



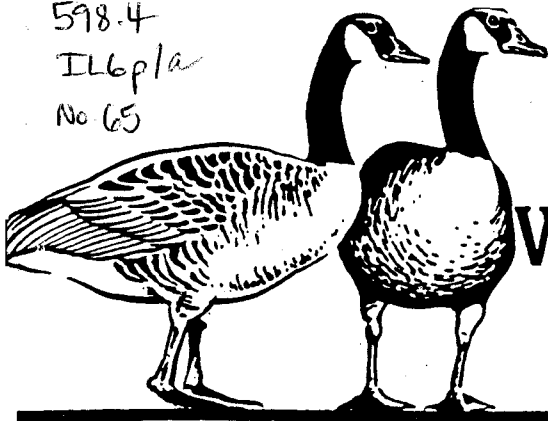
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WATERFOWL PROGRAM

ILLINOIS DEPARTMENT OF CONSERVATION

DIVISION OF WILDLIFE RESOURCES

WATERFOWL HARVEST AND HUNTER USE
IN THE REND LAKE QUOTA ZONE
DURING THE 1987 AND 1988 WATERFOWL SEASONS

NATURAL HISTORY SOCIETY

JUL 18 1991

Richard M. Whitton, Waterfowl Project Manager

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Abstract: Rend Lake and the surrounding area in Franklin and Jefferson counties comprise the Rend Lake Quota Zone. Hunter use and harvest at Rend Lake are determined from hunter registration sheets. Hunters are required to register before and after each day's hunt. The known harvest is then used as a percentage to project total harvest in the two counties. Rend Lake is assigned a harvest quota equal to 15% of the statewide Canada goose harvest allocation. The statewide Canada goose harvest allocation was 52,500 in 1987 and 74,000 in 1988. The Rend Lake quota was 7,900 in 1987 and increased 40% to 11,100 in 1988. The goose season at Rend Lake opened 16 November 1987 and closed 50 days later on 4 January 1988. Goose hunting at Rend Lake in 1988 opened 21 November and closed 50 days later on 9 January 1989. The daily bag limit was increased from one Canada goose in 1986 to two in 1987 and 1988. In 1987, the duck season at Rend Lake opened 29 October and closed 40 days later on 7 December. The duck season at Rend Lake in 1988 opened on 11 November and closed 30 days later on 10 December. Waterfowl hunters on the public hunting areas at Rend Lake harvested 5,988 ducks (3,915 mallards) and 1,676 geese in 1987. In 1988, 3,582 ducks (2,556 mallards) and 4,177 geese were harvested. Waterfowl hunters on the public hunting area reported a total of 14,867 days afield in 1987 and 14,748 days afield in 1988. Duck harvest increased 23% in 1987 and decreased 40% in 1988. Maximum daily bag limits were reduced from 5 ducks per day (point system) in 1987 to 3 ducks per day (conventional bag) in 1988. Shooting hours were changed from one half-hour before sunrise in 1987 to sunrise in 1988. Goose harvest decreased 18% in 1987 and increased 150% in 1988. Hunter success during the duck season was .63 ducks per trip in 1987 and .49 in 1988. Goose hunters reported a success rate of .28 geese per trip in 1987 and .43 in 1988 after the close of duck season. Access areas with highest duck harvest in 1987 and 1988 included Cottonwood, Bonnie Church Camp and Silo. Goose hunters were the most successful at Jackie Branch, Turnip Patch, Dareville and Whistling Wings in 1987 and 1988. The Canada goose population reached a mid-December record of 68,000 in 1987 and 72,000 in 1988. The wintering population of Canada geese at Rend Lake peaked in January at 110,000 in 1988 and 135,000 in 1989.

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INTRODUCTION

Rend Lake constitutes one of the largest and most diverse waterfowl areas in Illinois, offering excellent hunting opportunity for both ducks and Canada geese. Waterfowl harvest at Rend Lake has been monitored annually since 1975. Beginning in 1979, hunters using Rend Lake public access areas were required to register and report their daily harvest. The registration system was developed in response to the need for a practical method of determining hunter use and harvest at Rend Lake. This has proven to be a reliable and accurate technique. Commercial goose clubs on private lands around Rend Lake are required to obtain a license and submit daily hunter registration and harvest sheets at the close of the hunting season. Prior to the 1982 season, noncommercial goose hunting areas were also required to register hunters and report harvest. Since 1982, the Canada goose harvest on private land in the surrounding area has been derived from the Illinois Waterfowl Hunter Questionnaire Survey. This statewide survey has been conducted since 1981 and will continue in the future on an annual basis.

Rend Lake and the surrounding area in Franklin and Jefferson counties were designated as a Mississippi Valley Population (MVP) Canada goose harvest quota zone in 1986. The protection provided by the quota zone allowed liberalization of harvest regulations while preventing an overharvest in a high concentration goose area. An accurate account of harvest and hunter use is crucial to the continued evaluation of the waterfowl management program at Rend Lake.

