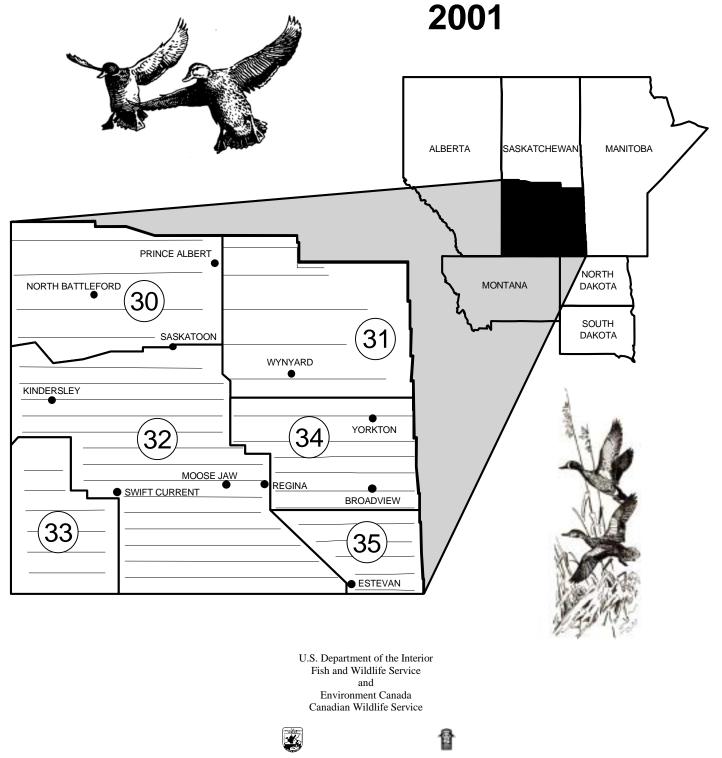
## WATERFOWL BREEDING POPULATION SURVEY SOUTHERN SASKATCHEWAN



<u>TITLE</u> :	Waterfowl Breeding Population Survey for Southern Saskatchewan
STRATA SURVEYED:	30, 31, 32, 33, 34, and 35
DATES:	May 9 – May 26, 2001
DATA SUPPLIED BY:	United States Fish and Wildlife Service (USFWS) Canadian Wildlife Service (CWS)
	Strata 30, 31, 32, and 33
<u>Aerial Crew</u> Pilot/Observer Pilot/Observer	Philip Thorpe, Flyway Biologist, USFWS Karen Bollinger, Flyway Biologist, USFWS
Ground Crew	
Crew Leaders:	Dan Nieman, Wildlife Biologist, CWS Jack Smith, Wildlife Technician, CWS Keith Warner, Wildlife Technician, CWS
Assistants:	Chris Downie, Student Technician, CWS Melanie Hosegood, Contractor, Ducks Unlimited Canada Céleste Lévesque, Volunteer, CWS Phyllis Nieman, Volunteer, CWS Chad Park, Student Technician, CWS Amanda Williams, Student Technician, CWS
	Strata 34 and 35
<u>Aerial Crew</u> Pilot/Observer: Observer:	Rod King, Flyway Biologist, USFWS Herb Bell, Wildlife Biologist, USFWS
Ground Crew	
Crew Leaders:	Dale Caswell, Wildlife Biologist, CWS Marc Schuster, Wildlife Technician, CWS Pat Rakowski, Wildlife Biologist, CWS Darcy Pisiak, Wildlife Technician, CWS Martin Van Osh, Wildlife Technician, Ducks Unlimited Canada
Assistants:	Mark Blanchard, Student Technician, CWS James Galbraith, Student Technician, CWS Frank Baldwin Jr., Student Technician, CWS Alain Dupuis, Student Technician, CWS Bob Carles, General Manager, Sask. Wetland Conservation Corps.

<u>ABSTRACT:</u> The 2001 Waterfowl Breeding Population and Habitat Survey of Southern Saskatchewan was conducted 9 May to 26 May and was consistent in design and coverage to previous years. Below to well-below average winter precipitation and above average winter and spring temperatures negatively impacted wetland and upland conditions across most of the survey area. Although the May pond estimate increased slightly (9%) from the 2000 estimate, it decreased 26% and 23% from the 10-year and the long-term means, respectively. The total duck population estimate (6,463,300) decreased 16%, 10%, and 13% from 2000, the 10-year mean, and the long-term mean, respectively. Percent changes for selected species compared to 2000, the 10-year mean, and the long-term mean are as follows: mallards, -27%, -10%, -22%; northern pintail, 47%, 12%, -47%; blue-winged teal, -22%, -11%, 5%; canvasbacks, 0%, 15%, 25%; scaup (greater and lesser), 18%, -14%, -26%. Only poor to fair nest success is expected across the survey area and recruitment from Southern Saskatchewan is expected to be poor for most of the Province.

<u>METHODS</u>: The procedures used in conducting this year's annual survey are described in the <u>Standard Operating Procedures for Aerial Waterfowl Breeding Population and Habitat Surveys</u> in <u>North America</u> Section III (A), (revised 1987). No changes were made this year in survey methodology or aerial coverage (Table 1). A survey program, written by John I. Hodges (USFWS-Alaska), provided the basis for both recording observations and transcribing the data into electronic format. This software integrated point locations {from the aircraft Global Positioning System unit (GPS)} with each bird or pond observation. See previous report (Thorpe 2000) for a more detailed description of the survey program.

Fifty-three (37 in strata 30-33; 16 in strata 34-35) air-ground comparison transects were used to provide visibility correction factors for waterfowl, coot, and pond numbers. The following air-grounds with their associated strata were not completed by the ground crew because of personnel shortages: Environ, 30; Elfros, 31; Hendon, 31; Grand Coulee 32; Gravelbourg, 32; Kincaid, 32; East End, 33. In addition, Lawson (32) and Peterson (31) air-grounds were both shortened from 18 miles to 10 miles.

The aerial survey crew remained the same for strata 34-35, but for the third straight year, a new observer flew in strata 30-33. The primary pilot/observer, Philip Thorpe, was joined this year by Karen S. Bollinger. For the previous 2 years (1999 and 2000), she had been a part of the aerial team surveying the Western Dakotas and Montana. Personnel changes were also made in both ground crews (i.e., two new assistants in each), but key crew leaders remained the same. All new personnel were provided initial training in duck identification, pond classification, and survey procedures. Each was closely monitored for accuracy in identification and compliance with established procedures throughout the survey.

The survey was initiated 9 May and was completed 26 May. A Cessna 206 (Cessna 206 amphibian in strata 34-35) was used as the survey aircraft this year in all strata. Approximately 71 and 23 hours of flight time were required to complete the survey within strata 30-33 and strata 34-35, respectively. One survey day was lost to weather in strata 30-33 and no weather days occurred in strata 34-35.

<u>WEATHER AND HABITAT CONDITIONS</u>: Another below average year for precipitation has resulted in poor to fair upland and wetland habitat conditions across most of the Southern Saskatchewan survey area. Overall, the majority of the survey area during the late summer and fall of 2000 received below average precipitation (60-85% of average), except in the north

central and northeast, which received well-below average precipitation (<40-60% of average) (Agriculture and Agri-food Canada 2001). The exception was an area between Swift Current and Moose Jaw that received well-above average precipitation (150-200% of average). Winter precipitation ranged from average in the southeast, below average in the central and northeast parts of the survey area, and well-below average in the west. Snowfall was below average except in the southeast and east central parts of the Province where it was above average (115-150% of average). Conditions did not improve in April and May and were well-below average in the northwest and northeast and only average in the southeast; extremely dry conditions (<40% of average precipitation) existed over a large part of the west and southwest from Rosetown to Regina south to the U.S. border.

Normal temperatures predominated across Southern Saskatchewan from late summer through October 2000. November and December were characterized by below average temperatures (2-6° C below average) and the late winter and early spring was characterized by average to well-above average temperatures (January 6-10 °C above average) (Agriculture and Agri-food Canada 2001). Temperatures during the May survey were average to 1-2 °C above average.

Below average snowfall and dry soil moisture conditions at freeze up resulted in well-below average runoff across most of the survey area, except for the southeast corner of the Province, which reported above average runoff (Sask Water 2001). Noticeably absent from the landscape this year were ephemeral, temporary, and seasonal wetlands that are normally abundant during the spring survey.

As of the 4 June Crop Report (Saskatchewan Agriculture and Food 2001), topsoil moisture, pasture, and hayland conditions were rated as poor to fair across the majority of the survey area; the southeast was again the exception with good conditions reported for topsoil, pasture, and hayland. Seeding progress was ahead of the five-year average (88% seeded) and nearly complete (99% seeded) by the first week in June (Saskatchewan Agriculture and Food 2001).

The May pond estimate (1,535,700) was about the same as the 2000 estimate (1,403,700) but was 26.0% down from the 10-year mean and 23.4% down from the long-term mean (Table 3, Figure 1). Overall, the 2001 May pond estimate was the 18<sup>th</sup> driest since 1961. The Parkland strata (strata 30 and 31) were most affected by the below average precipitation and both were down about 51% from last year. Stratum 30 pond estimates were the lowest (driest) on record and stratum 31 estimates ranked as the 4<sup>th</sup> driest on record. Wetlands in the southwest, although slightly improved from last year, still ranked as the 6<sup>th</sup> driest year on record. Brood habitat during the survey was considered poor across most of the survey area, except for southeast and south central Saskatchewan, which were considered fair to good.

