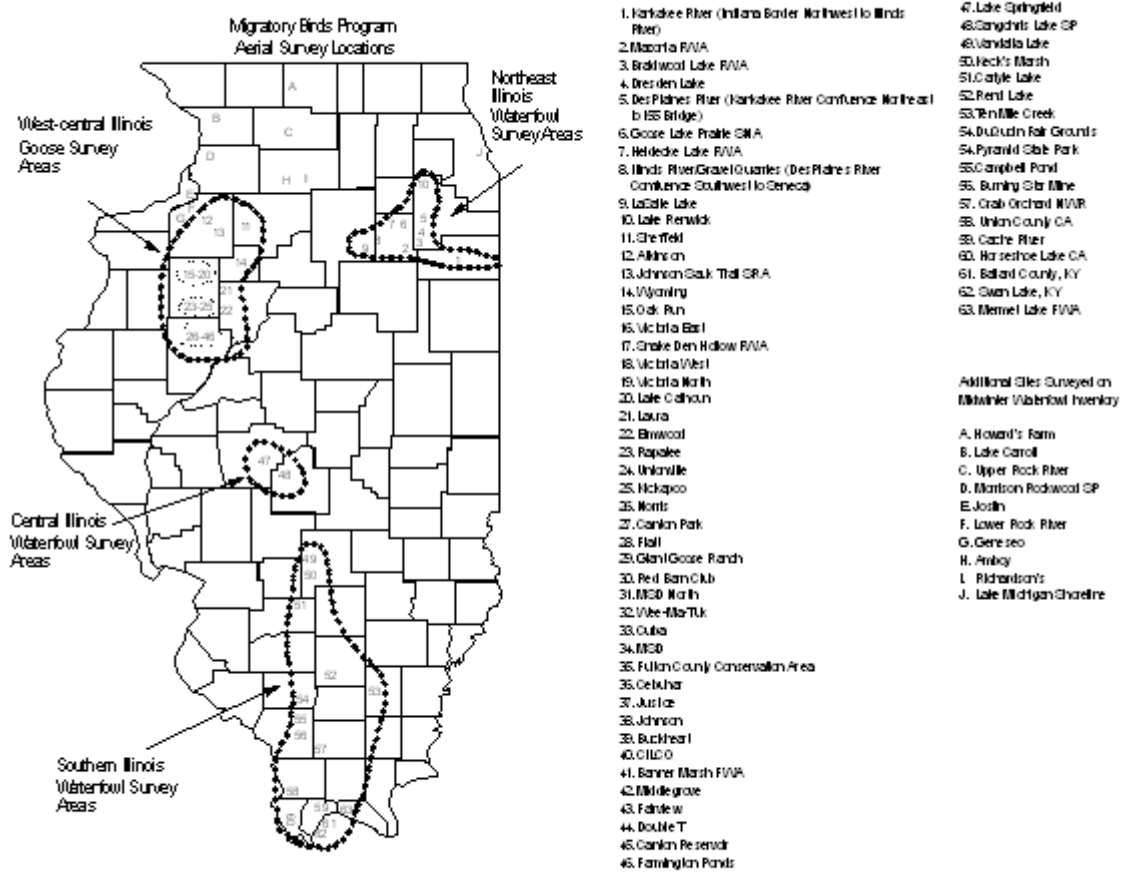


Figure 1. Aerial waterfowl survey locations, Office of Resource Conservation, 2003-04.

and Analysis (includes the Illinois Natural History Survey (INHS)) and the Office of Resource Conservation (ORC, includes the Division of Wildlife Resources). The INHS has used aerial surveys to document relative abundance of waterfowl along portions of the Illinois and Mississippi rivers since 1948. In 1972, the INHS expanded waterfowl aerial survey work to include additional river segments, selected cooling lakes, several reservoirs, and other wetlands. In 2002-03, INHS modified their aerial survey program to include 20 locations on the Illinois River (previously 54 sites) and 15 locations on the central Mississippi River (previously 39 sites). The 35 INHS inventory sites encompassed areas that provided an average of more than 90 percent of the peak population of total ducks for the region, 1991-2000. ORC personnel have collected aerial estimates of Canada geese wintering in southern Illinois and western Kentucky since 1956. Over the past four decades, 11 sites have been added to the original survey. In addition, one ground survey and three aerial surveys have been implemented in other regions of the state as new wetland development projects were completed, new management practices were employed, and Canada goose migration patterns changed (Figure 1). In 2001-02, ORC began collecting aerial estimates of duck populations on selected sites in central and southern Illinois (Appendix 1 and 2). In addition to documenting changes in Canada goose numbers and distribution during fall/winter, ORC has monitored the breeding season status of giant Canada geese in Illinois, 1993 through 2004.

Recent INHS waterfowl survey information is available at <http://home.grics.net/~forbes/> and <http://dnr.state.il.us>, and summarized in annual federal aid performance reports. ORC survey results are summarized in this document and fall/winter aerial estimates are available at <http://dnr.state.il.us>.

Weather Conditions

Dry and warm weather prevailed throughout Illinois during the fall and winter of 2003-04. Temperatures across Illinois averaged 2.1°F and 3.6°F above normal November and December, respectively. November and December were the 15th and 20th warmest in the last 109 years. Moderate weather continued to prevail throughout most of the first half of January when temperatures averaged six degrees above normal. Prolonged periods of colder weather arrived during the second half of January, however, and temperatures averaged eight degrees below normal. Overall, January temperatures averaged 1.5 degrees below normal, the 42nd coolest in 110 years. Climate records indicated that December 2003 through February 2004 was the 31st warmest on record in Illinois.

Precipitation records for the Midwestern region show that December 2003 and January 2004 were slightly wetter than normal. Snowfall was average to above average in most of the far northern Midwest, but below normal in most of central and southern Wisconsin. Illinois experienced precipitation that averaged 87 percent of normal throughout fall and winter of 2003-04. Although snowfall in December and January was widespread, amounts were below normal throughout most of the state. The northern third of Illinois only received 1 to 4 inches of snow in

December, but amounts increased across central Illinois where 4 to 8 inch accumulations were reported. Typical January snowfall amounts were 2 to 5 inches in southern Illinois, 3 to 7 inches in central Illinois, and 7 to 12 inches in northern Illinois. Winter snowfall totals for northeastern Illinois were 12 to 15 inches less than average. Overall, winter snowfall amounts were 25 to 50 percent less than normal across much of northern and central Illinois, about average in west-central Illinois, and as much as 50 to 75 percent below average in portions of southern Illinois.

Northeast Illinois Aerial Estimates

The northeast Illinois aerial survey area encompasses several large cooling lakes, reclaimed surfaced-mined lakes, gravel quarries, a variety of river segments, and other selected wetlands in Kankakee, Will, Grundy, and LaSalle counties (Figure 1). Biweekly aerial estimates of duck and Canada goose use, October through January, in this region of the state have been collected since 1994. In addition, a single survey has been flown in early September and in early March in some years. Six surveys were flown with a state-owned Cessna 182, October 6 through January 30, 2003-04. One flight was canceled due to inclement weather and two flights were canceled because of security concerns about low-level flying near nuclear power plants (Table 1).

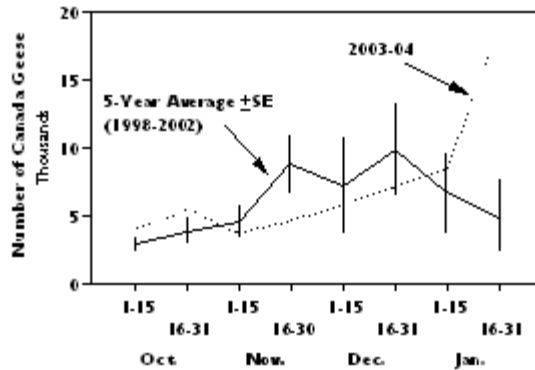


Figure 2. Aerial estimates of Canada geese on northeast Illinois survey areas, 2003-04.

Small numbers of Canada geese (4,115) slightly above the recent 5-year average (2,900) were present on the survey area in early October (Figure 2). Canada goose numbers increased to nearly 5,500 by October 21, but numbers were within the recent 5-year range (2,175-6,040). After mid-October arrivals, numbers declined resulting in populations by November 19 (4,660) that were much lower than 2002 (12,740) and the 5-year average (8,750). The primary Canada goose migration of 2003-04 into the survey area was noted after mid-January, and goose numbers doubled from 8,465 on January 5 to nearly 18,600 on January 30 (Figure 2). Population trends during the past 5 years show that, on average, numbers gradually increase to approximately 9,000 by late-November and peak around 10,000 in late-December (Figure 2). However, waterfowl use on the survey area is highly variable in late-December and January (Table 1, Figure 2, Appendix

3). Generally, in years when prolonged freezing temperatures coincide with migrations, relatively large numbers of birds may concentrate on open water provided by four large cooling lakes. Conversely, in years when moderate fall/winter temperatures prevail, waterfowl tend to remain dispersed in relatively small numbers throughout the region.

West-central Illinois Aerial Estimates

Biweekly aerial estimates of Canada geese staging and wintering on selected reclaimed surfaced-mined lands, a large cooling lake, and other wetlands in west-central Illinois have been collected since 1980. Portions of six counties (Fulton, Knox, Henry, Peoria, Stark, and Bureau) were incorporated into the survey when it became operational in 1986 (Figure 1). Eight surveys were flown with a state-owned Cessna 182, October 7, 2003 through January 20, 2004 (Table 2, Appendix 4). One flight was canceled because pilots were assigned to higher priority work.

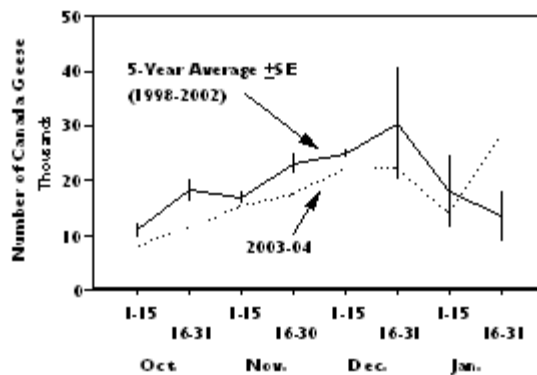


Figure 3. Aerial estimates of Canada geese on west-central Illinois survey areas, 2003-04.

The relatively mild weather that prevailed throughout the Midwest appeared to affect timing and intensity of Canada goose migrations into west-central Illinois. Mid-October estimates of Canada goose numbers on surveyed areas (8,050) were slightly higher than in 2002 (7,050), but below the recent 5-year average (10,825). Canada goose numbers increased gradually through December, but remained below the recent 5-year average through mid-January (Figure 3). An influx of geese occurred in mid-January resulting in numbers by January 20 (28,545) that were much higher than in 2002-03 (12,105) and well above the recent 5-year average (13,350). The population peaked in late-January, approximately one month later and 1,800 geese below the recent 5-year average peak (30,300; Table 2).

Canada geese generally remain widely dispersed in mostly small flocks throughout the survey area until freeze-up (Appendix 4). The largest concentration of geese typically occurs on reclaimed surface-mined lands owned by the Metropolitan Water Reclamation District of Greater Chicago (formerly Metropolitan Sanitary District; MSD) in Fulton County. After freeze-up, many of the Canada geese that remain on the survey area often concentrate on a large cooling lake (CILCO)

approximately 7 miles east of the MSD property. Relatively large (>15,000) numbers of Canada geese were observed using the CILCO cooling lake during January (Appendix 4) for the second time since 1996-97. Canada goose population estimates on the survey area in 2003-04 followed the recent 5-year average (Figure 3), but goose numbers remained below average until late-January.

Central Illinois Aerial Estimates

The central Illinois aerial survey was implemented in 1992 to help document recent changes in distribution of Canada geese. Aerial estimates of Canada goose use on Lake Springfield and Sangchris Lake are documented in conjunction with the southern Illinois waterfowl survey whenever possible. In some cases, however, poor weather, schedule conflicts, and other constraints require that selected survey areas be omitted from the southern Illinois route.

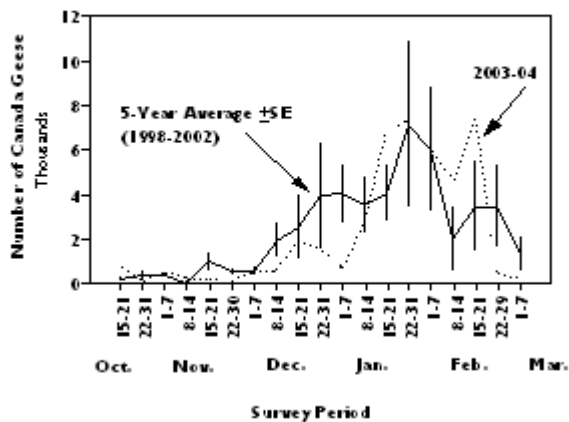


Figure 4. Aerial estimates of Canada geese on central Illinois survey area, 2003-04.

Small numbers of geese (200-1,000) generally use the two surveyed lakes from mid-October through mid-December. Goose use often increases through January and usually peaks in late-January or February. Canada geese may use the area in relatively large numbers during February when interior subspecies are migrating north towards their breeding grounds.