The Rend Lake Wildlife Management Area is a cooperative project between the U.S. Army Corps of Engineers (COE) and the Illinois Department of Conservation (DOC). The project consists of approximately 16,000 acres of land and water in Jefferson and Franklin counties. Implementation of the waterfowl harvest and hunter use survey was partially funded by Pittman-Robertson Project W-83-D.

Many employees of the Division of Lands, Division of Wildlife Resources and the COE assisted in the distribution and collection of hunter registration sheets in 1987 and 1988.

METHODS

Waterfowl harvest and hunter use at all Rend Lake public access areas (42) were monitored using a mandatory registration system. A registration box was placed at each hunter access area around the lake and the Big Muddy and Casey Fork management areas. Hunters were required to register before hunting and report their daily harvest by number and species following each hunt. Registration sheets were collected daily and the number of hunters and harvest by species were totaled for individual access areas and for each day of the season.

Canada goose harvest and hunter activity on private land surrounding Rend Lake were assessed in three ways. Commercial licenses were issued for all areas where payment was received for goose hunting privileges. At these commercial clubs, hunters were required to register before hunting and report their harvest at the end of the hunt. Registration sheets were submitted by club owners at the end of the season to the Union County Refuge office for tabulation of harvest and hunter use. Goose harvest on other private lands surrounding Rend Lake in Franklin and Jefferson counties was determined from the Statewide Waterfowl Hunter Questionnaire Survey. This was conducted after the 1987 and 1988 waterfowl seasons (Anderson 1988 and 1989). In addition to this information, a projection of total harvest in the two-county quota zone was possible using the mean reported harvest on the public hunting areas in past years. Analysis of Canada goose population and harvest data at Rend Lake over the past five years revealed that hunters on the public hunting areas have reported a consistent 35% of the total goose harvest in the Rend Lake Quota Zone. This percent was then used as a base to project total harvest throughout the season in the two-county zone. Goose harvest on the public hunting areas was tabulated daily by DOC staff at the Mt. Vernon game farm. Projected harvest in the zone was determined and harvest update information was forwarded to the Rend Lake COE office where it was provided to the public throughout the season by a recorded telephone message.

Canada goose populations at Rend Lake and other wintering areas in southern Illinois were monitored weekly by aerial inventories starting in mid-October and continuing to mid-February. DOC biologists conducted the inventories using Department of Transportation aircraft (Cessna 210 or Cessna 337).

RESULTS AND DISCUSSION

Predictions of average production and successive increases in fall flights of MVP Canada geese resulted in higher harvest allocations and more liberal hunting regulations throughout the flyway during 1987 and 1988. The Canada goose harvest allocation for Illinois increased from 48,000 in 1986 to 52,500 in 1987 and 74,000 in 1988. Season length outside the quota zone increased from 40 days in 1986 and 1987 to 50 days in 1988. The daily bag limit for Canada geese was increased from 1 goose in 1986 to two in 1987 and 1988.

Based on a comparative analysis of statewide goose-use days and hunter days, the Rend Lake Quota Zone receives 15% of the statewide harvest allocation. The harvest quota assigned to Rend Lake was 7,200 geese in 1986, 7,900 in 1987 and 11,100 in 1988. The protection offered by a quota zone, with emergency closure when the quota is reached, allowed hunters a 50-day season in 1987 and 1988. The season opened in 1987 on 16 November and closed on 4 January. Goose hunting at Rend Lake in 1988 opened 21 November and closed on 9 January.

Mild winters and early, dry springs in north-central U.S. and Canada in 1987 and 1988 caused a continuation of deteriorating wetland conditions. Mallard breeding pairs increased from 6.3 million in 1986 to 6.7 million in 1987 but decreased to 6.5 million in 1988. The predicted fall flight index for ducks in 1987 (74 million) was similar to 1986 (73 million), however, the index in 1988 was estimated to be 66 million, down 11% from 1987.

Season length, point values and shooting hours did not change in 1987. More restrictive regulations were implemented in 1988 in response to the decreased fall flight of ducks. Season length was reduced to 30 days, shooting hours were changed from one-half hour before sunrise to sunrise and the point system was suspended in favor of a 3-bird conventional bag limit. The implementation of the conventional bag in 1988 reduced the maximum daily limit of ducks from 5 to 3. The duck season at Rend Lake in 1987 ran from 29 October to 7 December and from 11 November to 10 December in 1988.

Weather conditions throughout the 1987 season were the opposite of those that existed during the 1986 season. Extremely dry conditions in the fall of 1987 and 1988 accelerated crop harvest and fall plowing. The combination of mild fall weather and the drought reduced the amount of duck-use days in Illinois in 1987 and 1988. These same mild conditions also delayed the migration of Canada geese to Illinois from east-central Wisconsin and this had a significant impact on goose harvest and hunter success.

Hunter Use

Waterfowl hunters reported a total of 14,867 days afield in 1987 and 14,748 in 1988. This represents a 4% increase in hunter trips over 1986. The 5-year (1984-88) average was 12,785 days afield, with a minimum of 6,553 in 1976 and a maximum of 17,873 in 1981. Goose hunters had the opportunity to harvest geese 28 days after the close of the duck season in 1987 and 30 days in 1988.