<u>BREEDING POPULATION ESTIMATES</u>: The total duck population estimate for Southern Saskatchewan decreased 15.8% from the 2000 estimate, 9.9% from the 10-year mean, and 13.1% from the long-term mean (Table 2). The total dabbling duck population estimate decreased 16.1% from 2000 and most dabbling species estimates were down this year (Table 2, Figure 1). The 2001 mallard population estimate decreased 27.2% from the 2000 estimate and dropped below the 10-year and long-term means for the first time since 1994 (Figure 1). The bluewinged teal estimate was down 21.9% and 11.2% from the 2000 estimate and the 10-year mean, but remained slightly above the long-term mean (5.0%). The 2001 northern pintail estimate was 46.7% and 11.9% above the 2000 estimate and the 10-year mean, but remained 46.9% below the long-term mean (Table 2). The American wigeon estimate was the lowest since 1990 (Appendix 1) and was 60.6% below the long-term mean (Table 2). The total diving duck population estimate was down 15.0% compared to the 2000 estimate. Many diving species showed declines compared to last year, although there was no change in the canvasback estimate and the combined scaup (greater and lesser) estimate was up 17.5% this year (Table 2). Scaup continue to be the only true diving duck species that remain below the long-term mean (Table 2).

The American coot estimate was down 19.9% from the 2000 estimate but was still the eighth highest on record and remains 54.6% above the long-term mean (Table 2, Appendix 1). The Canada goose estimate remained about the same as the 2000 estimate and ranked as the fourth highest estimate on record (Appendix 1).

<u>CONCLUSIONS</u>: Another dry year in Southern Saskatchewan has resulted in poor habitat conditions for ducks across the Province. Population estimates for most species of waterfowl (14 of 19) were down this year. Poor to non-existent wetland habitat can probably be attributed to most of the declines for the survey area. Although wetland numbers were up in some strata, parkland strata (30-31) were the driest they have been since the early 1990's. Because these wetlands in the Parklands are generally more permanent and therefore, more resistant to fluctuations in precipitation, this area is important for many waterfowl species when periodic drought cycles dry up the grasslands.

We observed mallards, a common parkland nesting species, in flocks of 3-6 males by the third week of the survey. Generally, this is interpreted to mean that nesting is well underway and that males are preparing to migrate to molting marshes. In a dry year like this one, it may also mean that renesting attempts were already ending by mid to late May.

American wigeon, another species common in the northern forests, also breed successfully on the grasslands and parklands of Saskatchewan. Wigeon estimates were down again this year and population estimates have been in a long-term decline in Southern Saskatchewan since the late 1970's to early 1980's. Early reports from other survey areas have not indicated large influxes of birds that may have come from Saskatchewan.

The decline in some species of diving ducks in the Province may be due to the drought in the Parklands since these species depend on semi-permanent and permanent wetlands. The drought may also explain the decline in some of the sea duck species, such as goldeneyes and buffleheads, all common boreal forest nesters that also breed in the Parklands.

In drought years, many ducks move to areas with better (or more stable) habitat or choose to forego breeding for the year. When the grasslands are dry, northern pintails normally move to the boreal forests and tundra of northern Canada and Alaska. This year, it appears many pintails moved into southeast Saskatchewan to take advantage of the improved wetlands and flooded fields of crop stubble. Many of these pintails may have moved into the area from Montana, Alberta, and western Saskatchewan where extreme drought conditions persist. Numerous flocks and breeding pairs were observed during the beginning of the month; but given the extensive agriculture in the area and the pintail's habit of nesting in crop stubble, it is unlikely that good production and recruitment will come about.

Droughts are a common and important occurrence on the prairies and Southern Saskatchewan appears to be entering a drought cycle that will influence duck populations for the next several years. Waterfowl are highly adapted to these cycles and move in and out of our political boundaries during these cycles. Because of this, it is important when considering current and future increases or decreases in population estimates to use a composite of habitat conditions and waterfowl estimates from all survey areas to determine if changes in population estimates are local anomalies or regional trends.

## LITERATURE CITED

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- Sask Water. 2001. Streamflow Forecast and Water Supply Outlook for Saskatchewan. River Forecast Centre, Basin Operations, Water Resource and Infrastructure Management Division. Moose Jaw, Saskatchewan.
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Submitted by: Philip Thorpe Date: July 3, 2001

			Stratu	m			
	30	31	32	33	34	35	Total
Survey design:							
Square miles in stratum	18,570	21,086	37,911	11,345	13,164	9,044	111,120
Square miles in sample- waterfowl	153.0	144.0	571.5	90.0	175.5	126.0	1,260.0
Square miles in sample- ponds	76.50	72.00	285.75	45.00	87.75	63.00	630.00
Linear miles in sample	612	576	2,286	360	702	504	5,040
Number of transects in sample	4	5	14	6	5	6	40
Number of segments in sample	34	32	127	20	39	28	280
Expansion factor	121.373	146.431	66.336	126.056	75.009	71.778	
May 2001 coverage:							
Square miles in sample- waterfowl	153.0	144.0	571.5	90.0	175.5	126.0	1,260.0
Square miles in sample- ponds	76.50	72.00	285.75	45.00	87.75	63.00	630.00
Linear miles in sample	612	576	2,286	360	702	504	5,040
Number of transects in sample	4	5	14	6	5	6	40
Number of segments in sample	34	32	127	20	39	28	280
Expansion factor	121.373	146.431	66.336	126.056	75.009	71.778	

Table 1. Survey design and May 2001 coverage for Southern Saskatchewan.

			Stratu	m							%	Change Fron	ı
Species/Ponds	30	31	32	33	34	35	2001 Total	2000 Total	10-Year Mean	Long- Term Mean	2000	10-Year Mean	Long Tern Mear
Ducks										1110411			
Dabblers													
Mallard	217.0	235.7	563.8	60.3	334.6	238.1	1649.7	2266.7	1838.7	2116.6	-27.2%	-10.3%	-22.1%
Am. black duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.2	-100.0%	-100.0%	-100.0%
Gadwall	116.8	58.1	304.4	36.4	107.5	92.2	715.4	650.0	789.4	537.6	10.1%	-9.4%	33.1%
Am. wigeon	27.0	12.3	86.6	10.6	20.7	20.0	177.3	253.1	301.5	449.9	-30.0%	-41.2%	-60.6%
Am. green-winged teal	41.2	42.9	27.6	0.0	45.5	45.0	202.3	294.8	254.8	230.9	-31.4%	-20.6%	-12.4%
Blue-winged teal	105.6	97.5	421.0	41.1	304.8	297.6	1267.5	1622.4	1428.1	1206.7	-21.9%	-11.2%	5.0%
N. shoveler	56.2	40.8	233.1	51.7	143.5	192.8	718.1	899.8	871.9	618.8	-20.2%	-17.6%	16.19
N. pintail	42.4	51.7	303.4	18.4	78.1	186.0	680.0	463.6	608.0	1281.3	46.7%	11.9%	-46.99
Subtotal	606.3	539.1	1940.0	218.6	1034.8	1071.6	5410.3	6450.9	6092.9	6441.8	-16.1%	-11.2%	-16.0%
Divers													
Redhead	35.8	21.2	48.8	1.3	76.2	40.9	224.3	323.8	237.8	190.2	-30.7%	-5.7%	17.9%
Canvasback	25.6	41.7	32.4	1.3	92.6	38.5	232.2	232.2	201.5	185.2	0.0%	15.2%	25.4%
Scaup	124.2	38.0	102.7	1.3	37.9	16.6	320.6	272.8	373.1	433.6	17.5%	-14.1%	-26.19
Ring-necked duck	11.6	6.1	1.2	0.0	9.7	7.7	36.3	63.9	39.2	27.4	-43.2%	-7.4%	32.79
Goldeneyes	5.3	1.1	0.0	0.0	1.6	2.1	10.2	40.5	40.1	21.8	-74.9%	-74.7%	-53.4%
Bufflehead	31.8	28.6	0.3	0.0	5.6	7.4	73.7	112.8	63.4	31.6	-34.7%	16.1%	132.9%
Ruddy Duck	32.8	5.1	9.7	0.0	64.8	21.9	134.3	168.2	122.5	97.1	-20.2%	9.6%	38.39
Subtotal	267.2	141.8	195.0	3.9	288.4	135.2	1031.5	1214.2	1077.5	986.9	-15.0%	-4.3%	4.5%
Miscellaneous													
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0		-100.0%	-100.09
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Scoters	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.4	3.5		-78.5%	-91.19
Mergansers	14.6	3.7	1.3	1.6	0.0	0.0	21.2	9.2	5.3	4.6	130.7%	302.2%	364.29
Subtotal	14.9	3.7	1.3	1.6	0.0	0.0	21.5	9.2	6.8	8.0	134.0%	216.7%	167.3%
Total Ducks	888.4	684.6	2136.3	224.1	1323.2	1206.8	6463.3	7674.2	7177.2	7436.7	-15.8%	-9.9%	-13.19
Canada Goose	61.2	76.8	85.6	11.6	34.1	19.9	289.1	294.4	228.1	84.5	-1.8%	26.7%	242.39
Am. coot	86.9	6.3	65.0	28.3	290.5	202.2	679.2	848.5	672.5	439.4	-19.9%	1.0%	54.6%
Ponds	139.7	202.4	378.9	42.0	480.1	292.8	1535.7	1403.7	2074.7	2003.9	9.4%	-26.0%	-23.49

Table 2. Status of waterfowl breeding population estimates (thousands, adjusted for visibility bias) by species and stratum with comparisons against the previous year, the previous 10-year mean, and the long-term mean for Southern Saskatchewan, May 2001.