Nineteen surveys were flown with a state-owned Cessna 337, October 20, 2003 through March 1, 2004 (Table 3). Aerial estimates indicated small numbers of geese using the survey area mid-October through early-December (150-825). After mid-December arrivals (1,900), numbers declined through the end of the December. The population increased from nearly 3,000 in early-January to a late-January peak of 7,300 (Figure 4). A peak count of 7,425 geese in mid-February was similar to the 2002-03 peak estimate of 7,250 geese, and within the 1997-2001 range (2,200 - 21,000; Table 4). An appreciable number of Canada geese used the survey area in mid-February as interior birds migrated north this year (Figure 4).

Southern Illinois Aerial Estimates

Aerial surveys have been used to document Canada goose use, distribution, and migration phenology on selected wetlands in southern Illinois and western Kentucky since 1956. Initially, surveys were made on Crab Orchard National Wildlife Refuge, Union County Conservation Area, Horseshoe Lake Conservation Area, and Ballard County Refuge (Kentucky). Over the past four decades, 11 sites have been added to the original survey (Figure 1). Aerial estimates of snow goose use have been collected in conjunction with the Canada goose survey since 1995 and estimates of white-fronted geese (Appendix 5) were first collected in 2002-03.

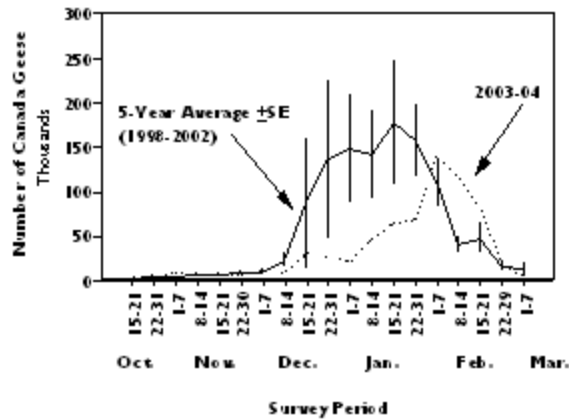


Figure 5. Aerial estimates of Canada geese on southern Illinois and western Kentucky survey areas, 2003-04.

Nineteen surveys were flown with a state-owned Cessna 337, October 20, 2003 through March 1, 2004 (Table 5). One flight was canceled because of an observer/pilot schedule conflict. Canada goose migrations into southern Illinois in October resulted in numbers (4,700) that were within the recent 5-year range (2,475-8,350). Limited migrations occurred in November and peak numbers for the month (7,490) remained below the 5-year average (8,325). The population remained below 50,000 through December and early-January, and gradually increased to a late-January peak of 68,080 (Figure 5). The 2003-04 peak count of 140,370 geese occurred during the first week of February. Although the peak count was higher than numbers estimated in 2001-02 (61,900) and 2002-03 (89,600), the 2003-04 peak remained below the 1996-2000 range (176,550-420,200; Table 4). Notably, the peak estimate of 140,370 geese was the third lowest on record for this survey (Table 4). Early-February Canada goose numbers (140,370) were higher than in 2002-03 (32,875), but within the recent 5-year range (32,875-151,180). Peak numbers of Canada geese on Crab Orchard (41,000), Union County (26,000), Horseshoe Lake (42,000), and other important refuges were near record low populations (Table 6). Canada goose numbers on the survey area continued the decline typical of the last decade and migrations into southern Illinois were significantly reduced resulting in population estimates well below the recent 5-year average, December through January (Figure 5). A substantial number of geese arrived on the survey area in early-February, but numbers decreased to less than 20,000 by mid-February as birds departed the area (Figure 5).

Snow geese generally occur in small and variable numbers throughout Illinois during fall. Peak snow goose estimates on northeast and west-central Illinois survey areas usually are below 1,000 (Table 7). Larger numbers of snow geese often are observed in southern Illinois where December populations normally average near 25,000 and peaks of several hundred thousand birds may occur in late-January through early March (Figure 6).

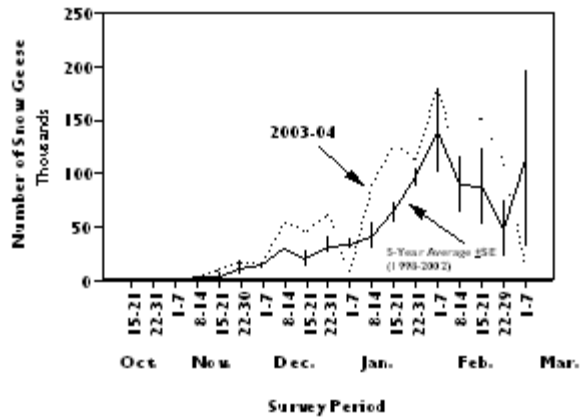


Figure 6. Aerial estimates of snow geese on southern Illinois and western Kentucky survey areas, 2003-04.

Small numbers of snow geese (1,125) arrived on the southern Illinois survey area in early-November (Table 8). Numbers remained low through November, but steadily increased through December. The first major migration of snow geese occurred in December when the population increased from 15,415 on December 1 to 55,100 on December 8. Snow goose number gradually increased through December and January. By January 21, 129,300 snow geese were observed on the survey area. The population peaked at 180,250 in early-February and numbers steadily declined through February to a low of 15,225 on March 1. The peak count of snow geese observed this year (180,250) was well below the 2002-03 population peak of 360,100, but within the 1997-98 through 2001-02 range of peak estimates (91,500-213,300; Table 7). Overall, snow goose numbers remained slightly above the recent 5-year average, December through February, but declined to below average in early-March this year (Figure 6).

Greater Chicago Area Ground Count

Although aerial estimates generally provide more accurate information than ground surveys on distribution and abundance of waterfowl, safety concerns, budget constraints, and other work priorities have limited their application in predominately urban areas of northeastern Illinois. In an effort to provide a more complete estimate of waterfowl use in Illinois for the U.S Fish and Wildlife Service's Midwinter Waterfowl Survey and collect additional information on the changing distribution and status of Canada geese wintering in Illinois, two standardized ground count surveys were implemented in portions of Cook, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, McHenry, and Will counties in 1997. Survey participants employ standardized techniques to document Canada goose (December count) and total waterfowl (January count) use

along established routes that span approximately 1,000 miles through the nine county region.

The December ground count survey normally is scheduled to coincide with the U.S. Fish and Wildlife Service's former December Goose Survey during the week containing the second Monday in December. The January survey is conducted during the first full week of January in concert with the Mississippi Flyway Midwinter Waterfowl Survey.

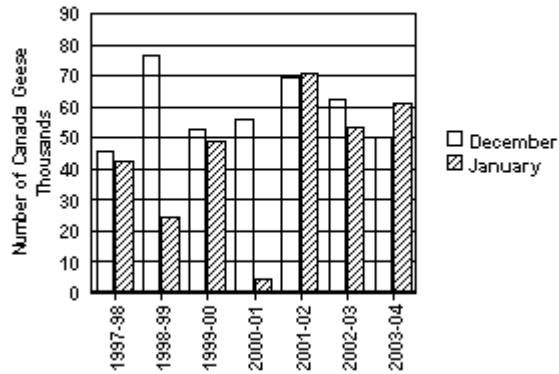


Figure 7. Ground count estimates of Canada geese in the greater Chicago region, 1997-98 through 2003-04.

Canada goose numbers on the December survey (50,280) were lower than the December 2002 estimate (62,435), and below the recent 5-year range (52,750-76,200; Table 9 and Figure 7). Geese were widely distributed throughout the survey area with the largest concentrations occurring in DuPage (11,905), Will (16,725) and McHenry (9,100) counties (Figure 8).

Mostly mild weather prevailed during the three week interval between ground counts and December temperatures averaged 3.7°F above normal for northeastern Illinois. Similar to 2001 and 2002, December 2003 was characterized by a lack of snowfall in northeastern Illinois (approximately 50 percent below average). Colder weather arrived in early January and most water areas were frozen during the survey week when daytime temperatures ranged from 0°F to 10°F and 2 to 6 inches of snow covered much of northeastern Illinois.

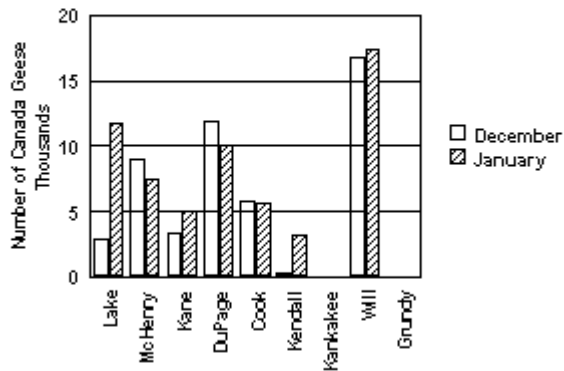


Figure 8. Distribution of Canada geese documented on ground counts conducted in the greater Chicago region, 2003-04.

Surveys indicated a moderate increase in Canada goose numbers between mid-December (50,280) and early January (61,040). The increased January estimate primarily reflected a possible influx of geese into Lake County (Figure 8). The 2003-04 pattern of increased population size from December to January is largely reverse of past survey results which primarily showed decreasing numbers as winter advanced (Figure 7). The number of Canada geese observed in January (61,040) was slightly higher than last year's estimate (53,585), but lower than 2002 (70,870; Figure 7). January counts revealed that Canada geese remained widely disbursed throughout the survey area with the largest concentrations observed in Lake, DuPage, and Will counties (Figure 8). Habitat and climatic conditions remained favorable for wintering Canada geese throughout the survey period this year. In contrast, surveys indicated approximately 70 to 90 percent of the population departed the area after severe cold and heavy snowfall in 1998-99 and 2000-01 (Table 9).

Statewide Giant Canada Goose Spring Survey

Each state and province in the Mississippi Flyway that has a breeding population of at least 10,000 giant Canada geese is encouraged to conduct an annual spring population survey. The survey is designed to coincide with the period when most geese are in their second to third week of incubation. In Illinois, a stratified random plot survey has been used to estimate the spring giant Canada goose population since 1993. The survey design incorporates a stratification procedure that identifies low, medium, and high goose density areas throughout the state. Varying numbers of randomly selected 2.5-square-mile plots from each stratum are surveyed in an effort to obtain annual population estimates with 95% confidence limits around ± 25 percent. In 2000, the Wisconsin Cooperative Wildlife Research Unit redefined strata boundaries for Illinois in an effort to increase accuracy and precision of the population estimate. In order to better understand how the spring survey measured population changes over time, annual estimates were recalculated using the more accurate area information provided in 2000 (Table 10, Figure 9).

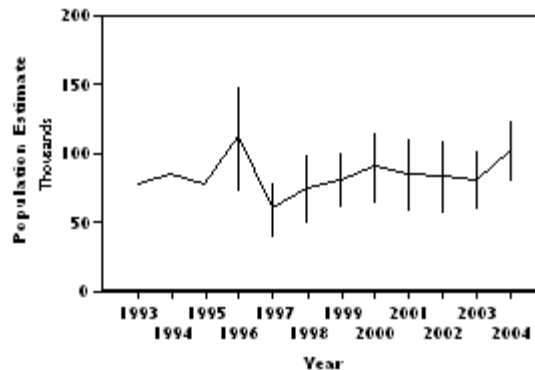


Figure 9. Giant Canada goose spring population estimates ($\pm 95\%$ CI), 1993-2004.

A Bell Jet Ranger helicopter with one pilot and one observer was used to conduct the 2004 survey.

The survey was flown on six days between April 7th and April 16th. Number of Canada geese observed in 72 low, 24 medium, and 17 high density plots averaged 4.25 ± 1.14 , 8.79 ± 3.11 , and 42.1 ± 23.04 , respectively. The average weighted mean number of geese observed per plot for all strata combined was 5.42 ± 1.13 (Table 11).

The 2004 survey produced a statewide estimate of $103,250 \pm 21,450$ (compared to $81,600 \pm 20,850$ in 2003; Table 10). Low density strata accounted for 87 percent of the suitable nesting habitat and contained 68 percent of the total population estimate. Medium density strata represented 11 percent of the suitable nesting habitat and contained 19 percent of the total population. High density strata accounted for two percent of the suitable nesting habitat and contained 13 percent of the total geese.

The spring estimate indicated a moderate increase (27 percent) in the giant Canada goose population from 2003. However, confidence intervals have overlapped continuously since inception of the survey in 1993 (Figure 9). Survey results suggest that the spring giant Canada goose population in Illinois has remained relatively stable during the past decade.

Canada Goose Harvest Management Summary

Illinois is assigned a maximum number of MVP Canada geese that can be harvested in a given year based on estimated size of the MVP breeding population. Banding and breeding ground information is used to determine proportions of other Canada goose populations in the Illinois harvest and arrive at a total Canada goose allowable harvest for the state. Complex season structures, zones, quota zones, and harvest monitoring systems are used to increase hunting opportunity, accommodate a broad range of hunting preferences, and ensure that no population is jeopardized by overharvest.

Early September Canada Goose Season

Current federal regulations for Canada goose hunting permit Illinois to offer an early September season of no more than 15 days between September 1 and 15. The early September season is designed to provide increased harvest opportunity for giant Canada geese that nest locally before migrant populations typically arrive in the state. Canada geese harvested during the September season are considered separate from the regular season maximum harvest allocation.

From 1987 to 1991, the U.S. Fish and Wildlife Service allowed Illinois to offer an experimental early September season in the Northeast Canada Goose Zone. Illinois elected not to hold the experimental September season in 1992-1994 because of costs associated with collecting harvest evaluation data. In lieu of the early September season, Illinois offered a 9 day early October season in the Northeast Canada Goose Zone, 1992-1993, to provide additional harvest

opportunity for local giant Canada geese. The early September season was resumed in a non-experimental capacity in the Northeast Canada Goose Zone in 1995, expanded to include the remainder of the North Zone in 1996, expanded to include the Central Zone in 1997, and has been offered throughout the state since 1998 (Table 12).