Daily kill sheets revealed that 9,552 hunters were afield during the 1987 duck season (40 days). An additional 5,315 hunters hunted Canada geese after the close of the duck season. During the 1988 waterfowl season at Rend Lake, 7,298 hunters were afield during the duck season (30 days) and an additional 7,450 hunters hunted Canada geese after the close of duck season. The mean number of hunters per day during the 1987 duck season was 239 and an average of 190 goose hunters were active on Rend Lake each day of the goose season following the close of the duck season. During the 1988 duck season, the mean number of hunters per day was 243 and the average number of goose hunters per day after the close of the duck season was 248. In comparison, there were fewer total hunters during the 30-day season in 1988 (7,298) than during the 40-day, 1987 duck season (9,552). However, the average number of hunters per day was essentially the same for both years.

Public access areas receiving the greatest hunting pressure throughout the 1987-88 waterfowl season included Cottonwood (1,666 hunters), Dareville (1,098 hunters), Whistling Wings (1,096 hunters), Bonnie Church Camp (982 hunters), Turnip Patch (932 hunters) and Silo (914 hunters). Six other access areas reported more than 500 hunters (Table 1). Public access areas during the 1988-89 waterfowl season with the greatest hunting pressure included Cottonwood (1,148 hunters), Jackie Branch (1,066 hunters), Whistling Wings (999 hunters), Turnip Patch (950 hunters) and Honker's Point (914 hunters). Nine other access areas reported more than 500 hunters (Table 2).

Eight commercial goose clubs were licensed in the Rend Lake Quota Zone during 1987 and 1988. These clubs reported a total of 2,071 hunter days in 1987 and 2,101 in 1988.

The Statewide Waterfowl Hunter Questionnaire Survey indicated that a total of 5,000 hunters (20% more than in 1986) spent 26,500 days afield (5% more than 1986) in the Rend Lake Quota Zone during the 1987-88 goose season (Anderson 1988). During the 1988-89 goose season, the survey indicated that a total of 5,600 hunters (12% more than in 1987) spent 32,600 days afield (23% more than 1987) in the Rend Lake Quota Zone (Anderson 1989).

Harvest

Hunters reported a total harvest of 5,988 ducks at Rend Lake during the 1987 hunting season (Table 1). This represented a 23% increase over the 1986 harvest (Thornburg 1987). During the 1988 duck season hunters reported a harvest of 3,582 ducks (Table 2). The reduction in season length and bag limit and the sunrise opening decreased the harvest by 40% in 1988. Mallards comprised 65% of the harvest in 1987 and 71% in 1988 (Table 3). Wood ducks followed with 11% in 1987 and 7% in 1988. Green-winged teal followed with 5% in 1987 and 1988. Gadwalls represented 3% of the harvest in 1987 and 1% in 1988. Mallard harvest continued to be well below the 5-year average of 3,542. Harvest trends for dabbling ducks and diving ducks from 1984-88 are shown in Figures 1 and 2.

Hunters at the Cottonwood access area reported the highest duck harvest (1,620), followed by Bonnie Church Camp (915), Silo (639), Dareville (541) and Casey Fork Dam (448) in 1987. These 5 areas comprised 70% of the total duck harvest on public hunting areas at Rend Lake. During the 1988 duck season hunters reported the highest harvest at Cottonwood (658), Bonnie Church Camp (524), Waltonville East (481), Silo (430) and Dareville (305) access areas. These sites represented 67% of the total duck harvest at Rend Lake in 1988.

A total of 1,676 Canada geese (Table 4) was harvested on public hunting areas in 1987-88. This represents a decrease of

18% from 1986. The majority of the goose harvest (89%) occurred in mid and late December, after the close of the duck season. Goose harvest is often incidental to duck hunting during the duck season. Hunters reported a harvest of 191 geese or 11% of the total during the 1987 duck season and 949 geese or 23% of the total harvest during the 1988 duck season. Public access areas with the highest goose harvest in 1987-88 included Turnip Patch (305), Dareville (206), Whistling Wings (163), Jackie Branch (127) and Ina Ramp (122). Goose hunting success in 1988-89 improved dramatically when 4,177 geese were harvested (Table 4). This represented a 150% increase from 1987-88. Approximately 87% of the goose harvest occurred in mid and late December, after the close of the duck season. Access areas with the highest goose harvest included Jackie Branch (623), Turnip Patch (480), Dareville (328), Honkers Point (322) and Whistling Wings (266).

Using the reported harvest on public hunting areas as 35% of the total two-county zone goose harvest resulted in a projected harvest estimate of 4,789 for the entire Rend Lake Quota Zone in 1987-88. This was 3,111 geese short of the 7,900 quota assigned to the zone. The harvest estimate derived from the Statewide Hunter Questionnaire Survey after the season revealed a similar estimated harvest of 4,872 geese in the Rend Lake Zone (Anderson 1988). The 1988-89 Rend Lake goose harvest resulted in a projected zone harvest estimate of 11,934 which was slightly over the quota of 11,100. The harvest estimate derived from the Statewide Hunter Questionnaire after the season reported that 9,236 geese were harvested in the Rend Lake Quota Zone (Anderson 1989).