## Waterfowl Breeding Population Survey

Year 1961 1962 1963 1964 1965	30 142.2 160.3 145.0 196.9 327.9	31 219.4 383.4 198.5	32 252.2 311.1	33 80.3	34 58.9	35 41.8	Total 794.9
1962 1963 1964 1965	160.3 145.0 196.9	383.4			58.9	41.8	
1962 1963 1964 1965	145.0 196.9		311.1				/94.9
963 964 965	196.9	198.5		45.2	269.4	59.9	1229.3
1964 1965			268.9	43.3	239.1	129.7	1024.5
1965	327.9	357.3	322.6	64.7	481.8	394.0	1817.2
		439.9	610.1	112.2	435.1	332.2	2257.4
1966	350.8	587.3	595.1	133.0	569.7	388.5	2624.3
1967	282.3	642.1	688.8	194.9	545.1	299.0	2652.2
1968	231.4	329.6	404.2	65.1	123.6	58.5	1212.:
1969	386.7	469.7	781.8	140.0	267.1	179.6	2225.0
1970	278.1	603.7	733.4	102.6	721.3	518.1	2957.
1971	294.3	407.0	495.3	120.4	608.7	391.7	2317.4
1972	349.1	646.2	357.2	63.1	546.0	302.8	2264.4
1973	266.8	466.6	326.8	85.7	227.6	117.0	1490.4
974	427.6	836.7	755.0	122.9	943.1	460.9	3546.
1975	395.3	806.1	785.7	192.7	763.9	480.9	3424.7
1976	201.9	399.0	553.4	96.8	656.6	670.8	2578.
1977	176.1	254.7	265.7	44.5	338.7	170.3	1250.0
1978	274.1	393.6	566.4	161.6	545.5	280.7	2221.3
1979	433.4	697.5	660.4	130.2	667.8	480.9	3070.
1980	265.4	311.3	358.2	48.1	273.3	137.2	1393.
1980	145.9	160.5	126.2	28.4	97.3	52.6	611.0
982	283.6	629.7	704.5	119.0	247.5	210.4	2194.
	384.9	715.4	711.9	96.0	464.6	323.3	2696.2
1983	283.1	548.3	266.9	35.2	260.3	131.9	1525.
1984	622.3	737.1	722.9	108.0	200.3 560.4	207.8	2958.
1985	343.8	402.5	615.2	112.8	529.1	346.3	2938
1986	223.8	260.9	347.5	112.8	251.5	184.3	1418.9
1987	223.8	378.7				63.4	
1988	217.6		149.1	37.1	213.8		1059.
1989		220.6	222.9	71.1	63.9	73.1	859.
990	213.0	284.9	277.1	56.8	453.6	97.4	1382.
1991	194.8	213.2	437.3	157.1	257.8	144.8	1405.
1992	247.9	376.4	349.8	34.5	378.3	229.1	1615.9
1993	167.7	189.6	337.3	94.0	203.0	96.3	1087.9
1994	407.3	564.7	742.9	178.0	472.3	288.0	2653.
1995	344.9	680.9	343.5	52.7	561.0	331.4	2314.4
1996	408.3	666.9	1041.4	197.6	573.0	381.6	3268.9
1997	461.6	497.4	972.1	163.4	578.1	319.5	2992.0
1998	146.5	284.6	345.0	49.3	403.0	241.8	1470.2
999	313.1	344.4	807.0	93.5	614.9	362.3	2535.
2000	214.4	272.9	322.5	36.6	348.1	209.2	1403.7
2001	139.7	202.4	378.9	42.0	480.1	292.8	1535.7
0-year Mean	290.7	409.1	569.9	105.7	439.0	260.4	2074.7
Long-term Mean	285.5	409.1	498.4	98.0	420.4	254.7	2003.9
Percent Change:							
From 2000	-34.9%	-25.8%	17.5%	14.7%	37.9%	39.9%	9.4%
From 10-year Mean From Long-term Mean	-51.9% -51.1%	-50.5% -54.7%	-33.5% -24.0%	-60.3% -57.2%	9.4% 14.2%	12.4% 14.9%	-26.0% -23.4%

Table 3. Long-term trend in adjusted May pond estimates (thousands) by stratum with comparisons against the previous year, the previous 10-year mean, and the long-term mean for Southern Saskatchewan.