In 2003, the September Canada goose season was open from September 1-15. Daily bag limits were 2 geese per day except in the Northeast Canada Goose Zone where the daily bag was 5 per day. The September season harvest was estimated at 15,267 geese (Table 12). In comparison to the 2002 September season (21,534 geese), approximately 6,250 (29 percent) fewer geese were harvested this year. Harvest decreased in the North (34 percent) and Central (36 percent) zones, but increased in the South Zone (55 percent). Distribution of the September season harvest averaged 43 percent, 52 percent, and 5 percent in the North, Central, and South zones, 1998-2002. Approximately 39 percent, 47 percent, and 14 percent of the 2003 September season harvest occurred in the North, Central, and South zones, respectively (Table 12).

Regular Canada Goose Season

Prior to the early-1990's, most of the state's MVP harvest occurred in a limited area associated with the Rend Lake and Southern Illinois quota zones. Harvest quotas and harvest monitoring systems were implemented in the Southern Illinois Quota Zone (SIQZ) and Rend Lake Quota Zone (RLQZ) in 1960 and 1986, respectively, to ensure that the MVP allowable harvest was not exceeded. By 1990, dramatic increases in the giant Canada goose population and changes in migration patterns of interior subspecies had reduced effectiveness of controlling the statewide MVP harvest with the two quota zone system. In 1994, additional Canada goose quota zones were established in the North and Central zones. Canada goose quota systems and in-season harvest monitoring programs have been used in each waterfowl zone since 1994 to help provide maximum hunting opportunities while protecting against excessive overharvest.

The RLQZ was eliminated in 2002-03 because of changes in distribution and numbers of Canada geese and a much reduced role in controlling harvest. Peak populations of Canada geese on Rend Lake averaged 123,200 (range 65,000 to 170,000), 1986 - 1990. Canada goose use declined substantially through the 1990's and peak populations averaged 21,700 (range 5,900 to 34,500), 1997 - 2001. Notably, the 2001-02 through 2003-04 peak population estimates (2,800-5,900) are the three lowest on record (Table 6). Declining goose numbers corresponded with reduced Canada goose harvest in the RLQZ. Approximately 15 percent of the statewide Canada goose harvest occurred in the RLQZ when it was established in 1986. By the late-1990's, the RLQZ accounted for only 3 percent of the statewide harvest.

For the 2003-04 season, Canada goose hunters in the northern and central quota zones were required to carry a free permit card in the field, punch a hole or mark the card with indelible ink on the appropriate date and zone upon harvesting a Canada goose, and report their harvest on the same calendar day geese were taken by calling a toll-free number. Conservation Police Officers

collected reporting compliance information; the number of geese reported to the phone-in system was adjusted to account for non-reporting compliance. In the SIQZ, all goose hunters on commercial (daily or annual fee) clubs were required to write their names and addresses on daily registration forms before going afield and, after hunting, to record the number of geese harvested. Commercial club operators were required to phone-in the kill to a toll-free number twice weekly throughout the season. In addition, commercial clubs are required to phone-in the kill on a daily basis if notified by the IDNR. Goose harvest on non-commercial areas was estimated using harvest ratios between commercial and non-commercial hunters, 1973-1981. Extrapolation factors used to project harvest from commercial clubs to the entire quota zone were 0.940, 0.915, and 0.675 in Alexander, Union, and Williamson/Jackson counties, respectively.

In addition to the daily registration form monitoring procedure, a phone-in harvest monitoring system was used on an experimental basis in the SIQZ during the regular Canada goose season, 2001-02 and 2002-03. Successful use of this system is contingent on the Department's ability to obtain an accurate estimate of hunter reporting compliance before a decision must be made to close a season early to prevent overharvest. It is necessary to obtain an accurate estimate of current-year reporting behavior because hunter compliance may vary considerably from year to year; reporting compliance has varied in the NIQZ and CIQZ as much as 18 percent and 14 percent, respectively, from one year to the next. Thus, there is an increased likelihood that the permit/phone-in system could cause seasons to close prematurely or allow seasons to continue too long in years and/or locations where the allowable harvest can be achieved before current-year reporting characteristics are known. The 2-year study revealed several problems with using the phone-in harvest monitoring system in the SIQZ. Low early-season harvest levels and relatively short season lengths precluded the Department from collecting adequate samples of hunter compliance checks and providing reliable harvest control. The 2-year evaluation was discontinued in 2003-04.

Illinois was assigned a maximum allowable harvest of 55,600 MVP geese for the 2003-04 season (Table 13). Updated Canada goose harvest derivations from 1999-2001 indicated that the proportion of the statewide harvest derived from MVP geese was 44 percent (Tables 13 and 14). Because 56 percent of the Canada goose harvest in Illinois was comprised of giants and other populations than MVP, Illinois received a total statewide Canada goose harvest allocation of 126,400 (Table 13).

North Zone.

The North Zone received a harvest allocation of 31,200 Canada geese, representing 29 percent and 22 percent of the statewide MVP and non-MVP harvest allotment, respectively (Tables 15, 16 and 17). Sixty-two percent of the allowable harvest (19,300 geese) distributed to the North Zone was assigned to the northern quota zone (Table 16). The Canada goose season opened on October 16th and was scheduled to run through January 13th (90 days) or until the maximum allowable harvest assigned to the quota zone was achieved. A 2 bird daily bag limit was set for

the entire season.

Conservation Police Officers inspected Canada goose permits in conjunction with 1,067 goose hunter checks in the northern quota zone. Reporting characteristics of 375 hunters provided sufficient information to determine what percentage of harvested geese were phoned-in to the monitoring system in compliance with regulations. Results indicated a harvest reporting compliance estimate of 74.2 ± 4.5 percent ($\pm 95\%$ CI). Reporting compliance decreased by approximately 7 percent from the 2002-03 estimate (81.0 percent), but remained within the recent 5-year range (67.1 to 82.2 percent; Table 18).

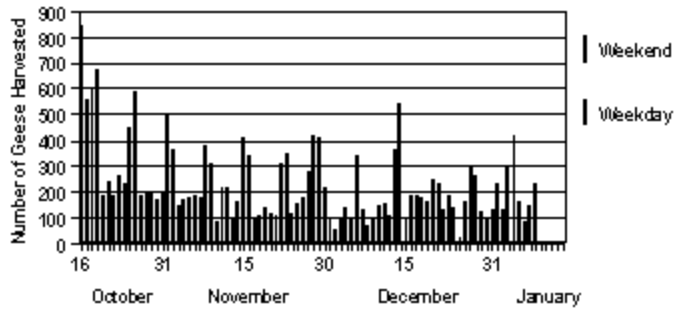


Figure 10. Canada goose harvest estimates, Northern Quota Zone, 2003-04.

The daily pattern of harvest in the northern quota zone is presented in Figure 10 and Appendix 6. An estimated 845 geese were taken on opening day, the largest single-day harvest of the season. The average daily harvest rate was 233 geese, the highest on record for this quota zone since inception of the phone-in monitoring system in 1994-95 (Table 18). More geese were harvested on weekend days ($\bar{x} = 378$) than on weekdays ($\bar{x} = 176$).

It was necessary to close the Canada goose season in the North Zone 5 days early to prevent overharvest. On 5 January, preliminary harvest information from the permit/phone-in system indicated that the northern quota zone's allowable harvest would be reached within a week and a decision was made to allow four more days of hunting and close the season at sunset on 8 January, the 85th day of the season. A preliminary harvest reporting compliance estimate of 74.4 ± 4.6 percent (calculated from 357 hunter checks) was used to adjust for nonreporting and project when the maximum allowable harvest would be reached.

The permit/phone-in system indicated that an estimated 19,810 Canada geese were harvested in the northern quota zone. Thus, the maximum allowable harvest allocated to the quota zone (19,300) was exceeded by approximately three percent (510 geese; Table 19).

Central Zone.

The Central Zone received a harvest allocation of 48,200 Canada geese, representing 21 percent and 51 percent of the statewide MVP and non-MVP harvest allotment, respectively (Tables 15 and 16). Fifty percent of the allowable harvest (24,100 geese) distributed to the Central Zone was assigned to the central quota zone (Table 16). A 90 day Canada goose season was split into two segments; the first segment opened on October 23rd and ran until October 26th. The second segment opened on November 7th and was scheduled to run through January 31st or until the maximum allowable harvest assigned to the quota zone was achieved. A 2 bird daily bag limit was set for the entire season.

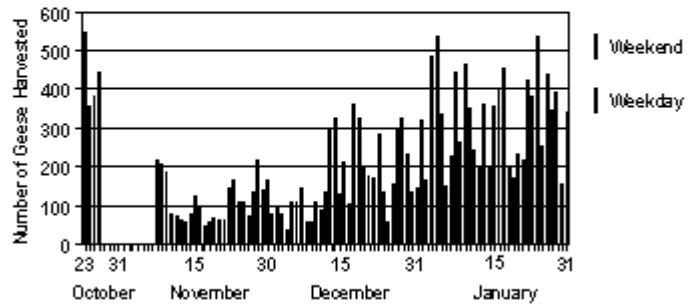


Figure 11. Canada goose harvest estimates, Central Quota Zone, 2003-04.

Conservation Police Officers inspected Canada goose permits in conjunction with 734 goose hunter checks in the central quota zone. Reporting characteristics of 315 hunters provided sufficient information to determine what percentage of harvested geese were phoned-in to the monitoring system in compliance with regulations. Results indicated a harvest reporting compliance estimate of 85.9 ± 3.9 percent ($\pm 95\%$ CI), slightly above the 2002-03 estimate of 82.6 percent and slightly above the most recent 5-year range (70.2 to 83.8 percent; Table 20).

The daily pattern of harvest in the central quota zone is presented in Figure 11 and Appendix 6. The largest single-day harvest occurred on opening day, October 23rd when an estimated 546 birds were harvested. The average daily harvest rate was 219 geese, the second highest daily harvest estimate on record since 1994-95 (Table 20). Overall, the average number of geese harvested on weekend days and weekdays was 293 and 188, respectively.

The central zone Canada goose season ran for 90 days; there was no need to close the season early to prevent exceeding maximum allowable harvest levels. The permit/phone-in system indicated that an estimated 19,719 geese were harvested in the central quota zone, representing 82 percent of the maximum allowable harvest assigned to the region (Table 19).

South Zone.

The South Zone received a harvest allocation of 47,000 Canada geese, representing 50 percent and 27 percent of the statewide MVP and non-MVP harvest allotment, respectively (Tables 15 and 16). A harvest allocation of 28,600 Canada geese was assigned to the SIQZ, representing 32 percent and 15 percent of the statewide MVP and non-MVP harvest allotment, respectively (Table 15). A 61 day Canada goose season was split into two segments; the first segment opened on November 20th and ran until November 23rd. The second segment opened December 6th and was scheduled to run through January 31st or until the maximum allowable harvest assigned to the quota zone was achieved. A two bird daily bag limit was set for the entire season.

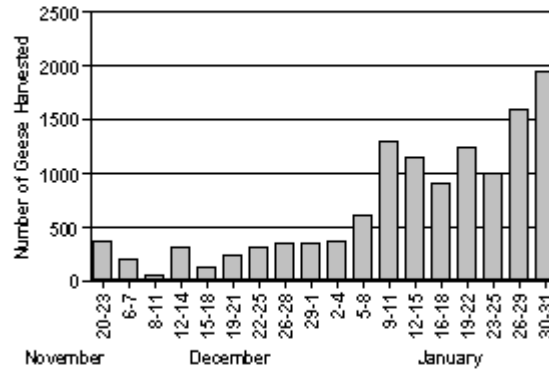


Figure 12. Canada goose harvest estimates, Southern Illinois Quota Zone, 2003-04.

The Canada goose season ran for the entire 61 days. An estimated 12,497 Canada geese were taken, representing 44 percent of the maximum allowable harvest (Tables 19 and 21, Figure 12). Approximately 71 percent, 15 percent, and 14 percent of the total harvest occurred in Williamson/Jackson, Union, and Alexander counties, respectively (Table 22). Canada geese were harvested at an average rate of approximately 76 and 339 per day in December and January, respectively (Table 21). An average harvest rate of 205 Canada geese per day was recorded for the entire season. The average daily harvest was highest during January 30th through 31st when an average of

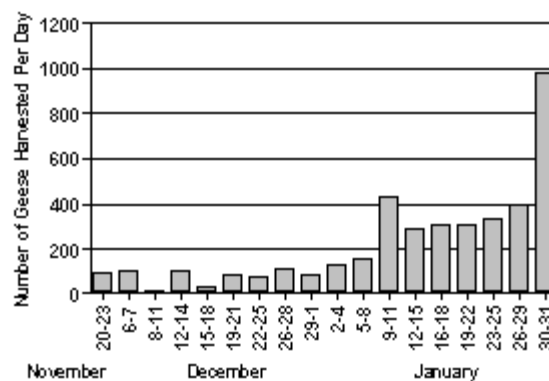


Figure 13. Average daily harvest of Canada geese, Southern Illinois Quota Zone, 2003-04.

978 geese were taken each day. The lowest average daily harvest (15 per day) occurred during the 4-day reporting period December 8-11 when 61 geese were taken (Figure 13).