Eight commercial goose hunting clubs reported a total harvest of 690 geese in 1987 and 924 in 1988.

Hunter Success

Duck hunter success at Rend Lake varied from .52 in 1986 to .63 in 1987 and .49 in 1988 (Table 4). Goose hunter success on the public hunting areas fluctuated dramatically between years as a result of mild weather in southern Illinois and delayed migrations of geese from Wisconsin. Success rates were .32 in 1986, .28 in 1987 and .43 in 1988. The success rate in the Rend Lake Zone, as determined by the Statewide Hunter Questionnaire Survey, was .24 goose per hunter in 1986, .18 in 1987 and .28 in 1988. Goose hunter success on private clubs in the Rend Lake Quota Zone continued to decline from .40 in 1986 to .33 in 1987. However, goose hunter success improved to .44 on private clubs in 1988.

Waterfowl Population Status

Canada goose numbers at Rend Lake in mid-December have continued to increase from 65,000 in 1986 to 68,000 in 1987 and 72,000 in 1988 (Table 5). Peak numbers (Table 6) of Canada geese were recorded on 25 January 1988 (110,000) and 23 January 1989

(135,000). This represents the highest number ever recorded at Rend Lake (Figure 3). Peak numbers of Canada geese in southern Illinois and western Kentucky were recorded on 11 January 1988 (611,300) and 23 January 1989 (690,000).

Five waterfowl surveys were conducted by the Illinois Natural History Survey between October and December in 1987 and 1988. Due to a lack of funding, no waterfowl surveys were conducted by the INHS in 1985 or 1986 at Rend Lake during the fall migration period. Duck populations on Rend Lake in 1987 ranged from 20,825 on 28 October to a peak of 20,985 on 11 December. Duck numbers gradually increased at Rend Lake in 1988 from 5,990 on 26 October and reached a peak of 16,715 on 17 November. Aerial inventories revealed that total duck numbers continued to decrease in late November (12,630) and early December (6,730). Total duck numbers decreased 44% in 1988 at Rend Lake compared to the same survey period in 1987 and the 1988 fall flight of ducks also decreased 11% from 1987.

Mallard peak numbers were reported on 11 December (16,000) 1987 and 17 November (11,000) 1988. Mallard numbers totaled 42,900 during the 5 surveys conducted during the fall of 1987 compared to 29,100 for the same period in 1988.

CONCLUSIONS

A decade of drought conditions in Prairie Canada has caused duck populations to decline. The implementation of restrictive duck regulations in 1988 is intended to reduce harvest rates until wetland conditions and population levels improve. Results of aerial inventories from the MVP wintering grounds indicated the population level is up substantially from past years and well above the population objective of 500,000. The current population is a result of high recruitment, survival and exceptional production in 1988. Continued growth of the MVP will result in more liberalized harvest regulations throughout the flyway in 1989.

Water levels and food availability in the subimpoundments and refuge were good in 1987. Food resources decreased in quality and quantity as drought conditions prevailed in 1988 at Rend Lake.

The Rend Lake Quota Zone has proved to be effective in reducing the potential for overharvesting Canada geese. The longer goose season permitted by the quota zone has benefited waterfowlers throughout the state.

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Table 1. Waterfowl harvest and hunter use on public hunting areas at Rend Lake, Illinois for the 1987 waterfowl season.

NAME OF PUBLIC ACCESS AREA	TOTAL HUNTERS	MALLARDS	TOTAL DUCKS	CANADA GEESE
1. Blue Gill Hole	35	1	6	0
2. Bonnie Church Camp	982	579	915	4
3. Bonnie South	565	32	106	65
4. Buck Creek	344	43	95	20
5. Casey Fork Dam	816	339	448	117
6. Casey Fork West (Genevo)	237	54	90	2
7. Cottonwood	1,666	1,287	1,620	105
8. County Line	370	7	23	41
9. Crossroads	0	0	0	0
10. Dam West	40	11	24	0
11. Dareville	1,098	328	541	206
12. Elk Praire	117	9	45	4
13. Gun Creek North	59	1	14	0
14. Gun Creek Northeast	103	17	35	0
15. Gun Creek South	14	0	0	2
16. Gun Creek West	106	5	12	8
17. Hamilton Branch	21	1	1	0
18. Honkers Point	592	7	13	62
19. Ina Parking Lot	323	4	15	24
20. Ina Ramp	500	27	57	122
21. Jackie Branch	527	16	40	127
22. Ken Gray	302	0	0	50
23. Lambrusco	492	2	14	86
24. Mine 21	212	0	2	11
25. Nason North	243	93	188	6
26. Nason South	106	1	8	12
27. North Marcum	10	0	0	6
28. North Marina	43	1	2	21
29. Pin Oak Flats	290	107	164	7
30. River Road	101	33	57	0
31. RLCD Cemetary	43	0	0	5
32. RLCD Ramp	119	1	3	22
33. Ryder Bottoms	51	6	10	0
34. Sailboat Harbor	49	0	4	5
35. Sandusky North	10	0	0	0
36. Silo	914	463	639	5
37. Turnip Patch	932	35	78	305
38. Waltonville Dam	266	71	120	5
39. Waltonville East (148)	576	156	301	11
40. Ward Branch	459	6	35	45
41. Whistling Wings	1,096	172	263	163
42. Willbanks Woods	38	0	0	2
Totals	14,867	3,915	5,988	1,676

Table 2. Waterfowl harvest and hunter use on public hunting areas at Rend Lake, Illinois for the 1988 waterfowl season.