Canada Goose

Am. coot

Ponds

12.8

63.6

2257.4

16.9

83.4

2624.3

8.0

179.0

2652.2

	Saskatchewan.										
Dacks         Dacks           Mallard         3317.2         4691.4         3987.9         4534.0         2152.2         2967.5         1649.7         1125.9         1551.4         1387.3           An Black Much         0.3         0.0 </th <th>Species/Ponds</th> <th>1955</th> <th>1956</th> <th>1957</th> <th>1958</th> <th>1959</th> <th>1960</th> <th>1961</th> <th>1962</th> <th>1963</th> <th>1964</th>	Species/Ponds	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Mallard         3317.2         4991,4         3987.9         4534.0         2152.2         2967.5         1649.7         112.5         1531.4         1387.3           An. black duck         0.3         0.0 <td>Ducks</td> <td></td>	Ducks										
Am. black duck 0.3 0.0 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Dabblers										
Gadwall         359.0         422.1         375.7         136.7         171.4         22.0         126.8         342.7         319.4         317.6           An. wigcon         620.4         946.2         634.0         473.1         472.6         365.2         328.0         150.2         373.3         310.1           Bine-winged real         2068.5         2524.7         1924.3         1650.7         1087.0         1083.0         383.8         504.9         735.8           N. showler         667.1         854.4         637.9         335.4         264.5         604.3         233.9         77.7         387.6         404.5           N. pinutal         1076.5         622.2         234.5         181.10         77.50.1         1665.5         844.7         518.1         827.7         397.6         404.85           Divers         12468.6         1616.3.3         11058.3         912.5         5032.7         7147.9         377.8         8270.7         3707.6         444.85           Canwashack         266.2         397.4         366.2         397.4         362.0         118.1         117.6         18.8         44.8         17.4         59.0         104.84         117.8         90.9	Mallard	3317.2	4691.4	3987.9	4534.0	2152.2	2967.5	1649.7	1125.9	1551.4	1387.3
Am. sigeon 620.4 946.2 634.0 473.1 472.6 365.2 238.0 15.02 237.3 310.1 Am. green-winged leal 2068.5 2542.7 1924.3 1650.7 1087.0 1112.8 581.0 383.8 504.9 735.8 N. shovelar 667.1 854.4 637.9 335.4 264.5 604.3 233.9 78.8 196.9 375.3 N. pintal 5076.5 6222.2 3245.9 1813.0 775.0 1665.5 846.7 581.1 823.9 853.4 Subotal 12468.6 1616.3 11058.3 9125.2 5032.7 7147.9 3779.8 2707.7 3707.6 4048.5 Divers 215.4 449.1 266.8 143.5 10.66 134.2 46.6 150.7 44.6 1053.3 Canvasback 266.2 397.4 362.0 249.7 81.2 118.1 121.0 175.7 90.9 107.7 Scaup 48.8 21.2 47.7 898.1 520.0 633.1 434.5 419.5 418.8 174.4 162.9 King-accked duck 27.2 16.9 10.9 11.7 27.6 434.5 419.5 418.8 174.4 162.9 King-accked duck 27.2 16.9 10.9 11.7 27.6 434.5 419.5 418.8 174.4 162.9 King-accked duck 27.2 15.9 1059.9 1084.4 1178.8 90.21 686.9 814.5 33.4 2.4 Subotal 1515.3 239.9 1059.9 1084.4 1178.8 90.21 686.9 814.5 33.4 3 Subotal 1515.3 239.9 1059.9 108.4 1178.8 90.21 686.9 814.5 33.4 3 Subotal 1515.3 239.9 1059.9 108.4 1178.8 90.21 686.9 814.5 33.4 3 Subotal 1515.3 239.9 1059.9 108.4 1178.8 90.21 686.9 814.5 33.4 4 35.5 Oldsquaw 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Am. black duck	0.3	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Am.green-winged leal 399.6 484.3 252.0 182.3 110.0 20.5 101.7 44.2 73.8 69.1 Blue-winged lead 2068.5 2542.7 1924.3 1050.7 1087.0 1112.8 583.0 383.8 50.49 758.8 N. shoveler 667.1 854.4 637.9 335.4 264.5 604.3 233.9 47.8 196.9 375.3 N. shoveler 667.1 854.4 637.9 335.4 264.5 604.3 233.9 477.8 196.9 375.3 N. shoveler 2065.6 223.7 147.9 3779.8 2707.7 3707.6 4048.5 Divers 2014.5 124.6 1663.3 11058.3 9125.2 5032.7 7147.9 3779.8 2707.7 3707.6 4048.5 Divers 124.6 1663.3 11058.3 9125.2 5032.7 7147.9 3779.8 2707.7 3707.6 44.6 105.3 Convashack 266.2 397.4 362.0 249.7 81.2 118.1 121.0 175.7 90.9 107.7 Scaup 888.3 1274.7 898.1 520.0 683.1 484.5 419.5 418.8 174.4 162.9 Ring-necked duck 27.2 16.9 10.9 11.7 27.6 13.8 8.4 0.00 2.08 96.6 Goldencys 11.8 21.2 17.7 9.8 13.3 21.4 10.6 7.8 3.9 2.6 Buffehead 7.6 8.8 14.2 7.5 9.0 13.4 95 2.0 11.2 13.2 Ring-necked duck 128.7 231.8 126.1 662. 256.1 116.8 71.4 59.6 38.5 34.3 Shobral 1515.3 2399.9 1695.9 1008.4 1178.8 902.1 686.9 814.5 384.4 435.5 Miscellmeous 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Gadwall	359.0	422.1	375.7	136.7	171.4	227.0	126.8	342.7	319.4	317.6
Biue-winged real 2068.5 2542.7 1924.3 1650.7 1087.0 1112.8 583.0 383.5 504.9 735.8 N, shoveler 667.1 854.4 637.9 3354 264.6 604.3 233.9 78.8 190.9 775.0 1665.5 84.67 578.8 775.0 1665.5 84.67 578.8 775.0 1665.5 84.67 578.8 775.0 1665.5 84.67 578.8 775.0 1665.5 84.67 578.8 775.0 1745.9 3779.8 2707.7 3707.6 4048.5 Divers Carboxshack 266.2 371.4 266.8 143.5 108.6 134.2 46.6 150.7 44.6 105.3 Carboxshack 266.2 371.4 266.8 143.5 108.6 134.2 46.6 150.7 44.6 105.3 Carboxshack 266.2 371.4 362.0 249.7 81.2 118.1 121.0 17.7 99.9 17.7 27.6 13.8 44.4 0 0 20.8 96 Coldencys 11.8 21.2 17.7 9.8 13.3 21.4 10.6 7.8 3.9 2.0 683.1 484.5 410.5 418.8 174.4 46. 0 0 20.8 96 Coldencys 11.8 121.2 17.7 9.8 13.3 21.4 10.6 7.8 3.9 2.0 683.1 274.7 18.2 18.2 18.1 12.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Am. wigeon	620.4	946.2	634.0	473.1	472.6	365.2	238.0	150.2	237.3	310.1
N. shoveler         667.1         854.4         637.9         335.4         264.5         604.3         223.9         196.9         375.3           Subtotal         12468.6         16163.3         11058.3         9125.2         5032.7         7147.9         377.8         2707.7         3707.6         4048.5           Borners         2066.2         397.4         362.0         249.7         81.2         118.1         117.7         707.6         404.6         105.3           Canyasback         266.2         397.4         362.0         249.7         81.3         21.4         116.1         121.6         117.7         90.9         117.7         27.6         13.8         8.4         0.0         20.8         96.6           Burflehead         7.6         8.8         14.2         7.5         9.0         13.4         9.5         2.0         11.2         12.2         12.1         11.7         2.0         11.4         9.5         34.3         34.4         435.5           Subotal         151.5         239.9         1605.9         100.6         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Am. green-winged teal	359.6	484.3	252.0		110.0	205.5	101.7	44.2	73.8	69.1
N. shoveler         667.1         854.4         637.9         335.4         264.5         604.3         223.9         196.9         375.3           Subtotal         12468.6         16163.3         11058.3         9125.2         5032.7         7147.9         377.8         2707.7         3707.6         4048.5           Borners         2066.2         397.4         362.0         249.7         81.2         118.1         117.7         707.6         404.6         105.3           Canyasback         266.2         397.4         362.0         249.7         81.3         21.4         116.1         121.6         117.7         90.9         117.7         27.6         13.8         8.4         0.0         20.8         96.6           Burflehead         7.6         8.8         14.2         7.5         9.0         13.4         9.5         2.0         11.2         12.2         12.1         11.7         2.0         11.4         9.5         34.3         34.4         435.5           Subotal         151.5         239.9         1605.9         100.6         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Blue-winged teal	2068.5	2542.7	1924.3	1650.7	1087.0	1112.8	583.0	383.8	504.9	735.8
Sabiotal         12468.6         16163.3         11058.3         9125.2         5032.7         7147.9         377.8         2707.7         3707.6         4048.5           Redhead         215.4         449.1         266.8         143.5         108.6         134.2         46.6         150.7         44.6         105.3           Canvashack         266.2         397.4         362.0         249.7         81.2         118.1         121.0         175.7         90.9         107.7           Scaup         858.3         1274.7         898.1         520.0         683.1         484.5         419.5         418.8         174.4         162.9           Goldencys         11.8         21.2         17.7         9.8         13.3         21.4         10.5         7.8         39.2         2.0         11.2         13.2         13.4         9.5         2.0         11.2         13.2         13.4         10.6         7.8         34.2         34.4         435.5           Micsellancous         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.	N. shoveler	667.1	854.4	637.9	335.4	264.5	604.3	233.9	79.8	196.9	375.3
Divers Redhead 215.4 449.1 266.8 143.5 108.6 134.2 46.6 150.7 44.6 105.3 Canvaback 266.2 397.4 362.0 249.7 81.2 118.1 121.0 175.7 90.9 107.7 Scaup 858.3 1274.7 898.1 520.0 683.1 484.5 419.5 418.8 174.4 162.9 King-necked duck 27.2 16.9 10.9 11.7 27.6 13.8 8.4 0.0 20.8 9.6 Goldencys 11.8 21.2 17.7 9.8 13.3 21.4 10.6 7.8 3.9 2.6 Goldencys 11.8 21.2 17.7 9.8 13.3 21.4 10.6 7.8 3.9 2.4 Subfetch 7.6 8.8 14.2 7.5 9.0 13.4 9.5 2.0 11.2 13.2 Kudy Duck 128.7 231.8 126.1 66.2 256.1 116.8 71.4 9.5 384.4 435.5 Miscellancous 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	N. pintail	5076.5	6222.2	3245.9	1813.0	775.0	1665.5	846.7	581.1	823.9	853.4