Commercial licenses were issued to 62 goose clubs in the quota zone in 2003-04 (Table 23). In addition, 34 commercial duck clubs were required to report their Canada goose harvest this year. The number of commercial goose and duck clubs licensed in Williamson/Jackson, Alexander, and Union counties was 46 (48 percent), 31 (32 percent), and 19 (20 percent), respectively. Commercial clubs accounted for 75 percent of the total quota zone harvest or 9,342 Canada geese (Table 24). Approximately 64 percent, 18 percent, and 18 percent of the total harvest on commercial clubs occurred in Williamson/Jackson, Union, and Alexander counties, respectively.

An estimated 3,155 Canada geese were harvested on noncommercial areas. Approximately, 92 percent, 5 percent, and 3 percent of the noncommercial harvest occurred in Williamson/Jackson, Union, and Alexander counties, respectively (Table 24).

Goose hunters spent 38,327 days afield in the SIQZ during the 2003-04 season (Table 25). A total of 23,887 (62 percent) and 14,440 (38 percent) hunter trips were reported on commercial and noncommercial areas. Approximately two-thirds of the hunter trips (23,913; 62 percent) occurred in Williamson/Jackson counties. The number of hunter trips recorded for Alexander and Union counties was 6,760 (18 percent) and 7,654 (20 percent), respectively (Table 25).

Canada goose harvest on the three public hunting areas (PHA) in the quota zone -- Horseshoe Lake, Union County, and Crab Orchard -- was 492 or 4.0 percent of the total quota zone harvest (Table 26). Hunters spent more days afield on Union County PHA (1,281 hunter trips) than on Crab Orchard PHA (827 hunter trips) or Horseshoe Lake PHA (277 hunter trips). All three public hunting areas are considered commercial areas because hunters must pay a fee to hunt. The three commercial public hunting areas accounted for 10 percent (2,385) of total hunter trips on commercial areas in the quota zone. An average of 0.16, 0.18, and 0.27 goose per hunter trip was harvested on Horseshoe Lake, Union County, and Crab Orchard public hunting areas, respectively (Table 26). In comparison, the average success rate for Canada goose hunters on commercial clubs throughout the quota zone was 0.39 goose per hunter trip. Commercial clubs in Alexander, Union, and Williamson/Jackson counties reported harvesting an average of 0.27, 0.26, and 0.53 goose per hunter trip, respectively (Table 27). Canada goose hunters on commercial and noncommercial areas in the quota zone harvested an average of 0.33 goose per hunter trip, well below the recent 10-year average of 0.44 goose per hunter trip (Table 28).

Summary

In 2003-04, Illinois elected to continue managing the state's regular season Canada goose harvest with three waterfowl hunting zones. Approximately 25 percent, 38 percent, and 37 percent of the state's allowable Canada goose harvest was assigned to the North, Central, and South zones, respectively (Table 17). In an effort to ensure that Illinois' allowable harvest was not surpassed, the Department assigned a portion of the allowable harvest in each zone to a quota zone where

progress of the harvest was monitored to prevent overharvest. The allowable harvest of Canada geese was distributed among waterfowl zones and between quota zone and non-quota zone counties based on the most recent 3-year average harvest in each region. The Northern Quota Zone, Central Quota Zone, and Southern Quota Zone received 62 percent, 50 percent, and 61 percent of the allowable harvest assigned to each zone, respectively.

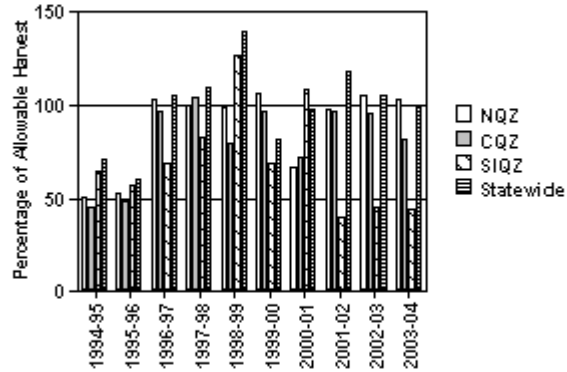


Figure 14. Canada goose harvest estimates by quota zone (state harvest monitoring systems) and statewide (federal harvest estimate), 1994-95 through 2003-04.

The U.S. Fish and Wildlife Service estimated Canada goose harvest in Illinois at 124,600 or 99 percent of the assigned quota. Federal harvest estimates indicate that Illinois exceeded maximum allowable Canada goose harvest levels 50 percent of the time during the last decade (Table 13). The quota zone system limited amount of overharvest to within 10 percent of assigned limits in 3 out of the 5 years overharvest occurred, 1994-95 through 2003-04 (Figure 14).

Interior Canada geese continue to exhibit a wider distribution than historically upon arrival in the state. Two decades ago, approximately 60 percent of the Canada geese harvested in Illinois were taken in the SIQZ. By the early-1990's, only about 30 percent of the statewide Canada goose harvest occurred in the SIQZ. For the third consecutive year, major migrations into southern regions of Illinois were delayed and were significantly smaller than average. Approximately 10 percent of the statewide harvest occurred in the SIQZ, 2001-02 and 2002-03 and 15 percent of the statewide harvest occurred in this region in 2003-04 (IWHS harvest estimates, Table 13). Increased opportunities to harvest Canada geese throughout the state have developed as the giant Canada goose population increased in size and distribution and interior Canada geese altered migration patterns. One result of this change in distribution and numbers has been a marked decline in the proportion of geese harvested in quota zone counties (71 percent, 1994-95 through 1998-99; 59 percent 1999-00 through 2003-04; Table 29).

Prepared by:
 Dan Holm
 Illinois Department of Natural Resources
 Division of Wildlife Resources
 August 5, 2004

Table 1. Aerial estimates of Canada geese on surveyed areas in northeast Illinois throughout fall and winter of 2003-04.

Date	Kankakee River	Braidwood Lake	Mazonia FWA	Dresden Lake	Goose Lake Prairie	DesPlaines River	Heidecke Lake	Illinois River/Quarries	LaSalle Lake	Lake Renwick	Total	5-Year Average (1998-02)
10-6-03	30	90	455	130	10	505	620	140	555	1,580	4,115	2,889
10-21-03	265	120	65	675	195	250	460	55	425	2,980	5,490	3,903
11-5-03	600	75	120	300	85	150	775	275	700	750	3,830	4,610
11-19-03	220	80	135	30	345	65	1,350	230	90	2,115	4,660	8,753
12-1-03 ^a												7,248
12-15-03 ^b												7,248
12-29-03 ^b												9,925
1-5-04	765	3,135	155	380	400	30	250	220	No Survey ^a	3,130	8,465	6,733
1-30-04	4,515	5,800	25	0	0	240	2,500	140	2,300	3,065	18,585	4,992

^aSurvey canceled due to inclement weather.

^bSurvey canceled because of security concerns about low-level flying near power plants.

Table 2. Aerial estimates of Canada geese on surveyed areas in west-central Illinois throughout fall and winter of 2003-04.

Date	Bureau County	Fulton County	Henry County	Knox County	Peoria County	Stark County	Total	5-Year Average (1998-2002)
10-7-03	1,075	3,240	205	2,420	960	150	8,050	10,828
10-21-03	950	5,500	340	3,635	440	550	11,415	18,115
11-5-03	1,325	7,250	250	3,570	850	1,925	15,170	16,707
11-18-03	1,605	10,010	340	3,960	745	700	17,360	23,011
12-2-03	1,610	10,055	800	7,725	1,185	800	22,175	24,906
12-16-03 ^a								30,298
12-30-03	1,300	9,480	1,245	8,710	1,050	500	22,285	30,298
1-5-04	450	8,725	675	3,410	315	495	14,070	17,932
1-20-04	0	22,795	500	4,675	200	375	28,545	13,342

^aFlight canceled because pilots were assigned to higher priority work.

Table 3. Aerial estimates of Canada geese on surveyed areas in central Illinois throughout fall and winter of 2003-04.

Date	Sangchris Lake	Lake Springfield	Total	5-Year Average (1998-2002)
10-20-03	225	600	825	275
10-29-03	75	75	150	N/A
11-3-03	0	550	550	450
11-10-03	50	200	250	107
11-17-03 ^a			N/A	1,044
11-25-03	60	75	135	538
12-1-03	100	450	550	643
12-8-03	200	400	600	1,970
12-17-03	600	1,300	1,900	2,579
12-22-03	325	1,250	1,575	3,963
12-30-03	250	300	550	3,963
1-5-04	375	350	725	4,060
1-12-04	225	2,600	2,825	3,550
1-21-04	700	6,200	6,900	4,100
1-28-04	600	6,700	7,300	7,130
2-3-04	800	5,200	6,000	6,075
2-9-04	1,300	3,375	4,675	2,000
2-17-04	2,075	5,350	7,425	3,488
2-23-04	225	250	475	3,517
3-1-04	50	200	250	1,357

^aFlight canceled due to observer/pilot schedule conflict.

Table 4. Peak numbers of Canada geese on surveyed areas during fall and winter, 1985-86 through 2003-04.

Year	Survey Area			
	Northeast	West-central	Central	Southern
1985-86		37,650 (12/12/85)		355,000 (12/9/85)
1986-87		33,100 (12/19/86)		331,000 (12/22/86)
1987-88		24,550 (12/28/87)		611,300 (1/11/88)
1988-89		17,900 (12/12/88)		692,000 (1/23/89)
1989-90		20,400 (11/30/89)		871,150 (12/26/89)
1990-91		39,450 (12/11/90)		820,000 (1/14/91)
1991-92		26,300 (12/19/91)		583,000 (12/24/91)
1992-93		22,450 (12/21/92)		597,000 (1/19/93)
1993-94		21,350 (12/28/93)		603,800 (2/7/94)
1994-95	9,705 (12/27/94)	67,700 (1/4/95)	4,500 (2/17/95)	431,900 (1/9/95)
1995-96	31,720 (1/22/96)	49,400 (1/3/96)	5,000 (1/29/96)	332,200 (1/8/96)
1996-97	51,635 (1/6/97)	45,200 (12/9/96)	9,100 (2/17/97)	310,100 (1/20/97)
1997-98	8,875 (11/24/97)	40,900 (11/24/97)	12,700 (1-21-98)	176,550 (1/21/98)
1998-99	14,750 (12/23/98)	40,425 (12/23/98)	2,200 (1/25/99)	420,200 (1/20/99)
1999-00	9,325 (11/8/99)	35,400 (1/5/00)	21,000 (1/31/00)	221,900 (1/31/00)
2000-01	10,945 (11/22/00)	27,185 (12/5/00)	11,000 (12/27/00)	398,650 (12/27/00)
2001-02	N/A ^a	30,755 (1/7/02)	8,800 (1/2/02)	61,900 (1/21/02)
2002-03	12,740 (11/18/02)	23,165 (12/3/02)	7,250 (1/21/03)	89,600 (1/21/03)
2003-04	18,585 (1-30-04)	28,545 (1-20-04)	7,425 (2-17-04)	140,370 (2-3-04)

^aNot available; flights were discontinued because of security concerns about low-level flying near power plants.

Table 5. Aerial estimates of Canada geese on staging and wintering areas in southern Illinois throughout fall and winter of 2003-04.

Date	Ballard County ^a	Horseshoe Lake	Union County	Crab Orchard	Rend Lake	Pyramid State Park	Carlyle Lake	DuQuoin Fair Ground	Cache River	Burning Star Mine	Total ^b	5-Year Average (1998-02)
10-20-03	100	1,500	300	1,200	200	200	50	700	0	450	4,700	2,150
10-29-03	100	600	400	100	300	800	0	850	0	400	3,600	5,075
11-3-03	160	2,000	450	1,750	400	1,100	0	930	0	600	7,490	4,060
11-10-03	150	1,800	700	1,200	210	825	0	800	0	450	6,245	6,272
11-17-03 ^c											N/A	6,325
11-25-03	100	2,000	1,200	1,000	1,100	350	0	600	0	0	7,070	8,325
12-1-03	500	5,000	1,000	800	350	2,100	0	750	0	500	11,350	9,983
12-8-03	900	1,600	1,300	2,200	150	2,000	50	600	0	100	9,175	23,250
12-17-03	1,100	4,700	4,000	12,500	1,300	3,500	150	1,300	0	1,200	30,500	86,250
12-22-03	1,000	5,500	7,000	8,500	2,650	650	0	600	0	950	27,050	137,131
12-30-03	1,900	7,000	4,800	10,000	1,500	400	0	950	0	575	27,875	137,131
1-5-04	1,100	4,000	5,500	7,500	850	125	0	425	0	1,600	21,350	147,870
1-12-04	5,800	5,200	7,500	15,200	2,400	1,550	0	2,050	350	3,400	45,400	141,950
1-21-04	9,300	12,000	9,000	19,800	3,500	3,000	900	1,850	0	2,200	64,725	177,210
1-28-04	5,600	14,000	9,000	15,500	5,900	4,000	5,000	2,250	200	3,700	68,080	157,645
2-3-04	12,400	42,000	22,000	41,000	1,500	5,000	120	2,900	400	10,000	140,370	109,214
2-9-04	16,200	21,000	26,000	39,000	3,000	2,550	0	3,400	100	3,150	116,500	39,242
2-17-04	10,050	13,000	15,000	18,500	3,400	1,950	100	0	2,100	8,300	81,250	47,969
2-23-04	8,350	750	825	2,800	600	525	150	375	1,200	150	16,775	16,238
3-1-04	1,650	50	0	700	50	200	0	350	0	0	3,050	11,838

^aIncludes Swan Lake, KY.