NAME OF PUBLIC ACCESS AREA	TOTAL HUNTERS	MALLARDS	TOTAL DUCKS	CANADA GEESE
1. Blue Gill Hole	22	1	1	3
2. Bonnie Church Camp	595	398	524	41
3. Bonnie South	691	27	46	148
4. Buck Creek	331	114	164	27
5. Casey Fork Dam	487	120	115	149
6. Casey Fork West (Genevo)	97	35	55	8
7. Cottonwood	1,148	504	658	236
8. County Line	630	71	102	216
9. Crossroads	9	1	3	0
10. Dam West	59	3	10	9
11. Dareville	847	243	305	328
12. Elk Praire	70	5	5	1
13. Gun Creek North	33	4	8	2
14. Gun Creek Northeast	56	10	18	0
15. Gun Creek South	41	7	14	1
16. Gun Creek West	109	21	21	19
17. Hamilton Branch	18	0	4	1
18. Honkers Point	914	9	12	322
19. Ina Parking Lot	400	10	14	90
20. Ina Ramp	698	21	31	191
21. Jackie Branch	1,066	21	56	623
22. Ken Gray	416	0	1	102
23. Lambrusco	676	1	2	233
24. Mine 21	308	1	2	67
25. Nason North	89	35	57	23
26. Nason South	106	14	16	31
27. North Marcum	30	0	1	4
28. North Marina	0	0	0	0
29. Pin Oak Flats	89	58	73	1
30. River Road	49	14	36	0
31. RLCD Cemetary	29	0	6	2
32. RLCD Ramp	283	1	8	147
33. Ryder Bottoms	30	5	13	0
34. Sailboat Harbor	74	6	7	4
35. Sandusky North	62	4	10	14
36. Silo	724	281	430	129
37. Turnip Patch	950	46	73	480
38. Waltonville Dam	163	45	63	21
39. Waltonville East (148)	615	372	481	16
40. Ward Branch	723	16	26	222
41. Whistling Wings	999	32	111	266
42. Willbanks Woods	12	0	0	0
Totals	14,748	2,556	3,582	4,177

Table 3. Harvest of ducks by species at Rend Lake, (Southern Zone), Illinois, 1981 through 1988. Data collected from hunter registration reports.

SPECIES	1981	1982	1983	1984	1985	1986	1987	1988
<u>DABBLING DUCKS</u>								
American Wigeon	205	283	249	198	115	142	145	54
Black Duck	180	222	147	251	113	122	179	182
Blue-Winged Teal	66	174	102	227	38	27	34	10
Gadwall	366	335	395	206	182	291	199	57
Green-Winged Teal	146	247	321	256	152	205	323	168
Mallard	4,415	4,390	5,447	5,002	3,273	2,964	3,915	2,556
Northern Shoveler	34	74	105	109	96	51	107	32
Pintail	80	216	118	98	85	62	82	23
Wood Duck	476	537	734	457	279	531	660	271
<u>TOTAL</u>	5,968	6,478	7,618	6,804	4,333	4,395	5,644	3,353
<u>DIVING DUCKS</u>								
Bufflehead	20	34	36	70	52	54	35	30
Canvasback	17	32	53	42	46	15	0	0
Common Goldeneye	4	0	1	7	4	0	0	0
Redhead	47	31	65	158	70	68	24	21
Ring-Necked Duck	80	108	237	304	161	133	163	92
Ruddy Duck	21	45	57	40	27	20	17	7
Scaup	112	117	200	306	160	174	105	79
<u>TOTAL</u>	301	367	649	927	520	464	344	229
<u>TOTAL ALL SPECIES</u>	6,269	6,845	8,267	7,731	4,853	4,859	5,988	3,582

Table 4. Waterfowl harvest and hunter success on public hunting areas at Rend Lake, Illinois, 1976-1988.