Redfine         215.4         449.1         266.8         143.5         108.6         134.2         146.6         150.7         44.6         105.3           Garwasback         266.2         397.4         362.0         249.7         81.2         118.1         121.0         175.7         90.9         107.7           Scaup         858.3         1274.7         898.1         520.0         683.1         484.5         419.5         418.8         174.4         162.9           Ring-necked duck         27.2         16.9         10.9         11.7         27.6         13.8         8.4         0.0         20.8         9.6           Goldeneyes         11.8         12.2         17.7         9.8         13.3         21.4         10.6         7.8         3.9         2.6           Burdhehead         7.6         8.8         14.2         7.5         9.0         13.4         9.6         38.5         34.3           Subtotal         1515.3         239.9         1695.9         100.8         11.7         8.5         2.6         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Subtotal	12468.6	16163.3	11058.3	9125.2	5032.7	7147.9	3779.8	2707.7	3707.6	4048.5
Canvasback 266.2 $397.4$ $362.0$ $249.7$ $81.2$ $118.1$ $121.0$ $175.7$ $90.9$ $107.7$ Scaup 858.3 $1274.7$ $898.1$ $520.0$ $683.1$ $484.5$ $419.5$ $418.8$ $174.4$ $162.9$ Ring-necked duck 27.2 $16.9$ $10.9$ $11.7$ $2.76$ $13.8$ $8.4$ $0.0$ $20.8$ $9.6$ Goldeneyes 11.8 $21.2$ $17.7$ $9.8$ $13.3$ $21.4$ $10.6$ $7.8$ $3.9$ $2.6$ Builfichead $7.6$ $8.8$ $14.2$ $7.5$ $9.0$ $13.4$ $9.5$ $2.0$ $11.2$ $13.2$ Rudy Duck $128.7$ $231.8$ $126.1$ $66.2$ $256.1$ $116.8$ $71.4$ $59.6$ $38.5$ $343.4$ Subtotal $1515.3$ $2399.9$ $1695.9$ $1008.4$ $1178.8$ $902.1$ $686.9$ $814.5$ $384.4$ $435.5$ Miscellaneous $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ Eiders $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ Scoters $5.4$ $13.4$ $0.8$ $10.0$ $4.9$ $5.5$ $2.6$ $0.0$ $3.8$ $5.9$ Chardback $1398.9$ $183.6$ $61275.0$ $0.14.2$ $7.8$ $15.0$ $11.4$ $2.6$ $0.0$ $9.4$ $2.4$ Subtotal $5.9$ $13.4$ $0.8$ $10.0$ $5.3$ $16.9$ $5.2$ $2.0$ $0.13.2$ $8.3$ Chardback $3989.9$ $183.6$ $1275.6$ $1143.5$ $61275.0$ $104.35$ $6126.9$ $806.8$ $4471.9$ $22.2$ $4105.2$ $4492.3$ Chardba Goose $5.6$ $0.8$ $0.0$ $14.2$ $7.8$ $15.0$ $11.4$ $13.9$ $9.9$ $19.2$ Chardba Goose $5.6$ $0.8$ $0.0$ $14.2$ $7.8$ $15.0$ $11.4$ $13.9$ $9.9$ $19.2$ Chardba Goose $5.6$ $0.8$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ Backs $794.9$ $1229.3$ $1024.5$ $1817.2$ Total Ducks $13989.9$ $1875.6$ $1285.0$ $1045.5$ $5407.2$ $2711.5$ $2369.1$ $2073.8$ Am. back duck $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ $0.0$ Gadwall $481.2$ $575.4$ $4092.2$ $679.9$ $463.5$ $511.5$ $590.2$ $41.4$ $72.3$ $474.4$ $633.2$ Subtotal $367.4$ $6191.7$ $7188.9$ $5384.3$ $7754.9$ $9808.1$ $376.7$ $2211.5$ $2369.1$ $2372.2$ $331.2$ $2954$ Bue-winged teal $609.1$ $909.7$ $1395.7$ $720.2$ $406.8$ $801.4$ $386.9$ $232.2$ $331.2$ $2954$ Bue-winget teal $609.1$ $909.7$ $1395.7$ $729.2$ $71.6$ $139.4$ $335.4$ $292.2$ $21.1$ $135.3$ $228.9$ $11.4$ N, shoveler $293.6$ $809.9$ $807.7$ $479.4$ $77.4$ $770.7$	Divers										
Scaup         858.3         1274.7         898.1         520.0         683.1         484.5         418.8         174.4         162.9           Goldeneyes         11.8         21.2         17.7         9.8         13.3         21.4         10.6         7.8         3.9         2.6           Buffhehad         7.6         8.8         14.2         7.5         9.0         13.4         9.6         8.4         3.5         3.4         3.5           Kuddy Duck         12.87         23.18         12.61         16.62         25.61         11.68         7.1.4         59.6         3.8.5         34.3           Subtotal         1515.3         2399.9         1695.9         100.4         117.8         902.1         686.9         81.4.5         384.4         435.5           Okdguaw         0.0         0	Redhead	215.4	449.1	266.8	143.5	108.6	134.2	46.6	150.7	44.6	105.3
Ring-necked duck       27.2       16.9       10.9       11.7       27.6       13.8       8.4       0.0       20.8       9.6         Goldeneyes       11.8       21.2       17.7       9.8       13.3       21.4       10.6       7.8       3.9       2.6         Buffhehead       7.6       8.8       14.2       7.5       9.0       13.4       9.5       2.0       11.2       13.2         Rudy Duck       128.7       231.8       126.1       66.2       256.1       116.8       7.14       59.6       38.5       34.3         Subtotal       0.0 <td>Canvasback</td> <td>266.2</td> <td>397.4</td> <td>362.0</td> <td>249.7</td> <td>81.2</td> <td>118.1</td> <td>121.0</td> <td>175.7</td> <td>90.9</td> <td>107.7</td>	Canvasback	266.2	397.4	362.0	249.7	81.2	118.1	121.0	175.7	90.9	107.7
Goldeneyes         11.8         21.2         17.7         9.8         13.3         21.4         10.6         7.8         3.9         2.6           Bufflehead         7.6         8.8         14.2         7.5         9.0         13.4         9.5         2.0         11.2         13.2           Ruddy Duck         128.7         231.8         126.1         66.2         256.1         116.8         71.4         59.6         38.5         34.3         34.3         34.4         35.5         34.3         35.5         34.3         35.5         34.3         35.6         34.3         35.6         30.0         11.4         13.9         9.9         19.2         2.7         2.6         0.0         3.2         8.3         3.6         3.4         3.8         12.7         7.8         5.0         11.4         13.9	Scaup	858.3						419.5			
Bufflehad         7.6         8.8         14.2         7.5         9.0         13.4         9.5         2.0         11.2         13.2           Ruddy Duck         128.7         231.8         126.1         66.2         256.1         116.8         71.4         59.6         38.5         34.3           Subtotal         151.5         239.9         1695.9         1008.4         1178.8         902.1         686.9         814.5         38.44         435.5           Miscellancous         0.0 <td>Ring-necked duck</td> <td>27.2</td> <td></td> <td>10.9</td> <td>11.7</td> <td>27.6</td> <td>13.8</td> <td>8.4</td> <td>0.0</td> <td>20.8</td> <td>9.6</td>	Ring-necked duck	27.2		10.9	11.7	27.6	13.8	8.4	0.0	20.8	9.6
Ruddy Duck       128.7       231.8       126.1       66.2       256.1       116.8       71.4       59.6       38.5       34.3.3         Subtotal       1515.3       2399.9       1695.9       1008.4       1178.8       902.1       686.9       814.5       384.4       435.5         Oldsquaw       0.0       11.4       2.6       0.0       13.2       8.3       7.5       7.6       102.4       4492.3       7.8       102.4       102.5       7.9       27.4       50.5       7.6       10.4       10.5       7.4       10.5       7.4       50.5       7.6       102.4       102.5       340.7       2711.5       2369.1       2073.8 </td <td>Goldeneyes</td> <td>11.8</td> <td>21.2</td> <td>17.7</td> <td>9.8</td> <td>13.3</td> <td>21.4</td> <td>10.6</td> <td>7.8</td> <td>3.9</td> <td>2.6</td>	Goldeneyes	11.8	21.2	17.7	9.8	13.3	21.4	10.6	7.8	3.9	2.6
Subtoral         1515.3         2399.9         1695.9         1008.4         1178.8         902.1         686.9         814.5         384.4         435.5           Miscellaneous         0.0	Bufflehead	7.6		14.2	7.5	9.0	13.4			11.2	13.2
Miscellaneous         Oldsquaw       0.0 </td <td>Ruddy Duck</td> <td>128.7</td> <td>231.8</td> <td>126.1</td> <td>66.2</td> <td>256.1</td> <td>116.8</td> <td>71.4</td> <td>59.6</td> <td>38.5</td> <td>34.3</td>	Ruddy Duck	128.7	231.8	126.1	66.2	256.1	116.8	71.4	59.6	38.5	34.3
Oldsquaw         0.0         0.	Subtotal	1515.3	2399.9	1695.9	1008.4	1178.8	902.1	686.9	814.5	384.4	435.5
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Miscellaneous										
Soters         5.4         13.4         0.8         10.0         4.9         5.5         2.6         0.0         3.8         5.9           Mergansers         0.5         0.0         0.0         0.0         0.4         11.4         2.6         0.0         9.4         2.4           Subtotal         5.9         13.4         0.8         10.0         5.3         16.9         5.2         0.0         13.2         8.3           Total Ducks         13989.9         18576.6         12755.0         10143.5         6216.9         8066.8         4471.9         3522.2         4105.2         4492.3           Am. coot         360.7         604.7         438.8         127.5         145.3         112.0         70.5         79.0         27.4         50.5           Ponds           1965         1966         1967         1968         1970         1971         1972         1973         1974           Ducks           3407.2         2711.5         2369.1         2073.8         Am. black duck         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subioral         5.9         13.4         0.8         10.0         5.3         16.9         5.2         0.0         13.2         8.3           Total Ducks         13989.9         18576.6         12755.0         10143.5         6216.9         8066.8         4471.9         3522.2         4405.2         4492.3           Canada Goose         5.6         0.8         0.0         14.2         7.8         15.0         11.4         13.9         9.9         19.2           Am. coot         360.7         604.7         438.8         127.5         145.3         112.0         70.5         79.0         27.4         50.5           Ponds         794.9         1229.3         1024.5         1817.2         1973         1974           Ducks         Dablers         Mallard         1069.9         1975.6         188.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Scoters	5.4	13.4	0.8		4.9	5.5	2.6	0.0	3.8	5.9