^b Includes Vandalia Lake, Keck's Marsh, Campbell Pond, Mermet Lake (starting on 11/10/03), and Ten Mile Creek.

^cFlight canceled due to observer/pilot schedule conflict.

Table 6. Peak numbers of Canada geese on primary refuge areas during fall and winter in southern Illinois and Ballard County, Kentucky, 1985-86 through 2003-04.

Year	Rend Lake	Crab Orchard	Union County	Horseshoe Lake	Ballard County, KY ^a
1985-86	70,000 (12/9/85)	95,000 (12/9/85)	96,000 (12/16/85)	105,000 (1/7/86)	40,000 (12/9/85)
1986-87	65,000 (12/22/86)	94,000 (12/15/86)	74,000 (12/22/86)	95,000 (1/5/87)	37,000 (12/15/86)
1987-88	110,000 (1/25/88)	190,000 (1/4/88)	132,000 (12/29/87)	170,000 (1/11/88)	45,300 (1/11/88)
1988-89	135,000 (1/23/89)	129,000 (1/4/89)	230,000 (1/17/89)	300,000 (1/10/89)	69,000 (1/23/89)
1989-90	170,000 (1/16/90)	158,000 (1/2/90)	210,000 (1/2/90)	365,000 (1/8/90)	230,000 (12/26/89)
1990-91	136,000 (1/14/91)	155,000 (12/19/90)	145,000 (12/31/90)	220,000 (1/14/91)	82,000 (1/22/91)
1991-92	165,000 (12/10/91)	152,400 (12/10/91)	90,000 (12/16/91)	145,000 (1/21/92)	68,000 (1/27/92)
1992-93	108,000 (1/19/93)	165,000 (1/14/93)	68,000 (1/14/93)	130,000 (1/6/93)	50,000 (1/14/93)
1993-94	118,000 (2/7/94)	235,000 (1/18/94)	104,000 (1/31/94)	205,000 (1/31/94)	76,500 (1/24/94)
1994-95	80,000 (1/9/95)	151,000 (1/9/95)	65,000 (1/3/95)	76,000 (1/9/95)	36,000 (1/9/95)
1995-96	38,000 (12/20/95)	107,000 (12/26/95)	61,000 (1/17/96)	175,000 (1/8/96)	30,000 (1/8/96)
1996-97	32,500 (1/28/97)	62,000 (1/20/97)	70,000 (1/20/97)	102,000 (1/20/97)	47,500 (1/20/97)
1997-98	13,000 (12/31/97)	58,000 (1/21/98)	24,000 (1/21/98)	37,000 (1/21/98)	24,500 (1/21/98)
1998-99	28,000 (1/25/99)	87,000 (1/20/99)	83,000 (1/20/99)	165,000 (1/20/99)	49,000 (1/11/99)
1999-00	34,500 (1/31/00)	76,000 (1/31/00)	30,000 (1/31/00)	34,000 (2/7/00)	23,000 (1/31/00)
2000-01	27,150 (12/19/00)	165,000 (12/27/00)	65,000 (12/27/00)	120,000 (1/2/01)	86,000 (1/2/01)
2001-02	5,900 (1/14/02)	15,000 (1/28/02)	16,000 (1/28/02)	13,500 (1/21/02)	7,300 (1/21/02)
2002-03	2,800 (1/21/03)	20,000 (1/13/03)	21,500 (1/6/03)	25,000 (12/23/02)	11,900 (1/21/03)
2003-04	5,900 (1-28-04)	41,000 (2-3-04)	26,000 (2-9-04)	42,000 (2-3-04)	16,200 (2-9-04)

^aBeginning in 1989-90, population estimate includes Swan Lake, KY.

Table 7. Peak numbers of snow geese on surveyed areas, 1995-96 through 2003-04.

Year	Survey Area			
	Northeast	West-central	Central	Southern
1995-96	970 (11/7/95)	900 (11/28/95)	0	231,800 (2/13/96)
1996-97	110 (10/28/96)	105 (10/31/96)	0	335,000 (2/18/97)
1997-98	300 (11/24/97)	450 (11/12/97)	20,000 (2/9/98)	170,700 (1/27/98)
1998-99	550 (12/7/98)	2,050 (12/7/98)	500 (12/15/98)	91,500 (1/20/99)
1999-00	50 (11/8/99)	205 (11/22/99)	50 (1/5/00)	213,300 (2/7/00)
2000-01	0 (all surveys)	4,500 (3/6/01)	11,000 (3/5/01)	188,850 (2/19/01)
2001-02	N/A ^a	305 (12/18/01)	86,000 (2/11/02)	113,850 (1/28/02)
2002-03	400 (1/21/03)	125 (12/3/02)	1,000 (2/25/03)	360,100 (3/3/03)
2003-04	250 (1-30-04)	210 (12/3/03)	38,000 (2-23-04)	180,250 (2-3-04)

^aNot available; flights were discontinued because of security concerns about low-level flying near power plants.

Table 8. Aerial estimates of snow geese on staging and wintering areas in southern Illinois throughout fall and winter of 2003-04.

Date	Ballard County ^a	Horseshoe Lake	Union County	Crab Orchard	Rend Lake	Keck's Marsh	Carlyle Lake	Ten Mile Creek	Cache River	Burning Star Mine	Total ^b	5-Year Average (1998-02)
10-20-03	0	0	0	0	0	0	0	0	0	0	0	0
10-29-03	0	0	0	0	200	0	0	0	0	0	0	456
11-3-03	0	0	0	0	600	0	200	0	0	0	1,125	583
11-10-03	0	0	0	0	3,000	0	200	0	0	0	3,300	3,333
11-17-03 ^c											N/A	4,013
11-25-03	0	200	0	0	15,000	0	75	0	0	0	16,525	11,775
12-1-03	0	300	100	0	15,000	0	0	0	0	15	15,415	14,167
12-8-03	50	600	50	0	10,500	8,400	27,500	No Survey	0	0	55,100	29,100
12-17-03	0	0	1,000	100	16,000	0	14,000	9,000	0	0	45,600	20,313
12-22-03	0	2,500	6,000	0	6,000	0	400	3,000	0	0	19,100	32,788
12-30-03	9,500	20,000	7,000	0	13,500	6,500	2,500	2,600	0	0	61,850	32,788
1-5-04	0	3,000	1,000	0	250	0	0	0	200	500	8,450	33,670
1-12-04	19,000	40,000	4,000	0	6,000	1,350	7,000	4,500	0	600	88,450	41,020
1-21-04	72,500	25,000	5,000	0	1,300	0	0	9,000	0	0	129,300	64,430
1-28-04	49,500	18,000	6,000	50	2,300	0	12,500	7,000	0	200	112,550	96,580
2-3-04	96,000	50,000	20,000	0	150	0	2,100	0	0	2,500	180,250	139,850
2-9-04	72,000	19,000	13,000	0	4,100	0	0	0	0	500	109,800	90,000
2-17-04	17,500	900	1,000	0	3,400	20,000	54,000	0	7,500	500	152,250	88,213
2-23-04	6,300	11,250	1,100	0	250	300	10,400	0	950	0	116,550	48,700
3-1-04	1,200	1,500	0	0	300	2,800	7,000	0	1,200	0	15,225	115,150

^aIncludes Swan Lake, KY.

^bIncludes Vandalia Lake, Campbell Pond, Pyramid State Park, Mermet Lake, (starting 11/10/03), and DuQuoin Fair Ground.

^cFlight canceled due to observer/pilot schedule conflict.

Table 9. Greater Chicago area ground count survey results, 1997-98 through 2003-04.

Year	December		January		
	Survey Period	Number of Canada Geese	Survey Period	Number of Canada Geese	Number of Ducks
1997-98	8-11	45,400	5-8	42,660	4,300
1998-99	8-11	76,200	5-8	24,275	4,775
1999-00	9-10	52,750	3-5	49,200	4,825
2000-01	5-8	55,575	2-5	4,480	3,780
2001-02	10-12	69,330	7-10	70,870	7,000
2002-03	10-13	62,435	6-9	53,585	4,316
2003-04	9-11	50,280	6-9	61,040	6,268

Table 10. Giant Canada goose spring population estimates, 1993-2004.

Year	Survey Period	Population Estimate		95 % Confidence Interval ^a		
		Original Strata	Revised Strata	Percent	Low	High
1993	12-16 April	106,200	78,550			
1994	11-21 April	114,200	85,250			
1995	10-15 April	107,000	78,950			
1996	8-23 April	154,230	111,900	34	74,200	149,600
1997	7-18 April	72,720	60,600	33	40,900	80,300
1998	1-13 April	105,650	75,400	32	50,950	99,850
1999	7-14 April	111,800	81,400	24	61,800	101,000
2000 ^b	12-24 April	102,900	91,000	28	65,400	116,600
2001	5-16 April		85,700	30	59,800	111,600
2002	9-16 April		83,850	30	58,550	109,150
2003	4-18 April		81,600	26	60,750	102,450
2004	7-16 April		103,250	21	81,800	124,700

^aNo information for 1993, 1994, and 1995.

^bStrata were redefined using an improved computer program that provided more accurate estimates of strata boundaries and size.

Table 11. Mean number of giant Canada geese observed per plot during spring population surveys, 1993-2004.

Year	Strata									Total		
	Low			Medium			High					
	Number of Plots Sampled ^a	Mean Number of Geese Observed	95 Percent Confidence Level	Number of Plots Sampled ^a	Mean Number of Geese Observed	95 Percent Confidence Level	Number of Plots Sampled ^a	Mean Number of Geese Observed	95 Percent Confidence Level	Number of Plots Sampled ^a	Mean Number of Geese Observed	95 Percent Confidence Level
1993	29	3.44	2.99	32	7.36	6.04	24	27.08	10.67	85	4.34	2.77
1994	62	2.05	1.20	20	8.60	4.82	17	72.20	53.83	99	4.50	1.89
1995	70	2.21	1.86	13	19.50	18.92	48	27.80	10.67	131	4.24	2.21
1996	60	4.03	2.22	50	16.50	6.49	21	44.40	26.47	131	6.32	2.25
1997	70	1.61	1.01	20	7.80	6.37	16	29.94	13.03	106	2.87	1.09
1998	67	3.03	1.53	20	11.30	4.09	16	21.94	11.07	103	4.19	1.44
1999	76	2.61	0.92	14	12.71	6.56	14	39.71	16.51	104	4.43	1.08
2000	63	2.79	1.21	25	11.16	6.23	12	61.5	22.64	100	4.80	1.34
2001	60	3.12	1.37	20	11.20	4.75	14	29.71	17.14	94	4.47	1.32
2002	64	2.94	1.28	19	11.53	5.80	16	29.50	12.66	99	4.37	1.32
2003	65	3.02	1.14	18	9.89	3.53	14	31.0	12.17	97	4.28	1.11
2004	72	4.25	1.13	24	8.79	3.11	17	42.06	23.04	113	5.42	1.13

^aNumber of plots with suitable goose nesting habitat (permanent water).

Table 12. Canada goose harvest estimates for the early-September season, 1987-2003 (Illinois Waterfowl Hunter Questionnaire Survey; 2003 results are preliminary).

Year	Season Length (days)	Northeast Canada Goose Zone	Remainder of North Zone	North Zone Subtotal ^a	Central Zone ^b	South Zone	Total Harvest
1987 ^c	10	1,660	---	1,660	---	---	1,660
1988 ^c	10	2,270	---	2,270	---	---	2,270
1989 ^c	10	2,950	---	2,950	---	---	2,950
1990 ^c	10	2,878	---	2,878	---	---	2,878
1991 ^c	10	3,510	---	3,510	---	---	3,510
1992-1994 ^d		---	---	---	---	---	---
1995 ^e	14	2,784	---	2,784	---	---	2,784
1996 ^f	9	2,286	648	2,934	---	---	2,934
1997 ^g	9/14 ^g	5,405	2,216	7,621	3,774	---	11,443 ^h
1998 ⁱ	15	3,125	1,059	4,184	3,046	384	7,852 ^h
1999 ⁱ	15	6,624	2,500	9,124	10,491	491	20,223 ^h
2000 ^j	14	4,143	2,048	6,191	8,774	932	15,897
2001 ⁱ	15	8,151	2,828	10,979	13,170	1,580	26,019 ^h
2002 ⁱ	15	7,165	1,806	8,971	11,130	1,433	21,534
2003 ⁱ	15	4,259	1,648	5,907	7,103	2,221	15,267 ^h

^aIncluding portions of the Central Zone in the Northeast Canada Goose Zone.

^bExcluding portions of the Central Zone in the Northeast Canada Goose Zone.

^cSeason held September 1-10.

^dNo early-September season offered.

^eSeason held September 1-14.

^fSeason held September 7-15.

^gSeason held September 1-14 in the Northeast Canada Goose Zone and September 6-14 in the remainder of the North Zone and in the Central Zone.

^hNo zone was identified for some harvested geese.

ⁱSeason held September 1-15 in all zones.

^jSeason held September 2-15 in all zones.

Table 13. Statewide Canada goose harvest objectives and harvest estimates, 1990-91 through 2003-04.