YEAR	NO. OF HUNTERS	HARVEST		HUNTER SUCCESS	
		DUCKS	GEESE	DUCKS	GEESE
1976	6,555	7,414	2,017	1.13	.21 ^a
1977	8,377	8,748	1,630	1.04	.19
1978	12,622	9,060	4,604	.78	.36
1979	12,978	5,375	1,917	.52	.15
1980	16,134	5,493	3,508	.39	.22
1981	17,873	6,285	2,827	.46	.16
1982	14,682	6,845	1,109	.57	.08
1983	13,352	8,270	1,856	.76	.14 ^b
1984	11,050	7,724	610	.70	.06
1985	8,964	4,901	1,214	.55	.14
1986	14,300	4,859	2,042	.52	.32 ^c
1987	14,867	5,988	1,676	.63	.28 ^d
1988	14,748	3,582	4,177	.49	.43 ^e

^a Last 20 Days of Goose Season After Close of Duck Season

^b .34 Last 15 Days of Goose Season After Close of Duck Season

^c Last 23 Days of Goose Season After Close of Duck Season

^d Last 28 Days of Goose Season After Close of Duck Season

^e Last 30 Days of Goose Season After Close of Duck Season

Table 5. Canada goose numbers at Rend Lake through the fall and winter of 1985-1988.

DATE	<u>1985</u>		<u>1986</u>		<u>1987</u>		<u>1988</u>	
	NO. OF GEESE	DATE	NO. OF GEESE	DATE	NO. OF GEESE	DATE	NO. OF GEESE	DATE
10-15-85	2,500	10-14-86	2,000	10-13-87	6,000	10-15-88	4,500	
10-28-85	6,500	10-20-86	2,500	10-19-87	6,000	10-24-88	7,000	
11-04-85	6,500	10-27-86	2,500	10-27-87	5,000	10-31-88	7,500	
11-20-85	8,000	11-03-86	4,500	11-02-87	9,000	11-07-88	9,500	
12-02-85	18,000	11-10-86	6,000	11-09-87	9,000	11-14-88	14,000	
12-09-85	70,000	11-24-86	12,000	11-18-87	10,000	11-21-88	7,500	
12-16-85	60,000	12-10-86	30,000	11-23-87	10,000	11-28-88	7,000	
01-07-86	65,000	12-15-86	60,000	12-09-87	12,000	12-05-88	17,000	
01-13-86	65,000	12-22-86	65,000	12-16-87	18,000	12-12-88	40,000	
01-21-86	36,000	01-05-87	60,000	12-21-87	68,000	12-19-88	72,000	
01-27-86	27,000	01-12-87	38,000	12-29-87	50,000	01-04-89	90,000	
		01-26-87	55,000	01-04-88	50,000	01-10-89	75,000	
				01-11-88	74,000	01-17-89	70,000	
				01-25-88	110,000	01-23-89	135,000	

Table 6. Peak Numbers of Canada Geese at Rend Lake, Illinois
1971-1989.

YEAR	NUMBER OF GEESE	DATE
1971-72*	6,000	Dec. 22
1972-73	2,000	Dec. 13
1973-74	13,000	Jan. 04
1974-75	32,000	Dec. 18
1975-76	50,000	Jan. 22
1976-77	42,000	Dec. 14
1977-78	100,000	Jan. 23
1978-79	62,000	Jan. 04
1979-80	90,000	Jan. 14
1980-81	88,000	Jan. 27
1981-82	120,000	Jan. 18
1982-83	40,000	Feb. 03
1983-84	44,000	Feb. 07
1984-85	72,000	Jan. 15
1985-86	70,000	Dec. 09
1986-87	65,000	Jan. 13
1987-88	110,000	Jan. 25
1988-89	135,000	Jan. 23