Total Ducks       13989.9       18576.6       12755.0       10143.5       6216.9       8066.8       4471.9       3522.2       4105.2       4492.3         Canada Goose       5.6       0.8       0.0       14.2       7.8       15.0       11.4       13.9       9.9       19.2         Am. coot       360.7       604.7       438.8       127.5       145.3       112.0       70.5       79.0       27.4       50.5         Ponds       794.9       1229.3       1024.5       1817.2       79.0       127.1       1973       1974         Ducks       Dablers       70.0       0.0	Mergansers	0.5	0.0	0.0	0.0	0.4	11.4	2.6	0.0	9.4	2.4
Canada Goose         5.6         0.8         0.0         14.2         7.8         15.0         11.4         13.9         9.9         19.2           Am. coot         360.7         604.7         438.8         127.5         145.3         112.0         70.5         79.0         27.4         50.5           Pends         794.9         1229.3         1024.5         1817.2           Species/Ponds         1965         1966         1967         1968         1969         1970         1971         1972         1973         1974           Ducks         Dablers         Mallard         1069.9         1975.6         1888.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0	Subtotal	5.9	13.4	0.8	10.0	5.3	16.9	5.2	0.0	13.2	8.3
Am. coot         360.7         604.7         438.8         127.5         145.3         112.0         70.5         79.0         27.4         50.5           Ponds         794.9         1229.3         1024.5         1817.2           Species/Ponds         1965         1966         1967         1968         1969         1970         1971         1972         1973         1974           Ducks         Dablers         Mallard         1069.9         1975.6         1888.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0	Total Ducks	13989.9	18576.6	12755.0	10143.5	6216.9	8066.8	4471.9	3522.2	4105.2	4492.3
Ponds         794.9         1229.3         1024.5         1817.2           Species/Ponds         1965         1966         1967         1968         1969         1970         1971         1972         1973         1974           Ducks         Dabblers	Canada Goose	5.6	0.8	0.0	14.2	7.8	15.0	11.4	13.9	9.9	19.2
Species/Ponds         1965         1966         1967         1968         1969         1970         1971         1972         1973         1974           Ducks         Dabblers         Mallard         1069.9         1975.6         1888.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0         0.0         0.0         0.0         0.0         0.2         0.0         0.0         0.0           Gadwall         481.2         575.4         409.2         679.9         463.5         511.5         590.2         488.8         451.5         644.7           Am. green-winged teal         125.3         114.2         367.7         200.7         408.8         801.4         386.9         232.2         331.2         295.4           Blue-winged teal         669.1         909.7         1395.7         720.2         966.6         1552.6         1291.4         1012.9         887.9         1312.2           N. shoveler         293.6         809.9         807.7         477.4         760.7         907.7         921.9         538.4         705.2           Divers         Redhead         114.1         124	Am. coot	360.7	604.7	438.8	127.5	145.3	112.0	70.5	79.0	27.4	50.5
Ducks           Dabblers           Mallard         1069.9         1975.6         1888.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0	Ponds							794.9	1229.3	1024.5	1817.2
Ducks           Dabblers           Mallard         1069.9         1975.6         1888.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0											
Dabblers         Mallard         1069.9         1975.6         1888.4         2132.2         2180.0         2945.5         3407.2         2711.5         2369.1         2073.8           Am. black duck         0.0         0	Species/Ponds	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Mallard       1069.9       1975.6       1888.4       2132.2       2180.0       2945.5       3407.2       2711.5       2369.1       2073.8         Am. black duck       0.0	Ducks										
Am. black duck       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Gadwall       481.2       575.4       409.2       679.9       463.5       511.5       590.2       488.8       451.5       644.7         Am. wigeon       317.7       302.1       649.1       362.8       831.7       819.3       951.4       772.3       474.4       633.2         Am. green-winged teal       125.3       114.2       367.7       200.7       408.8       801.4       386.9       232.2       331.2       295.4         Blue-winged teal       669.1       909.7       1395.7       720.2       966.6       1552.6       1291.4       1012.9       887.9       1312.2         N. shoveler       293.6       809.9       807.7       479.4       777.4       760.7       907.7       921.9       538.4       705.2         N. pintail       716.6       1504.8       1671.1       809.2       1956.2       2417.2       222.0       2261.6       1006.3       2186.0         Subtotal       3673.4       6191.7       7188.9       5384.3       7584.0       9808.1       9757.0       8401.2       6058.7       <	Dabblers										
	Mallard	1069.9	1975.6	1888.4	2132.2	2180.0	2945.5	3407.2	2711.5	2369.1	2073.8
Am. wigeon       317.7       302.1       649.1       362.8       831.7       819.3       951.4       772.3       474.4       633.2         Am. green-winged teal       125.3       114.2       367.7       200.7       408.8       801.4       386.9       232.2       331.2       295.4         Blue-winged teal       669.1       909.7       1395.7       720.2       966.6       1552.6       1291.4       1012.9       887.9       1312.2         N. shoveler       293.6       809.9       807.7       479.4       777.4       760.7       907.7       921.9       538.4       705.2         N. pintail       716.6       1504.8       1671.1       809.2       1956.2       2417.2       2222.0       2261.6       1006.3       2186.0         Subtotal       3673.4       6191.7       7188.9       5384.3       7584.0       9808.1       9757.0       8401.2       6058.7       785.0         Divers       Redhead       114.1       124.6       176.0       134.9       137.8       179.6       169.3       158.6       176.3       237.6         Canvasback       126.5       167.8       137.5       99.5       162.4       238.9       202.1       1	Am. black duck	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Am. green-winged teal       125.3       114.2       367.7       200.7       408.8       801.4       386.9       232.2       331.2       295.4         Blue-winged teal       669.1       909.7       1395.7       720.2       966.6       1552.6       1291.4       1012.9       887.9       1312.2         N. shoveler       293.6       809.9       807.7       479.4       777.4       760.7       907.7       921.9       538.4       705.2         N. pintail       716.6       1504.8       1671.1       809.2       1956.2       2417.2       2222.0       2261.6       1006.3       2186.0         Subtotal       3673.4       6191.7       7188.9       5384.3       7584.0       9808.1       9757.0       8401.2       6058.7       7850.5         Divers       Redhead       114.1       124.6       176.0       134.9       137.8       179.6       169.3       158.6       176.3       237.6         Canvasback       126.5       167.8       137.5       99.5       162.4       238.9       202.1       135.3       228.9       181.8         Scaup       257.3       193.5       323.4       95.6       305.0       322.8       222.4       242.6<	Gadwall	481.2	575.4	409.2	679.9	463.5	511.5	590.2	488.8		644.7
Blue-winged teal         669.1         909.7         1395.7         720.2         966.6         1552.6         1291.4         1012.9         887.9         1312.2           N. shoveler         293.6         809.9         807.7         479.4         777.4         760.7         907.7         921.9         538.4         705.2           N. pintail         716.6         1504.8         1671.1         809.2         1956.2         2417.2         2222.0         2261.6         1006.3         2186.0           Subtotal         3673.4         6191.7         7188.9         5384.3         7584.0         9808.1         9757.0         8401.2         6058.7         7850.5           Divers          8         126.5         167.8         137.5         99.5         162.4         238.9         202.1         135.3         228.9         181.8           Scaup         257.3         193.5         323.4         95.6         305.0         322.8         222.4         242.6         230.4         377.9           Ring-necked duck         23.2         16.0         10.4         1.5         6.5         13.9         7.2         8.5         8.2         42.6           Goldeneyes         8.8	Am. wigeon	317.7	302.1	649.1	362.8	831.7	819.3	951.4		474.4	633.2