				U.S. Fish and Wildlife Service		Illinois Waterfowl Hunter Survey Questionnaire	
Year	MVP Harvest Allocation	MVP Harvest Derivation	Statewide Harvest Allocation	Harvest Estimate ^a	Percentage of Maximum Allocation	Harvest Estimate	Percentage of Maximum Allocation
1990-91	115,200	0.81	142,200	93,700	66	67,127	47
1991-92	110,000	0.76	144,800	95,400	66	92,239	64
1992-93	60,000	0.76	79,000	76,700	97	59,352	75
1993-94	46,600	0.76	61,300	94,800	155	93,361	152
1994-95	58,400	0.53	109,600	77,400	71	67,790	62
1995-96	92,200	0.53	172,600	104,700	61	92,478	54
1996-97	56,000	0.59	94,900	100,500	106	65,864	69
1997-98	44,000	0.59	74,600	81,700	110	61,282	82
1998-99	24,100	0.59	40,800	57,100	140	43,222	106
1999-00	61,000	0.51	119,600	98,020	82	119,611	100
2000-01	63,500	0.50	127,000	124,900	98	128,387	101
2001-02	30,700	0.56	54,800	64,740	118	64,907	118
2002-03	28,200	0.44	64,100	67,500 ^b	105	89,297	139
2003-04	55,600	0.44	126,400	124,600 ^{b c}	99	83,207 ^c	66

^aWaterfowl Harvest Survey, 1990-91 through 2001-02.

^bHarvest Information Program.

^cPreliminary harvest estimate.

Table 14. Estimates of the percent of regular season harvest derived from major Canada goose populations, Illinois. From Management Plan for the Mississippi Valley Population of Canada Geese, 1997-2002 , J. Wood (1999, 2000), and U.S. Fish and Wildlife Service (2001, 2002, 2003).

Period Examined	Year(s) Applied	Tall Grass Prairie	Interior Populations			Giant
			Eastern Prairie	Southern James Bay	Mississippi Valley	
1970-1974 ^a	N/A	4	3	5	84	4
1975-1979 ^a	N/A	2	7	1	84	6
1980-1984 ^a	N/A	3	10	1	80	7
1985-1989 ^a	N/A	3	8	1	72	16
1990-1994	1996-97 1997-98 1998-99	4	7	0	59	31
1995-1997	1999-00	1	4	0	51	44
1996-1998	2000-01	0	4	0	50	45
1997-1999	2001-02	1	5	0	56	38
1998-2000	2002-03	1	4	0	44	51
1999-2001	2003-04	1	4	0	44	51

^aReported harvest derivations not used to determine maximum allowable harvest quotas.

Table 15. Percentage of Canada goose harvest allocation assigned to waterfowl zones, Illinois.

Period	North Zone		Central Zone				South Zone			
							Non-quota Counties	Rend Lake Quota Zone		Southern IL. Quota Zone
1960-1965	-----Remainder of State = 0 percent-----									100
1966-1981	-----Remainder of State = 20 percent-----									80
1982-1985	-----Remainder of State = 35 percent-----									65
1986-1993	-----Remainder of State = 35 percent-----						15		50	
	MVP ^a	Non-MVP ^b	MVP	Non-MVP	MVP	Non-MVP	MVP	Non-MVP	MVP	Non-MVP
1994 ^c	10	25	15	50	5	5	15	5	55	15
1995 ^d	10	25	15	50	5	5	15	5	55	15
1996 ^e	10	25	15	50	5	5	15	5	55	15
1997 ^f	16	21	19	42	11	10	8	7	46	20
1998 ^g	20	25	20	42	12	10	6	5	42	18
1999 ^g	20	25	20	42	12	10	6	5	42	18
2000 ^h	24	28	23	44	11	9	4	3	37	15
2001 ⁱ	24	19	20	49	12	11	5	2	39	19
2002 ^j	26	20	21	51	17	12	N/A ^k	N/A ^k	36	17
2003 ^l	29	22	21	51	18	12	N/A ^k	N/A ^k	32	15

^aMVP=Percentage of statewide Mississippi Valley Population allocation.

^bNon-MVP = Percentage of statewide Canada goose allocation other than MVP.

^cThe North and Central quota zones received 70 percent and 65 percent of the total Canada geese assigned to each zone, respectively.

^dThe North and Central quota zones received 75 percent and 65 percent of the total Canada geese assigned to each zone, respectively.

^eThe North and Central quota zones received 72 percent and 63 percent of the total Canada geese assigned to each zone, respectively.

^fThe North and Central quota zones received 62 percent and 59 percent of the total Canada geese assigned to each zone, respectively.

^gThe North and Central quota zones received 62 percent and 60 percent of the total Canada geese assigned to each zone, respectively.

^hThe North and Central quota zones received 65 percent and 57 percent of the total Canada geese assigned to each zone, respectively.

ⁱThe North and Central quota zones received 61 percent and 52 percent of the total Canada geese assigned to each zone, respectively.

^jThe North and Central quota zones received 63 percent and 53 percent of the total Canada geese assigned to each zone, respectively.

^kRend Lake Quota Zone was eliminated in 2002-03.

^lThe North and Central quota zones received 62 percent and 50 percent of the total Canada geese assigned to each zone, respectively.

Table 16. Canada goose harvest allocation, 1994-95 through 2003-04.

Year	Statewide	North Zone			Central Zone			South Zone			
		Quota Zone	Non-quota Counties	Total	Quota Zone	Non-quota Counties	Total	Rend Lake Quota Zone	Southern IL. Quota Zone	Non-quota Counties	Total
1994-95	109,600	13,000	5,650	18,650	22,400	11,950	34,350	11,400	39,800	5,400	56,600
1995-96	172,600	22,000	7,300	29,300	35,200	18,850	54,050	17,830	62,600	8,820	89,250
1996-97	94,900	11,000	4,325	15,325	17,600	10,250	27,850	10,400	36,600	4,725	51,725
1997-98	74,600	8,400	5,100	13,500	12,500	8,700	21,200	5,700	26,400	7,800	39,900
1998-99	40,800	5,600	3,400	9,000	7,100	4,700	11,800	2,300	13,100	4,600	20,000
1999-00	119,600	16,700	10,200	26,900	22,100	14,700	36,800	6,600	36,100	13,200	55,900
2000-01	127,000	21,500	11,600	33,100	24,700	18,650	43,350	4,650	32,900	13,000	50,550
2001-02	54,800	7,250	4,650	11,900	9,250	8,600	17,850	2,100	16,550	6,400	25,050
2002-03	64,100	9,300	5,400	14,700	12,800	11,300	24,100	N/A ^a	16,100	9,200	25,300
2003-04	126,400	19,300	11,900	31,200	24,100	24,100	48,200	N/A ^a	28,600	18,400	47,000

^aRend Lake Quota Zone was eliminated in 2002-03.

Table 17. Canada goose harvest objective and harvest allocation by zone, 1994-95 through 2003-04.

Year	Maximum Allowable Canada Goose Harvest									
	Statewide				Waterfowl Zone					
	MVP	MVP Harvest Derivation	Non-MVP	Total	North		Central		South	
1994-95	58,400	0.53	51,200	109,600	18,650	17%	34,350	31%	56,600	52%
1995-96	92,200	0.53	80,400	172,600	29,300	17%	54,050	31%	89,250	52%
1996-97	56,000	0.59	38,900	94,900	15,325	16%	27,850	29%	51,725	55%
1997-98	44,000	0.59	30,600	74,600	13,500	18%	21,200	28%	39,900	54%
1998-99	24,100	0.59	16,700	40,800	9,000	22%	11,800	29%	20,000	49%
1999-00	61,000	0.51	58,600	119,600	26,900	22%	36,800	31%	55,900	47%
2000-01	63,500	0.50	63,500	127,000	33,100	26%	43,350	34%	50,550	40%
2001-02	30,700	0.56	24,100	54,800	11,900	22%	17,850	32%	25,050	46%
2002-03	28,200	0.44	35,900	64,100	14,700	23%	24,100	38%	25,300	39%
2003-04	55,600	0.44	70,800	126,400	31,200	25%	48,200	38%	47,000	37%

Table 18. Canada goose hunting season information, Northern Illinois Quota Zone, 1994-95 through 2003-04.

Year	Maximum Allowable Harvest	Harvest Estimate	Mean Daily Harvest	Daily Bag Limit	Season Length		Date Opened	Date Closed	Number of		Reported Harvest	Reporting Compliance Rate
					Possible	Actual			Hunter Checks	Usable Checks		
1994-95	13,000	6,649	130	2	51	51	10/20/94 11/23/94	11/13/94 12/18/94	315	N/A	5,392	81.1
1995-96	22,000	11,584	125	3	93	93	10/14/95	01/14/96	357	N/A	8,271	71.4
1996-97	11,000	11,300	147	2	93	77	10/12/96	12/27/96	340	146	8,170	72.3 ± 7.4
1997-98	8,400	8,386	210	2	78	40	10/04/97 10/31/97	10/12/97 11/30/97	298	123	5,132	61.2 ± 8.8
1998-99	5,600	5,530	111	1, 2 (Dec. 28 - Jan. 10)	67	50	10/08/98 11/09/98 12/07/98	10/18/98 11/29/98 12/24/98	603	296	4,374	79.1 ± 4.7
1999-00	16,700	17,799	225	2, 3 (Dec. 19 - Jan. 5)	91	79	10/07/99	12/24/99	856	376	11,943	67.1 ± 4.8
2000-01	21,500	14,418	158	3	91	91	10/19/00	1/17/01	1,218	419	11,852	82.2 ± 3.7
2001-02	7,250	7,120	102	1	70	70	10/13/01 11/10/01	10/21/01 1/9/02	1,565	336	5,461	76.7 ± 4.6
2002-03	9,300	9,751	184	2	80	53	10/17/02	12/8/02	1,104	305	7,898	81.0 ± 4.5
2003-04	19,300	19,810	233	2	90	85	10/16/03	1/8/04	1,067	375	14,699	74.2 ± 4.5

Table 19. Harvest monitoring system estimates of Canada goose harvest in Illinois' four quota zones, 1994-95 through 2003-04.

Year	Quota Zone											
	Northern Illinois			Central Illinois			Rend Lake			Southern Illinois		
	Quota ^a	Harvest Estimate	Percent of Quota ^a	Quota ^a	Harvest Estimate	Percent of Quota ^a	Quota ^a	Harvest Estimate	Percent of Quota ^a	Quota ^a	Harvest Estimate	Percent of Quota ^a
1994-95	13,000	6,649	51	22,400	10,007	45	11,400	6,326	55	39,800	25,956	65
1995-96	22,000	11,584	53	35,200	17,073	49	17,830	7,375	41	62,600	35,414	57
1996-97	11,000	11,300	103 [*]	17,600	17,001	97	10,400	4,140	40	36,600	25,091	69
1997-98	8,400	8,386	100 [*]	12,500	12,938	104 [*]	5,700	3,272	57	26,400	22,010	83
1998-99	5,600	5,530	99 [*]	7,100	5,665	80 [*]	2,300	2,820	123 [*]	13,100	16,605	127 [*]
1999-00	16,700	17,799	107 [*]	22,100	21,516	97	6,600	3,323	50	36,100	24,769	69
2000-01	21,500	14,418	67	24,700	17,893	72	4,650	4,509	97	32,900	35,815	109 [*]
2001-02	7,250	7,120	98	9,250	8,950	97 [*]	2,100	2,152	102 [*]	16,550	6,599	40
2002-03	9,300	9,751	105 [*]	12,800	12,293	96	N/A ^b	N/A ^b	N/A ^b	16,100	7,420	46
2003-04	19,300	19,810	103 [*]	24,100	19,719	82	N/A ^b	N/A ^b	N/A ^b	28,600	12,497	44

^aQuota = Maximum allowable harvest.

^bRend Lake Quota Zone was eliminated in 2002-03.

* Season closed early to prevent overharvest.

Table 20. Canada goose hunting season information, Central Illinois Quota Zone, 1994-95 through 2003-04.

Year	Maximum Allowable Harvest	Harvest Estimate	Mean Daily Harvest	Daily Bag Limit	Season Length		Date Opened	Date Closed	Number of		Reported Harvest	Reporting Compliance Rate
					Possible	Actual			Hunter Checks	Usable Checks		
1994-95	22,400	10,007	196	2	51	51	10/27/94 11/23/94	10/30/94 01/08/95	234	N/A	8,726	87.2
1995-96	35,200	17,073	184	3	93	93	10/28/95	01/28/96	276	N/A	13,505	79.1
1996-97	17,600	17,001	183	2	93	93	10/26/96	01/26/97	404	161	12,479	73.4 ± 7.0
1997-98	12,500	12,938	190	2	78	68	10/18/97 11/15/97	10/19/97 01/19/98	439	275	10,014	77.4 ± 5.0
1998-99	7,100	5,665	142	1, 2 (Jan. 18 - Jan. 31)	67	40	10/22/98 11/23/98 12/14/98	10/25/98 12/06/98 01/04/99	841	160	4,311	76.1 ± 6.7
1999-00	22,100	21,516	236	2, 3 (Jan. 8 - Jan. 21)	91	91	10/23/99	01/21/00	1,090	413	15,104	70.2 ± 4.5
2000-01	24,700	17,893	197	2, 3 (Dec. 1 - Jan. 31)	91	91	10/28/00 11/4/00	10/29/00 1/31/01	1,025	332	14,994	83.8 ± 4.0
2001-02	9,250	8,950	136	1, 2 (Dec. 24 - Jan. 21)	70	66	10/25/01 11/17/01	10/28/01 1/17/02	885	249	7,223	80.7 ± 5.0
2002-03	12,800	12,293	154	2	80	80	10/24/02 11/17/02	10/27/02 1/31/03	990	295	10,154	82.6 ± 4.4
2003-04	24,100	19,719	219	2	90	90	10/23/03 11/7/03	10/26/03 1/31/04	734	315	16,939	85.9 ± 3.9

Table 21. Canada goose harvest estimate for the Southern Illinois Quota Zone, 2003-04.