* First year that Canada Geese started using Rend Lake

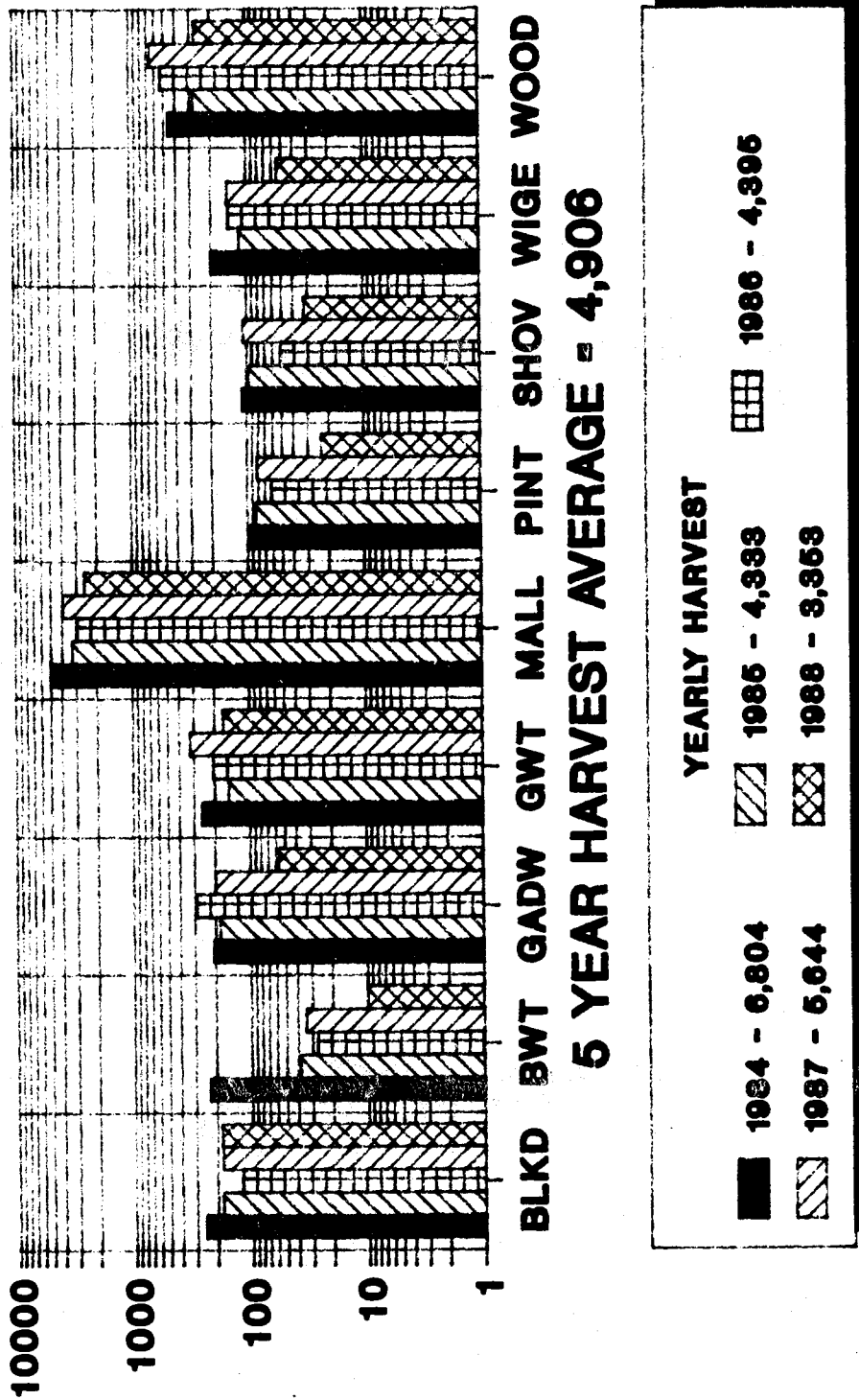


Figure 1. Dabbling Duck Harvest at Rend Lake from 1984-1988.