N. shoveler       293.6       809.9       807.7       479.4       777.4       760.7       907.7       921.9       538.4       705.2         N. pintail       716.6       1504.8       1671.1       809.2       1956.2       2417.2       2222.0       2261.6       1006.3       2186.0         Subtotal       3673.4       6191.7       7188.9       5384.3       7584.0       9808.1       9757.0       8401.2       6058.7       7850.5         Divers       Redhead       114.1       124.6       176.0       134.9       137.8       179.6       169.3       158.6       176.3       237.6         Canvasback       126.5       167.8       137.5       99.5       162.4       238.9       202.1       135.3       228.9       181.8         Scaup       257.3       193.5       323.4       95.6       305.0       322.8       222.4       242.6       230.2       42.6         Goldeneyes       8.8       10.5       14.3       22.5       8.7       15.5       14.3       4.6       20.6       13.9         Bufflehead       22.9       14.4       18.1       29.5       39.2       20.5       12.6       31.7       17.9       19.1	Am. green-winged teal	125.3	114.2	367.7	200.7	408.8	801.4	386.9	232.2	331.2	295.4
N. pintail       716.6       1504.8       1671.1       809.2       1956.2       2417.2       2222.0       2261.6       1006.3       2186.0         Subtotal       3673.4       6191.7       7188.9       5384.3       7584.0       9808.1       9757.0       8401.2       6058.7       7850.5         Divers        114.1       124.6       176.0       134.9       137.8       179.6       169.3       158.6       176.3       237.6         Canvasback       126.5       167.8       137.5       99.5       162.4       238.9       202.1       135.3       228.9       181.8         Scaup       257.3       193.5       323.4       95.6       305.0       322.8       222.4       242.6       230.4       377.9         Ring-necked duck       23.2       16.0       10.4       1.5       6.5       13.9       7.2       8.5       8.2       42.6         Goldeneyes       8.8       10.5       14.3       22.5       8.7       15.5       14.3       4.6       20.6       13.9         Bufflehead       22.9       14.4       18.1       29.5       39.2       20.5       12.6       31.7       17.9       19.1      <	Blue-winged teal										
Subtotal Divers3673.46191.77188.95384.37584.09808.19757.08401.26058.77850.5DiversRedhead114.1124.6176.0134.9137.8179.6169.3158.6176.3237.6Canvasback126.5167.8137.599.5162.4238.9202.1135.3228.9181.8Scaup257.3193.5323.495.6305.0322.8222.4242.6230.4377.9Ring-necked duck23.216.010.41.56.513.97.28.58.242.6Goldeneyes8.810.514.322.58.715.514.34.620.613.9Bufflehead22.914.418.129.539.220.512.631.717.919.1Ruddy Duck42.677.158.783.355.042.160.267.2116.098.5Subtotal595.4603.9738.3466.9714.6833.4688.0648.4798.3971.4MiscellaneousO0.00.00.00.00.00.00.00.00.00.0Scoters8.42.62.06.23.70.55.22.54.72.3Mergansers5.20.00.01.01.48.81.30.02.20.5Subtotal13.62.62.07.25.19.3 </td <td>N. shoveler</td> <td>293.6</td> <td>809.9</td> <td></td> <td></td> <td>777.4</td> <td>760.7</td> <td>907.7</td> <td>921.9</td> <td>538.4</td> <td></td>	N. shoveler	293.6	809.9			777.4	760.7	907.7	921.9	538.4	
Divers         Redhead       114.1       124.6       176.0       134.9       137.8       179.6       169.3       158.6       176.3       237.6         Canvasback       126.5       167.8       137.5       99.5       162.4       238.9       202.1       135.3       228.9       181.8         Scaup       257.3       193.5       323.4       95.6       305.0       322.8       222.4       242.6       230.4       377.9         Ring-necked duck       23.2       16.0       10.4       1.5       6.5       13.9       7.2       8.5       8.2       42.6         Goldeneyes       8.8       10.5       14.3       22.5       8.7       15.5       14.3       4.6       20.6       13.9         Bufflehead       22.9       14.4       18.1       29.5       39.2       20.5       12.6       31.7       17.9       19.1         Ruddy Duck       42.6       77.1       58.7       83.3       55.0       42.1       60.2       67.2       116.0       98.5         Subtotal       595.4       603.9       738.3       466.9       714.6       833.4       688.0       648.4       798.3       971.4 <t< td=""><td>N. pintail</td><td>716.6</td><td>1504.8</td><td>1671.1</td><td>809.2</td><td></td><td>2417.2</td><td></td><td>2261.6</td><td>1006.3</td><td>2186.0</td></t<>	N. pintail	716.6	1504.8	1671.1	809.2		2417.2		2261.6	1006.3	2186.0
Redhead114.1124.6176.0134.9137.8179.6169.3158.6176.3237.6Canvasback126.5167.8137.599.5162.4238.9202.1135.3228.9181.8Scaup257.3193.5323.495.6305.0322.8222.4242.6230.4377.9Ring-necked duck23.216.010.41.56.513.97.28.58.242.6Goldeneyes8.810.514.322.58.715.514.34.620.613.9Bufflehead22.914.418.129.539.220.512.631.717.919.1Rudy Duck42.677.158.783.355.042.160.267.2116.098.5Subtotal595.4603.9738.3466.9714.6833.4688.0648.4798.3971.4Miscellaneous0.00.00.00.00.00.00.00.00.00.0Scoters8.42.62.06.23.70.55.22.54.72.3Mergansers5.20.00.01.01.48.81.30.02.20.5Subtotal13.62.62.07.25.19.36.42.56.92.7	Subtotal	3673.4	6191.7	7188.9	5384.3	7584.0	9808.1	9757.0	8401.2	6058.7	7850.5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Divers										
Scaup         257.3         193.5         323.4         95.6         305.0         322.8         222.4         242.6         230.4         377.9           Ring-necked duck         23.2         16.0         10.4         1.5         6.5         13.9         7.2         8.5         8.2         42.6           Goldeneyes         8.8         10.5         14.3         22.5         8.7         15.5         14.3         4.6         20.6         13.9           Bufflehead         22.9         14.4         18.1         29.5         39.2         20.5         12.6         31.7         17.9         19.1           Ruddy Duck         42.6         77.1         58.7         83.3         55.0         42.1         60.2         67.2         116.0         98.5           Subtotal         595.4         603.9         738.3         466.9         714.6         833.4         688.0         648.4         798.3         971.4           Miscellaneous         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0	Redhead	114.1	124.6	176.0	134.9	137.8	179.6	169.3	158.6	176.3	237.6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Canvasback				99.5	162.4					
Goldeneyes         8.8         10.5         14.3         22.5         8.7         15.5         14.3         4.6         20.6         13.9           Bufflehead         22.9         14.4         18.1         29.5         39.2         20.5         12.6         31.7         17.9         19.1           Ruddy Duck         42.6         77.1         58.7         83.3         55.0         42.1         60.2         67.2         116.0         98.5           Subtotal         595.4         603.9         738.3         466.9         714.6         833.4         688.0         648.4         798.3         971.4           Miscellaneous         0.0	Scaup	257.3	193.5	323.4	95.6	305.0	322.8	222.4	242.6	230.4	377.9
Bufflehead         22.9         14.4         18.1         29.5         39.2         20.5         12.6         31.7         17.9         19.1           Ruddy Duck         42.6         77.1         58.7         83.3         55.0         42.1         60.2         67.2         116.0         98.5           Subtotal         595.4         603.9         738.3         466.9         714.6         833.4         688.0         648.4         798.3         971.4           Miscellaneous         0.0 <td>Ring-necked duck</td> <td></td> <td>16.0</td> <td>10.4</td> <td>1.5</td> <td>6.5</td> <td>13.9</td> <td>7.2</td> <td>8.5</td> <td>8.2</td> <td>42.6</td>	Ring-necked duck		16.0	10.4	1.5	6.5	13.9	7.2	8.5	8.2	42.6
Ruddy Duck         42.6         77.1         58.7         83.3         55.0         42.1         60.2         67.2         116.0         98.5           Subtotal         595.4         603.9         738.3         466.9         714.6         833.4         688.0         648.4         798.3         971.4           Miscellaneous         0.0	Goldeneyes		10.5	14.3		8.7	15.5	14.3	4.6	20.6	13.9
Subtoal         595.4         603.9         738.3         466.9         714.6         833.4         688.0         648.4         798.3         971.4           Miscellaneous         Oldsquaw         0.0	Bufflehead				29.5	39.2		12.6	31.7	17.9	
Miscellaneous           Oldsquaw         0.0	Ruddy Duck	42.6	77.1		83.3	55.0	42.1	60.2	67.2	116.0	98.5
Oldsquaw         0.0         0.	Subtotal	595.4	603.9	738.3	466.9	714.6	833.4	688.0	648.4	798.3	971.4
Eiders         0.0<	Miscellaneous										
Scoters         8.4         2.6         2.0         6.2         3.7         0.5         5.2         2.5         4.7         2.3           Mergansers         5.2         0.0         0.0         1.0         1.4         8.8         1.3         0.0         2.2         0.5           Subtotal         13.6         2.6         2.0         7.2         5.1         9.3         6.4         2.5         6.9         2.7	Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mergansers         5.2         0.0         0.0         1.0         1.4         8.8         1.3         0.0         2.2         0.5           Subtotal         13.6         2.6         2.0         7.2         5.1         9.3         6.4         2.5         6.9         2.7	Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal 13.6 2.6 2.0 7.2 5.1 9.3 6.4 2.5 6.9 2.7	Scoters	8.4	2.6	2.0	6.2	3.7	0.5	5.2	2.5	4.7	2.3
Subtotal 13.6 2.6 2.0 7.2 5.1 9.3 6.4 2.5 6.9 2.7	Mergansers										
Total Ducks 4282.4 6798.2 7929.2 5858.5 8303.7 10650.8 10451.5 9052.1 6864.0 8824.6	Subtotal	13.6	2.6	2.0	7.2	5.1	9.3	6.4	2.5	6.9	
	Total Ducks	4282.4	6798.2	7929.2	5858.5	8303.7	10650.8	10451.5	9052.1	6864.0	8824.6