Period		Daily Registration Harvest Form System
Days	Dates	
Thursday-Sunday	Nov. 20-23	368
Saturday-Sunday	Dec. 6-7	202
Monday-Thursday	Dec. 8-11	61
Friday-Sunday	Dec. 12-14	316
Monday-Thursday	Dec. 15-18	134
Friday-Sunday	Dec. 19-21	248
Monday-Thursday	Dec. 22-25	316
Friday-Sunday	Dec. 26-28	346
Monday-Thursday	Dec. 29 - Jan. 1	351
Friday-Sunday	Jan. 2-4	381
Monday-Thursday	Jan. 5-8	619
Friday-Sunday	Jan. 9-11	1,296
Monday-Thursday	Jan. 12-15	1,152
Friday-Sunday	Jan. 16-18	913
Monday-Thursday	Jan. 19-22	1,238
Friday-Sunday	Jan. 23-25	1,014
Monday-Thursday	Jan. 26-29	1,586
Saturday-Sunday	Jan. 30-31	1,956
Total Harvest		12,497

Table 22. Distribution of Canada goose harvest in the Southern Illinois Quota Zone, 1975-76 through 2003-04.

Year	County					
	Alexander		Union		Williamson/Jackson	
	Number	Percent	Number	Percent	Number	Percent
1975-76	9,176	37	8,629	34	7,270	29
1976-77	7,613	30	5,984	23	12,268	47
1977-78	11,111	36	3,927	13	15,709	51
1978-79	16,348	40	10,915	27	13,227	33
1979-80	8,331	28	7,480	26	13,382	46
1980-81	9,810	35	5,733	21	12,292	44
1981-82	7,766	31	7,133	28	10,429	41
1982-83	6,281	35	3,855	22	7,727	43
1983-84	6,186	34	4,578	25	7,400	41
1984-85	5,952	41	3,387	23	5,268	36
1985-86	6,919	32	5,186	24	9,662	44
1986-87	8,390	32	7,770	30	9,698	38
1987-88	5,427	29	3,749	20	9,409	51
1988-89	12,391	32	8,791	22	18,150	46
1989-90	13,806	33	9,996	24	18,452	43
1990-91	7,683	25	7,861	25	15,775	50
1991-92	7,026	27	5,650	21	13,727	52
1992-93	4,270	25	3,477	20	9,508	55
1993-94	7,046	19	5,285	15	24,348	66
1994-95	4,604	18	4,891	19	16,461	63
1995-96	7,872	22	5,874	17	21,668	61
1996-97	4,426	18	5,232	21	15,433	61
1997-98	3,067	14	4,106	19	14,837	67
1998-99	3,364	20	2,832	17	10,409	63
1999-00	3,347	13	4,379	18	17,043	69
2000-01	8,119	23	6,680	18	21,016	59
2001-02	544	8	667	10	5,388	82
2002-03	767	10	1,000	14	5,653	76
2003-04	1,765	14	1,830	15	8,902	71

Table 23. Number of licensed Canada goose hunting clubs (areas that charge a daily fee for hunting and areas covered by lease or other monetary agreement) in the Southern Illinois Quota Zone, 1985-86 through 2003-04.

Year	County			Total
	Alexander	Union	Williamson/ Jackson	
1985-86	32	13	44	89
1986-87	34	16	47	97
1987-88	37	16	46	99
1988-89	34	15	46	95
1989-90	37	17	50	104
1990-91	41	22	61	124
1991-92	42	20	65	127
1992-93	43	16	48	107
1993-94	22	13	45	80
1994-95	27	13	52	92
1995-96	26	12	51	89
1996-97	26	12	51	89
1997-98	31	16	56	103
1998-99	27	13	47	87
1999-00	26	13	47	86
2000-01	27/7	11/7	53/9	91/23 ^a
2001-02	24/9	10/10	45/8	79/27 ^a
2002-03	21/14	9/11	38/10	68/35 ^a
2003-04	19/12	8/11	35/11	62/34 ^a

^aNumber of commercial goose clubs/number of commercial duck clubs; licensed duck clubs were required to report their Canada goose harvest beginning in 2000.

Table 24. Canada goose harvest on commercial and noncommercial areas in the Southern Illinois Quota Zone, 2003-04.

County	Number of Commercial Clubs	Canada Goose Harvest				
		Commercial		Noncommercial		Total
		Number	Percent	Number	Percent	
Alexander	31	1,659	94	106	6	1,765
Union	19	1,674	91	156	9	1,830
Williamson/ Jackson	46	6,009	68	2,893	32	8,902
Total	96	9,342	75	3,155	25	12,497

Table 25. Hunter use on commercial and noncommercial areas in the Southern Illinois Quota Zone, 2003-04.

County	Number of Commercial Clubs	Number of Days Afield				
		Commercial		Noncommercial		Total
		Number	Percent	Number	Percent	
Alexander	31	6,219	92	541	8	6,760
Union	19	6,429	84	1,225	16	7,654
Williamson/ Jackson	46	11,239	47	12,674	53	23,913
Total	96	23,887	62	14,440	38	38,327

Table 26. Hunting effort and harvest on public hunting areas in the Southern Illinois Quota Zone, 1990-91 through 2003-04.

Year	Public Hunting Area														
	Horseshoe Lake					Union County					Crab Orchard				
	Percent of Total County Days Afield	Percent of Total County Harvest	Number of Days Afield	Harvest Estimate	Number of Geese per Day Afield	Percent of Total County Days Afield	Percent of Total County Harvest	Number of Days Afield	Harvest Estimate	Number of Geese per Day Afield	Percent of Total County Days Afield	Percent of Total County Harvest	Number of Days Afield	Harvest Estimate	Number of Geese per Day Afield
1990-91	6	2	1,406	184	0.13	23	19	3,644	1,467	0.40	9	5	3,938	776	0.20
1991-92	5	2	1,005	164	0.16	27	19	3,571	1,062	0.30	8	5	3,049	711	0.23
1992-93	5	1	746	61	0.08	25	17	2,618	605	0.23	9	5	2,910	498	0.17
1993-94	1	1	335	42	0.13	27	19	2,060	1,012	0.49	7	5	2,729	1,154	0.42
1994-95	1	2	375	75	0.20	26	16	2,255	802	0.36	6	4	2,754	642	0.23
1995-96	7	5	929	420	0.45	24	17	2,472	1,025	0.41	5	4	2,092	839	0.40
1996-97	8	5	850	214	0.25	21	12	2,054	620	0.30	4	3	1,772	479	0.27
1997-98	6	4	587	117	0.20	20	14	1,884	576	0.31	4	2	1,514	360	0.24
1998-99	19	3	1,026	95	0.09	14	8	791	223	0.28	3	2	776	259	0.33
1999-00	8	7	717	244	0.34	19	14	1,621	603	0.37	4	3	1,538	451	0.29
2000-01	7	2	718	173	0.24	15	10	1,621	678	0.42	5	4	1,622	766	0.47
2001-02	13	20	596	111	0.19	18	23	965	154	0.16	5	4	1,194	223	0.19
2002-03	5	7	267	52	0.19	19	14	1,170	143	0.12	5	3	991	179	0.18
2003-04	4	2	277	43	0.16	17	13	1,281	229	0.18	3	2	827	220	0.27

Table 27. Number of Canada geese harvested per day afield on commercial clubs in the Southern Illinois Quota Zone, 1990-91 through 2003-04.

Year	County		
	Alexander	Union	Williamson/ Jackson
1990-91	0.59	0.54	0.54
1991-92	0.35	0.46	0.52
1992-93	0.38	0.36	0.42
1993-94	0.71	0.77	0.95
1994-95	0.39	0.52	0.55
1995-96	0.61	0.62	0.69
1996-97	0.44	0.58	0.54
1997-98	0.34	0.49	0.55
1998-99	0.62	0.55	0.65
1999-00	0.38	0.55	0.70
2000-01	0.76	0.69	0.85
2001-02	0.12	0.13	0.33
2002-03	0.14	0.18	0.37
2003-04	0.27	0.26	0.53

Table 28. Canada goose hunting season information, Southern Illinois Quota Zone, 1988-89 through 2003-04.

Year	Maximum Allowable Harvest	Harvest Estimate	Daily Bag Limit	Season Length		Date Opened	Date Closed	Number of Geese Harvested per Day Afield	Number of Hunter Days Afield
				Possible	Actual				
1988-89	37,000	39,332	2	50	50	11/21/88	01/09/89	0.56	70,460
1989-90	51,750	42,254	2, (3/ Jan. 1-14)	56	56	11/20/89	1/14/90	0.54	78,699
1990-91	71,100	31,319	3	70	70	11/10/90 11/19/90	11/12/90 01/24/91	0.39	80,885
1991-92	72,400	26,403	3	84	84	11/09/91	01/31/92	0.38	70,210
1992-93	39,500	17,255	2	79	79	11/14/92	01/31/93	0.30	57,877
1993-94	30,600	36,679	2	51	51	11/27/93	01/16/94	0.67	54,437
1994-95	39,800	25,956	2	51	51	12/03/94	01/22/95	0.40	65,559
1995-96	62,600	35,414	3	89	89	11/04/95	01/31/96	0.52	68,759
1996-97	36,600	25,091	2	84	84	11/09/96	01/31/97	0.41	60,801
1997-98	26,400	22,010	2	78	78	11/15/97	01/31/98	0.38	57,196
1998-99	13,100	16,605	1, (2/Jan. 18-31)	67	50	11/26/98	01/14/99	0.48	34,267
1999-00	36,100	24,769	2	67	67	11/26/99	01/31/00	0.47	52,716
2000-01	32,900	35,815	2, (3/Jan. 1-31)	73	60	11/09/00 11/24/00	11/12/00 01/18/01	0.63	56,912
2001-02	16,550	6,599	1, (2/Jan. 1-31)	48	48	12/15/01	1/31/02	0.20	33,585
2002-03	16,100	7,420	2	60	60	11/07/02 12/07/02	11/10/02 1/31/03	0.22	33,557
2003-04	28,600	12,497	2	61	61	11/20/03 12/06/31	11/23/03 1/31/04	0.33	38,327

Table 29. Canada goose harvest estimates for Illinois and the 24 counties comprising the Northern, Central, Rend Lake ^a, and Southern Illinois quota zones, 1994-95 through 2003-04 (Illinois Waterfowl Hunter Questionnaire Survey results).

Year	Harvest Estimate		Percentage of Statewide Harvest In Quota Zone Counties
	Statewide	Quota Zone Counties	
1994-95	67,790	49,438	73
1995-96	92,478	62,877	68
1996-97	65,864	49,419	75
1997-98	61,282	42,291	69
1998-99	43,222	29,542	68
1999-00	119,611	75,055	63
2000-01	128,387	76,843	60
2001-02	64,907	36,570	56
2002-03 ^b	89,297	48,683	55
2003-04 ^{b c}	83,207	48,743	59

^aRend Lake Quota Zone (RLQZ) was eliminated in 2002-03.

^bHarvest estimates for RLQZ counties (Franklin and Jefferson) were included for comparative purposes.

^cPreliminary harvest estimates.

Appendix 1. Aerial estimates of total ducks on surveyed areas in central Illinois throughout fall and winter of 2003-04.

Date	Sangchris Lake	Lake Springfield	Total	5-Year Average (no data)
10-20-03	50	0	50	
10-29-03	130	0	130	
11-3-03	600	200	1,100	
11-10-03	625	190	815	
11-17-03 ^a			N/A	
11-25-03	200	450	650	
12-1-03	200	300	500	
12-8-03	175	325	500	
12-17-03	1,850	1,500	3,350	
12-22-03	425	1,150	1,575	
12-30-03	2,100	500	2,600	
1-5-04	1,000	150	1,150	
1-12-04	175	1,000	1,175	
1-21-04	0	1,800	1,800	
1-28-04	0	1,200	1,200	

^aFlight canceled due to observer/pilot schedule conflict.

Appendix 2. Aerial estimates of total ducks on migration and wintering areas in southern Illinois throughout fall and winter of 2003-04.

Date	Carlyle Lake	Keck's Marsh	Rend Lake	Crab Orchard	Union County	Horseshoe Lake	Cache River	Mermet Lake ^a	Total	5-Year Average (No Data)
10-20-03	4,300	0	800	3,500	100	0	800		9,500	
10-29-03	13,900	0	4,800	3,500	1,000	0	1,100		24,300	
11-3-03	23,500	0	3,300	4,500	6,500	300	1,100		39,200	
11-10-03	39,000	1,500	5,600	6,100	13,500	5,000	4,000	3,100	77,800	
11-17-03 ^b										
11-25-03	26,000	4,500	25,000	8,000	18,000	15,000	9,000	3,500	109,000	
12-1-03	6,000	23,000	5,500	5,200	13,000	27,000	7,200	2,500	89,400	
12-8-03	20,500	7,500	7,500	8,000	14,000	11,000	13,200	5,700	87,400	
12-17-03	27,500	21,000	7,000	3,000	19,500	25,000	8,500	3,500	115,000	
12-22-03	11,000	10,500	5,500	6,500	16,000	21,000	7,900	2,650	81,050	
12-30-03	9,000	8,700	3,300	2,500	3,500	8,500	3,500	4,500	43,500	
1-5-04	4,500	10,500	6,250	2,500	13,000	12,500	6,500	6,300	62,050	
1-12-04	5,100	10,000	2,400	4,600	9,000	6,800	2,100	4,800	44,800	
1-21-04	16,600	1,000	2,000	13,000	29,000	16,000	2,100	4,500	84,200	
1-28-04	2,200	2,100	6,100	5,900	14,500	26,800	1,400	2,000	61,000	

^aSite not surveyed on 10-20-03, 10-29-03, and 11-3-03.