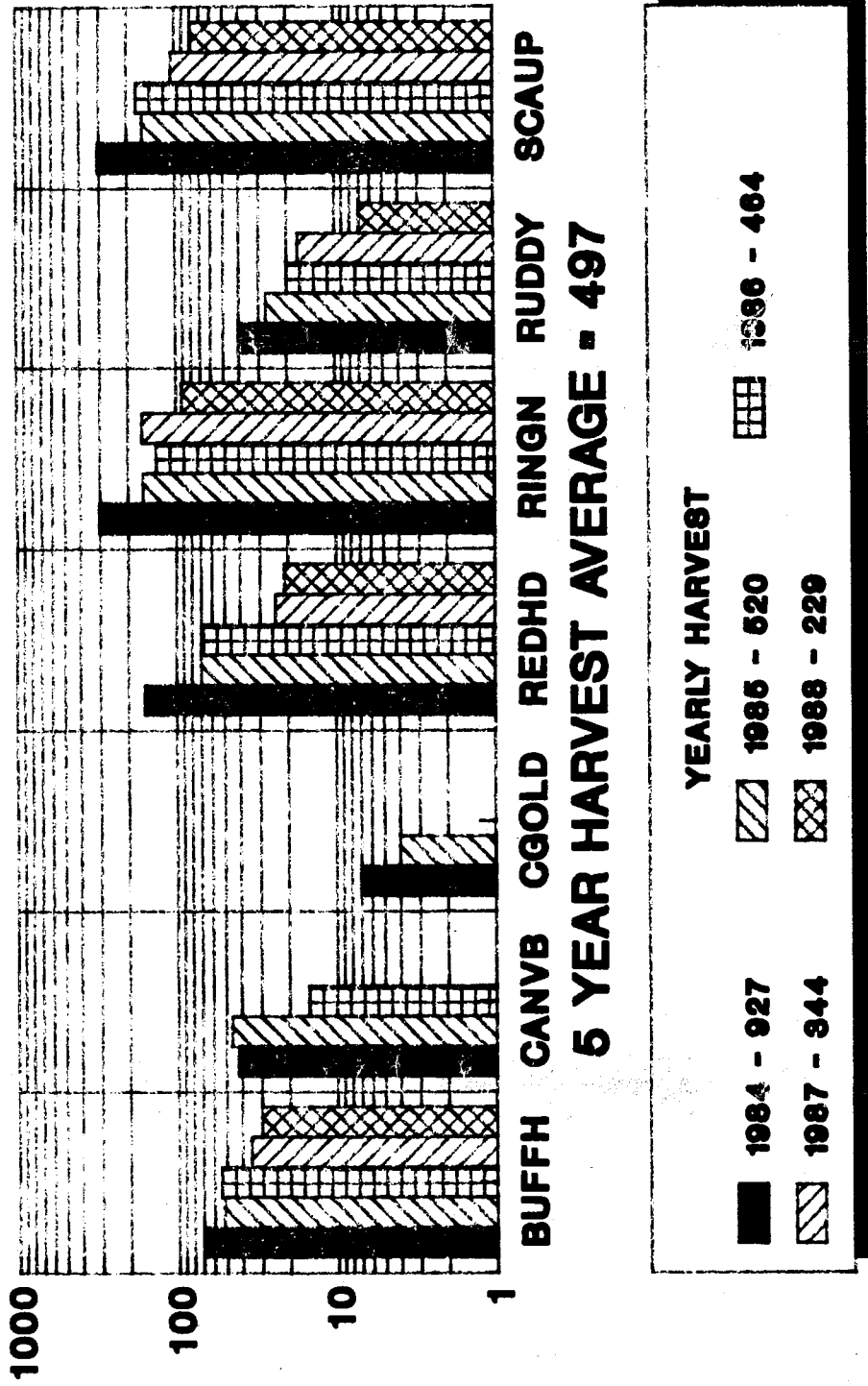


Figure 2. Diving Duck Harvest at Rond Lake from 1984-1988.

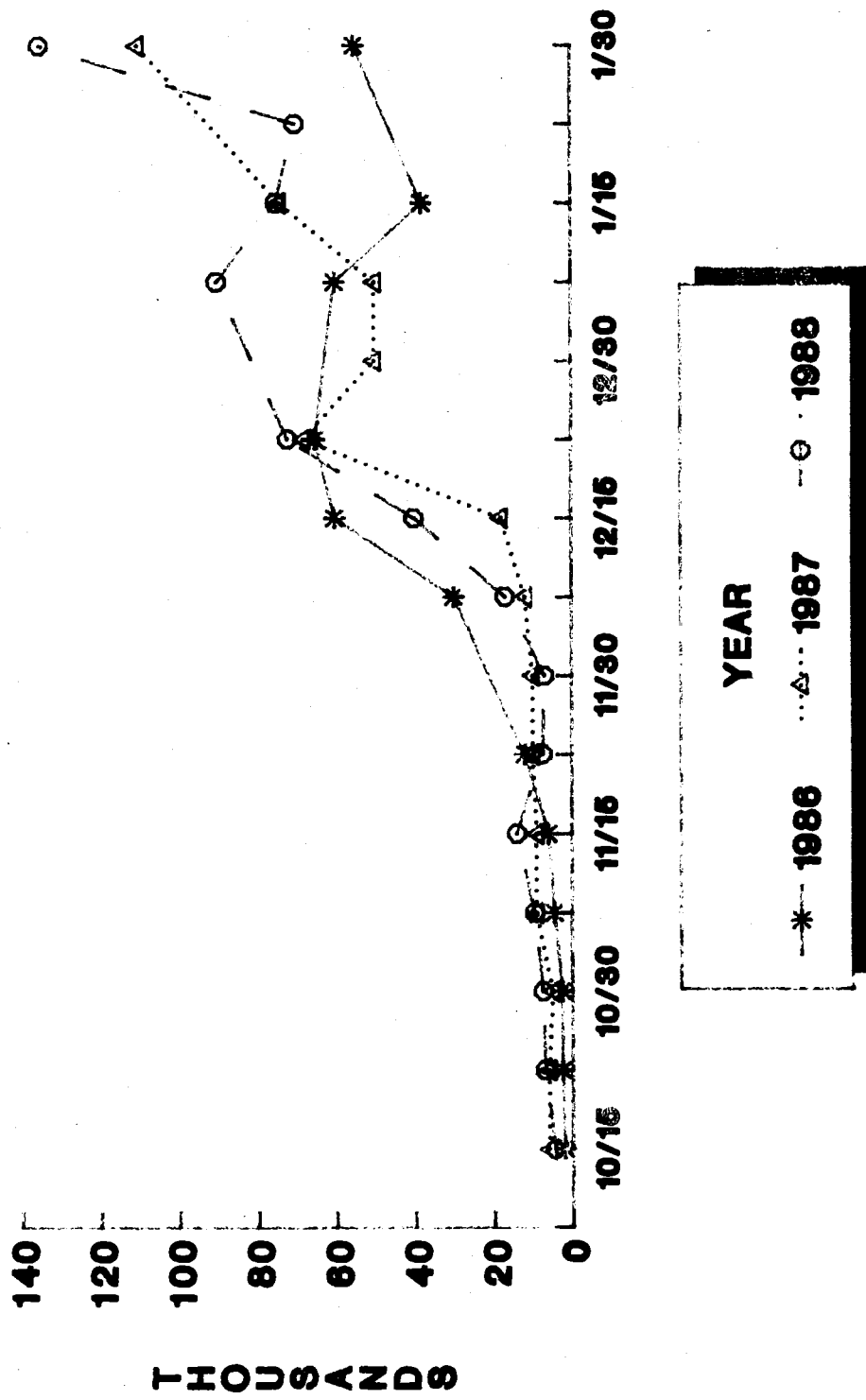


Figure 3. Numbers of Canada Geese at Rend Lake from 1986-1988.