^bFlight canceled due to observer/pilot schedule conflict.

Appendix 3. Aerial estimates of total ducks on surveyed areas in northeast Illinois throughout fall and winter of 2003-04.

Date	Kankakee River	Braidwood Lake	Mazonia FWA	Dresden Lake	Goose Lake Prairie	DesPlaines River	Heidecke Lake	Illinois River/Quarries	LaSalle Lake	Lake Renwick	Total	5-Year Average (1998-02)
10-6-03	20	10	0	50	220	0	70	30	20	20	440	1,812
10-21-03	30	25	0	40	180	20	50	0	150	95	590	6,031
11-5-03	215	280	60	200	845	0	600	525	3,185	380	6,290	17,829
11-19-03	170	430	35	0	1,600	0	1,605	120	800	200	4,960	38,005
12-1-03 ^a												46,677
12-15-03 ^b												46,677
12-29-03 ^b												35,905
1-5-04	165	7,190	0	150	210	0	1,665	40	No Survey ^a	250	9,670	23,093
1-30-04	265	150	0	125	0	10	0	150	1,800	0	2,500	21,825

^aSurvey canceled due to inclement weather.

^bSurvey canceled because of security concerns about low-level flying near power plants.

Appendix 4. Aerial estimates of Canada geese on west-central Illinois survey areas, 2003-04.

FULTON CO.	10-7-03	10-21-03	11-5-03	11-19-03	12-2-03	12-30-03	1-5-04	*1-20-04
Farmington Sew Pnd	20	210	80	210	50	155	0	0
Norris	150	125	75	50	255	50	50	50
Canton Pk.	115	145	1,265	1,500	650	600	400	800
Fiatt	395	600	50	845	2,520	750	25	0
GGR	50	0	0	0	0	0	0	0
RBC	0	0	0	0	0	0	0	0
MSD N.	160	590	300	160	135	25	380	350
WMT	135	125	100	130	255	25	150	450
Cuba	250	150	200	100	25	50	10	0
MSD	885	2,405	3,125	5,330	4,390	4,550	4,180	925
FCCA	60	105	320	200	550	325	400	0
CEB	25	0	0	0	0	50	0	0
Justice	35	120	30	60	50	0	205	0
Johnson	50	0	5	0	0	0	0	0
Buckheart	110	175	100	350	215	225	170	0
CILCO	175	230	820	525	275	785	1,650	16,100
Banner	100	215	100	90	270	255	275	20
Middlegrove	50	75	210	270	100	35	235	1,000
Fairview	425	220	125	130	165	700	165	0
Double T	50	10	335	10	0	900	30	600
Canton Reservoir	0	0	10	50	150	0	400	2,500
Subtotal	3,240	5,500	7,250	10,010	10,055	9,480	8,725	22,795
KNOX CO.								
Kickapoo	50	10	75	110	765	475	185	350
Unionville	795	950	1,955	1,160	2,415	2,070	375	300
Rapattee	100	175	265	155	235	425	175	0
Oak Run	150	130	50	125	285	1,525	1,195	2,600
Victoria E.	0	25	25	90	200	340	75	75
Snake Den	325	1,110	450	1,025	300	975	955	750
Victoria W.	0	0	0	0	25	0	0	0
Victoria N.	900	1,160	550	695	2,300	2,600	450	600
Lake Calhoun	100	75	200	600	1,200	300	0	0
Subtotal	2,420	3,635	3,570	3,960	7,725	8,710	3,410	4,675
PEORIA CO.								
Elmwood	700	165	200	580	535	600	315	200
Laura	200	0	150	50	0	225	0	0
Brimfield	60	275	500	115	650	225	0	0
Subtotal	960	440	850	745	1,185	1,050	315	200
HENRY CO.								
Atkinson	165	205	190	275	550	445	325	0
Sauk Trail	40	135	60	65	250	800	350	500
Subtotal	205	340	250	340	800	1,245	675	500
BUREAU CO.								
Sheffield/Mineral	1,075	950	1,325	1,605	1,610	1,300	450	0
STARK CO.								
Wyoming	150	550	1,925	700	800	500	495	375
OTHER AREAS								
Geneseo							250	
Joslin							275	
Morrison							No survey	
Lake Car roll							1,225	
Howard							3,750	
Amboy							275	
Rock River							2,060	
County Total	8,050	11,415	15,170	17,360	22,175	22,285	14,070	28,545
Grand Total							21,905	

Appendix 5. Aerial estimates of white-fronted geese on staging and wintering areas in southern Illinois throughout fall and winter of 2003-04.

Date	Ballard County ^a	Horseshoe Lake	Union County	Crab Orchard	Rend Lake	Keck's Marsh	Carlyle Lake	Ten Mile Creek	Cache River	Burning Star Mine	Pyramid State Park	Total ^b
10-20-03	0	0	0	0	0	0	0	0	0	0	0	0
10-29-03	0	0	0	0	0	0	0	0	0	0	0	0
11-3-03	0	0	0	0	0	0	0	0	0	0	0	0
11-10-03	0	0	0	0	0	0	0	0	0	0	0	0
11-17-03 ^c												
11-25-03	0	1,200	2,200	0	0	0	0	0	0	0	300	3,700
12-1-03	0	2,000	1,800	0	2,000	0	0	0	300	400	0	6,500
12-8-03	200	1,500	3,500	0	250	0	0	No Survey	0	350	400	6,200
12-17-03	200	5,000	8,500	0	0	0	50	0	0	400	1,500	15,650
12-22-03	700	4,500	4,000	0	800	100	0	0	0	1,000	800	11,900
12-30-03	200	1,800	3,000	0	1,400	0	200	0	550	750	2,500	10,400
1-5-04	200	800	5,000	100	800	0	0	0	100	950	50	8,000
1-12-04	2,400	5,000	5,000	0	0	600	0	0	0	0	2,000	15,000
1-21-04	4,300	3,000	4,500	0	600	0	300	0	0	0	800	13,500
1-28-04	4,100	5,500	400	50	100	0	0	0	0	0	300	10,700
2-3-04	1,700	100	0	0	0	0	0	0	0	0	450	2,250
2-9-04	2,500	100	4,000	0	0	0	0	0	0	0	100	6,700
2-17-04	5,100	3,200	550	0	900	600	0	0	0	0	100	10,750
2-23-04	0	100	150	0	0	0	0	0	0	0	100	450
3-1-04	0	0	0	0	0	0	0	0	0	0	0	0

^aIncludes Swan Lake, KY.

^bIncludes Vandalia Lake, Campbell Pond, Mermet Lake (starting 11/10/03), and DuQuoin Fair Ground.

^c Flight canceled due to observer/pilot schedule conflict.

Appendix 6. Canada goose harvest estimates from the permit/phone-in harvest monitoring system, Northern and Central Illinois quota zones, 2003-04.

Date	Northern Quota Zone			Central Quota Zone		
	Day of Season	Daily Harvest	Total Harvest	Day of Season	Daily Harvest	Total Harvest
10-13-03						
10-14-03						
10-15-03						
10-16-03	1	845	845			
10-17-03	2	557	1,402			
10-18-03	3	602	2,004			
10-19-03	4	674	2,678			
10-20-03	5	189	2,867			
10-21-03	6	244	3,111			
10-22-03	7	187	3,298			
10-23-03	8	265	3,563	1	546	546
10-24-03	9	230	3,794	2	356	902
10-25-03	10	450	4,244	3	386	1,289
10-26-03	11	589	4,833	4	445	1,733
10-27-03	12	187	5,020			
10-28-03	13	195	5,216			
10-29-03	14	205	5,420			
10-30-03	15	168	5,589			
10-31-03	16	201	5,790			
11-1-03	17	505	6,295			
11-2-03	18	367	6,662			
11-3-03	19	148	6,810			
11-4-03	20	171	6,981			
11-5-03	21	178	7,159			
11-6-03	22	191	7,350			

Appendix 6. Continued, page 2 of 5.

Date	Northern Quota Zone			Central Quota Zone		
	Day of Season	Daily Harvest	Total Harvest	Day of Season	Daily Harvest	Total Harvest
11-7-03	23	177	7,527	5	218	1,951
11-8-03	24	380	7,907	6	210	2,161
11-9-03	25	307	8,214	7	189	2,349
11-10-03	26	82	8,296	8	75	2,424
11-11-03	27	217	8,513	9	73	2,497
11-12-03	28	218	8,732	10	62	2,559
11-13-03	29	98	8,830	11	61	2,619
11-14-03	30	160	8,991	12	77	2,696
11-15-03	31	412	9,403	13	123	2,820
11-16-03	32	344	9,747	14	92	2,912
11-17-03	33	98	9,845	15	49	2,960
11-18-03	34	109	9,954	16	56	3,016
11-19-03	35	140	10,094	17	71	3,087
11-20-03	36	119	10,213	18	62	3,149
11-21-03	37	109	10,322	19	64	3,213
11-22-03	38	307	10,629	20	147	3,360
11-23-03	39	352	10,981	21	168	3,527
11-24-03	40	116	11,097	22	109	3,637
11-25-03	41	155	11,252	23	106	3,743
11-26-03	42	181	11,433	24	73	3,816
11-27-03	43	276	11,709	25	135	3,951
11-28-03	44	420	12,129	26	217	4,168
11-29-03	45	410	12,539	27	141	4,308
11-30-03	46	214	12,753	28	166	4,475
12-1-03	47	92	12,845	29	77	4,552
12-2-03	48	61	12,906	30	100	4,652

Appendix 6. Continued, page 3 of 5.

Date	Northern Quota Zone			Central Quota Zone		
	Day of Season	Daily Harvest	Total Harvest	Day of Season	Daily Harvest	Total Harvest
12-3-03	49	106	13,012	31	78	4,730
12-4-03	50	139	13,151	32	37	4,767
12-5-03	51	105	13,256	33	111	4,878
12-6-03	52	341	13,597	34	109	4,987
12-7-03	53	133	13,730	35	144	5,132
12-8-03	54	70	13,801	36	59	5,191
12-9-03	55	104	13,904	37	56	5,247
12-10-03	56	151	14,055	38	106	5,353
12-11-03	57	154	14,209	39	85	5,438
12-12-03	58	111	14,319	40	133	5,570
12-13-03	59	371	14,690	41	295	5,865
12-14-03	60	547	15,237	42	328	6,193
12-15-03	61	102	15,340	43	132	6,325
12-16-03	62	187	15,527	44	211	6,536
12-17-03	63	191	15,718	45	104	6,639
12-18-03	64	175	15,894	46	362	7,001
12-19-03	65	159	16,053	47	325	7,326
12-20-03	66	247	16,299	48	197	7,523
12-21-03	67	236	16,535	49	178	7,701
12-22-03	68	132	16,667	50	170	7,871
12-23-03	69	191	16,858	51	288	8,158
12-24-03	70	140	16,999	52	133	8,291
12-25-03	71	23	17,022	53	56	8,347
12-26-03	72	164	17,186	54	159	8,506
12-27-03	73	305	17,491	55	298	8,804
12-28-03	74	263	17,753	56	324	9,128

Appendix 6. Continued, page 4 of 5.

Date	Northern Quota Zone			Central Quota Zone		
	Day of Season	Daily Harvest	Total Harvest	Day of Season	Daily Harvest	Total Harvest
12-29-03	75	125	17,879	57	235	9,363
12-30-03	76	94	17,973	58	135	9,498
12-31-03	77	136	18,109	59	148	9,646
1-1-04	78	235	18,344	60	322	9,969
1-2-04	79	133	18,477	61	165	10,134
1-3-04	80	290	18,767	62	488	10,622
1-4-04	81	418	19,185	63	536	11,157
1-5-04	82	159	19,344	64	334	11,491
1-6-04	83	85	19,429	65	150	11,641
1-7-04	84	148	19,577	66	228	11,870
1-8-04	85	233	19,810	67	447	12,317
1-9-04	86	closed		68	265	12,582
1-10-04	87	closed		69	467	13,049
1-11-04	88	closed		70	354	13,403
1-12-04	89	closed		71	246	13,648
1-13-04	90	closed		72	196	13,844
1-14-04				73	363	14,207
1-15-04				74	198	14,405
1-16-04				75	357	17,763
1-17-04				76	397	15,159
1-18-04				77	455	15,615
1-19-04				78	203	15,817
1-20-04				79	172	15,990
1-21-04				80	234	16,224
1-22-04				81	217	16,440
1-23-04				82	427	16,867

Appendix 6. Continued, page 5 of 5.

Date	Northern Quota Zone			Central Quota Zone		
	Day of Season	Daily Harvest	Total Harvest	Day of Season	Daily Harvest	Total Harvest
1-24-04				83	384	17,251
1-25-04				84	537	17,788
1-26-04				85	255	18,043
1-27-04				86	438	18,481
1-28-04				87	347	18,828
1-29-04				88	392	19,220
1-30-04				89	159	19,380
1-31-04				90	340	19,719