Appendix 1. Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Southern Saskatchewan.

4.9

214.3

1212.5

28.6

203.8

2225.0

22.1

450.3

2957.1

47.3

481.5

2317.4

26.7

284.9

2264.4

16.4

465.9

1490.4

25.2

544.3

3546.3

Appendix 1 (continued). Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Southern Saskatchewan.

Species/Ponds	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Ducks	1713	1770	1711	1770	1717	1700	1701	1702	1705	1704
Dabblers										
Mallard	2449.2	3044.7	2869.3	1917.6	2244.2	2263.0	1509.8	1941.1	1670.1	1364.7
Am. black duck	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Gadwall	744.6	679.4	607.5	532.9	695.5	474.6	409.5	619.7	573.3	411.8
Am. wigeon	893.7	720.1	490.7	519.9	784.1	610.4	211.7	594.3	675.0	322.3
Am. green-winged teal	412.8	356.5	168.1	233.9	316.0	174.3	140.9	112.9	172.4	132.7
Blue-winged teal	2360.2	1799.6	1631.3	233.9 902.4	1482.8	1307.2	781.5	605.9	963.2	993.6
U		822.9	422.7	902.4 426.7	692.4	494.7				995.0 370.9
N. shoveler	730.3 2050.3						335.3	699.0	792.8	
N. pintail		2549.6	672.5	961.8	1579.9	897.6	526.2	1222.0	1029.4	492.1
Subtotal	9641.5	9972.8	6862.2	5495.0	7795.1	6221.8	3914.8	5795.0	5876.3	4088.1
Divers	205 7	211.7	224.2	120.2	220.5	100.0	120.4	102.4	222.2	201 (
Redhead	305.7	311.7	224.3	130.3	220.5	190.9	138.4	123.4	232.2	201.6
Canvasback	252.9	283.3	256.5	129.0	280.9	307.2	110.1	151.9	212.7	157.7
Scaup	622.2	504.6	702.2	526.2	796.5	629.0	277.1	496.6	844.8	510.2
Ring-necked duck	53.8	42.6	39.0	45.1	46.8	55.5	41.0	69.8	21.8	42.7
Goldeneyes	16.4	15.9	64.8	14.0	35.7	29.4	20.1	20.8	16.2	15.2
Bufflehead	43.7	23.8	38.5	40.7	42.4	23.9	29.2	24.7	36.2	27.6
Ruddy Duck	80.3	58.4	101.8	50.0	91.1	57.9	49.7	181.9	108.5	78.9
Subtotal	1374.9	1240.3	1427.2	935.2	1514.0	1293.8	665.7	1069.1	1472.5	1033.8
Miscellaneous										
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	7.2	1.1	4.3	2.6	12.6	1.7	0.5	3.3	2.6	3.0
Mergansers	7.5	5.3	3.4	6.5	13.0	6.8	14.6	3.4	5.9	17.7
Subtotal	14.7	6.4	7.6	9.1	25.6	8.6	15.0	6.7	8.5	20.8
Total Ducks	11031.1	11219.5	8297.0	6439.4	9334.7	7524.2	4595.6	6870.8	7357.3	5142.7
Canada Goose	25.0	34.8	25.6	35.3	42.4	44.0	59.0	62.5	85.0	91.3
Am. coot	799.8	1513.0	269.4	317.8	787.2	634.2	395.1	175.4	546.7	507.4
Ponds	3424.7	2578.5	1250.0	2221.8	3070.1	1393.6	611.0	2194.7	2696.2	1525.8
							611.0	2194.7	2696.2	1525.8
Ponds	3424.7	2578.5	1250.0	2221.8	3070.1	1393.6				
Ponds Species/Ponds							611.0 1991	2194.7 1992	2696.2 1993	1525.8 1994
Ponds Species/Ponds Ducks	3424.7	2578.5	1250.0	2221.8	3070.1	1393.6				
Ponds Species/Ponds Ducks Dabblers	3424.7 1985	2578.5 1986	1250.0 1987	2221.8 1988	3070.1 1989	1393.6 1990	1991	1992	1993	1994
Ponds Species/Ponds Ducks Dabblers Mallard	3424.7 1985 1173.3	2578.5 1986 1542.6	1250.0 1987 1273.3	2221.8 1988 1389.2	3070.1 1989 951.7	1393.6 1990 1253.7	1991 1031.1	1992 1293.4	1993 1036.4	1994 1380.3
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck	3424.7 1985 1173.3 0.0	2578.5 1986 1542.6 0.0	1250.0 1987 1273.3 0.9	2221.8 1988 1389.2 0.0	3070.1 1989 951.7 0.0	1393.6 1990 1253.7 0.0	1991 1031.1 0.5	1992 1293.4 0.3	1993 1036.4 0.0	1994 1380.3 0.0
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall	3424.7 1985 1173.3 0.0 588.4	2578.5 1986 1542.6 0.0 559.9	1250.0 1987 1273.3 0.9 539.1	2221.8 1988 1389.2 0.0 376.2	3070.1 1989 951.7 0.0 387.9	1393.6 1990 1253.7 0.0 539.5	1991 1031.1 0.5 507.7	1992 1293.4 0.3 626.9	1993 1036.4 0.0 429.6	1994 1380.3 0.0 639.8
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon	3424.7 1985 1173.3 0.0 588.4 290.1	2578.5 1986 1542.6 0.0 559.9 292.3	1250.0 1987 1273.3 0.9 539.1 159.4	2221.8 1988 1389.2 0.0 376.2 194.1	3070.1 1989 951.7 0.0 387.9 181.4	1393.6 1990 1253.7 0.0 539.5 177.3	1991 1031.1 0.5 507.7 234.3	1992 1293.4 0.3 626.9 324.9	1993 1036.4 0.0 429.6 195.2	1994 1380.3 0.0 639.8 261.0
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal	3424.7 1985 1173.3 0.0 588.4 290.1 179.9	2578.5 1986 1542.6 0.0 559.9 292.3 95.9	1250.0 1987 1273.3 0.9 539.1 159.4 85.8	2221.8 1988 1389.2 0.0 376.2 194.1 92.7	3070.1 1989 951.7 0.0 387.9 181.4 115.5	1393.6 1990 1253.7 0.0 539.5 177.3 135.7	1031.1 0.5 507.7 234.3 131.8	1992 1293.4 0.3 626.9 324.9 135.6	1993 1036.4 0.0 429.6 195.2 77.8	1994 1380.3 0.0 639.8 261.0 253.2
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5	1031.1 0.5 507.7 234.3 131.8 936.7	1992 1293.4 0.3 626.9 324.9 135.6 1362.4	1993 1036.4 0.0 429.6 195.2 77.8 570.1	1994 1380.3 0.0 639.8 261.0 253.2 980.2
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8	1031.1 0.5 507.7 234.3 131.8 936.7 473.4	1293.4 0.3 626.9 324.9 135.6 1362.4 571.9	1036.4 0.0 429.6 195.2 77.8 570.1 327.4	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7	1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0	1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9	1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8	1031.1 0.5 507.7 234.3 131.8 936.7 473.4	1293.4 0.3 626.9 324.9 135.6 1362.4 571.9	1036.4 0.0 429.6 195.2 77.8 570.1 327.4	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1	1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0	1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1	1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3	1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6	1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1	1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7 19.9	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6 18.0	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4	1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7 19.9 33.9	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7	1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6 18.0 44.3	1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6	1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7 19.9 33.9 120.2	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 130.5 265.4 19.6 18.0 44.3 58.5	1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7 19.9 33.9 120.2 965.5	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7	1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6 18.0 44.3 58.5 667.4	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1 699.5	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7 19.9 33.9 120.2 965.5 0.0	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6 18.0 44.3 58.5 667.4 0.0	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7 0.0	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1 699.5 0.3	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0	2578.5 1986 1542.6 0.0 559.9 292.3 95.9 876.5 538.8 545.9 4451.8 181.6 127.2 468.9 13.7 19.9 33.9 120.2 965.5 0.0 0.0 0.0	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.0	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6 18.0 44.3 58.5 667.4 0.0 0.0	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7 0.0 0.0	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1 699.5 0.3 0.0	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0
Ponds Species/Ponds Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0 2.6	$\begin{array}{c} 2578.5\\ \hline \\ 1986\\ \hline \\ 1542.6\\ 0.0\\ 559.9\\ 292.3\\ 95.9\\ 876.5\\ 538.8\\ 545.9\\ 4451.8\\ \hline \\ 181.6\\ 127.2\\ 468.9\\ 13.7\\ 19.9\\ 33.9\\ 120.2\\ 965.5\\ \hline \\ 0.0\\ 0.0\\ 1.7\\ \end{array}$	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0 2.3	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.0 0.0 2.2	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0 2.3	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0 4.3	$\begin{array}{c} 1991\\ \hline 1031.1\\ 0.5\\ 507.7\\ 234.3\\ 131.8\\ 936.7\\ 473.4\\ 221.0\\ 3536.4\\ \hline 131.1\\ 130.5\\ 265.4\\ 19.6\\ 18.0\\ 44.3\\ 58.5\\ 667.4\\ \hline 0.0\\ 0.0\\ 5.2\\ \end{array}$	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7 0.0 0.0 0.0 1.8	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1 699.5 0.3 0.0 0.9	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0 3.6
Ponds  Species/Ponds  Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0 2.6 1.9	$\begin{array}{r} 2578.5\\ \hline \\ 1986\\ \hline \\ 1542.6\\ 0.0\\ 559.9\\ 292.3\\ 95.9\\ 876.5\\ 538.8\\ 545.9\\ 4451.8\\ \hline \\ 181.6\\ 127.2\\ 468.9\\ 13.7\\ 19.9\\ 33.9\\ 120.2\\ 965.5\\ \hline \\ 0.0\\ 0.0\\ 1.7\\ 0.0\\ \end{array}$	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0 2.3 6.9	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.0 2.2 5.8	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0 2.3 3.7	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0 4.3 7.9	1991 1031.1 0.5 507.7 234.3 131.8 936.7 473.4 221.0 3536.4 131.1 130.5 265.4 19.6 18.0 44.3 58.5 667.4 0.0 0.0 0.0 5.2 6.5	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7 0.0 0.0 0.0 1.8 3.8	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1 699.5 0.3 0.0 0.9 3.5	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0 3.6 2.3
Ponds  Species/Ponds  Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0 2.6 1.9 4.5	$\begin{array}{r} 2578.5\\ \hline \\ 1986\\ \hline \\ 1542.6\\ 0.0\\ 559.9\\ 292.3\\ 95.9\\ 876.5\\ 538.8\\ 545.9\\ 4451.8\\ \hline \\ 181.6\\ 127.2\\ 468.9\\ 13.7\\ 19.9\\ 33.9\\ 120.2\\ 965.5\\ \hline \\ 0.0\\ 0.0\\ 1.7\\ 0.0\\ 1.7\\ 0.0\\ 1.7\\ \end{array}$	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0 2.3 6.9 9.1	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.0 2.2 5.8 8.0	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0 2.3 3.7 6.0	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0 4.3 7.9 12.3	$\begin{array}{c} 1991 \\ \hline 1031.1 \\ 0.5 \\ 507.7 \\ 234.3 \\ 131.8 \\ 936.7 \\ 473.4 \\ 221.0 \\ 3536.4 \\ \hline 131.1 \\ 130.5 \\ 265.4 \\ 19.6 \\ 18.0 \\ 44.3 \\ 58.5 \\ 667.4 \\ \hline 0.0 \\ 0.0 \\ 5.2 \\ 6.5 \\ 11.6 \\ \end{array}$	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7 0.0 0.0 0.0 1.8 3.8 5.6	1993 1036.4 0.0 429.6 195.2 77.8 570.1 327.4 240.4 2876.8 85.7 93.0 352.1 12.0 34.7 43.9 78.1 699.5 0.3 0.0 0.9 3.5 4.8	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0 3.6 2.3 6.5
Ponds  Species/Ponds  Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal Total Ducks	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0 2.6 1.9 4.5 5617.0	$\begin{array}{r} 2578.5\\ \hline \\ 1986\\ \hline \\ 1542.6\\ 0.0\\ 559.9\\ 292.3\\ 95.9\\ 876.5\\ 538.8\\ 545.9\\ 4451.8\\ \hline \\ 181.6\\ 127.2\\ 468.9\\ 13.7\\ 19.9\\ 33.9\\ 120.2\\ 965.5\\ \hline \\ 0.0\\ 0.0\\ 1.7\\ 0.0\\ 1.7\\ 5419.1\\ \hline \end{array}$	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0 0.2.3 6.9 9.1 4269.3	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.0 0.2 2.5.8 8.0 4149.5	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0 2.3 3.77 6.0 3386.6	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0 4.3 7.9 12.3 4308.1	$\begin{array}{c} 1991 \\ \hline 1031.1 \\ 0.5 \\ 507.7 \\ 234.3 \\ 131.8 \\ 936.7 \\ 473.4 \\ 221.0 \\ 3536.4 \\ \hline 131.1 \\ 130.5 \\ 265.4 \\ 19.6 \\ 18.0 \\ 44.3 \\ 58.5 \\ 667.4 \\ \hline 0.0 \\ 0.0 \\ 5.2 \\ 6.5 \\ 11.6 \\ 4215.4 \end{array}$	$\begin{array}{c} 1992 \\ 1293.4 \\ 0.3 \\ 626.9 \\ 324.9 \\ 135.6 \\ 1362.4 \\ 571.9 \\ 456.9 \\ 4772.4 \\ 150.3 \\ 95.7 \\ 438.6 \\ 16.1 \\ 44.4 \\ 37.6 \\ 116.1 \\ 898.7 \\ 0.0 \\ 0.0 \\ 1.8 \\ 3.8 \\ 5.6 \\ 5676.7 \end{array}$	$\begin{array}{c} 1993 \\ 1036.4 \\ 0.0 \\ 429.6 \\ 195.2 \\ 77.8 \\ 570.1 \\ 327.4 \\ 240.4 \\ 2876.8 \\ 85.7 \\ 93.0 \\ 352.1 \\ 12.0 \\ 34.7 \\ 43.9 \\ 78.1 \\ 699.5 \\ 0.3 \\ 0.0 \\ 0.9 \\ 3.5 \\ 4.8 \\ 3581.0 \end{array}$	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0 3.6 2.3 6.5 5883.3
Ponds  Species/Ponds  Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal Total Ducks Canvada Goose	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0 2.6 1.9 4.5 5617.0 94.7	$\begin{array}{r} 2578.5\\\hline\\1986\\\hline\\1542.6\\0.0\\559.9\\292.3\\95.9\\876.5\\538.8\\545.9\\4451.8\\\hline\\181.6\\127.2\\468.9\\13.7\\19.9\\33.9\\120.2\\965.5\\\hline\\0.0\\0.0\\1.7\\0.0\\1.7\\5419.1\\117.3\end{array}$	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0 2.3 6.9 9.1 4269.3 118.4	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.2 2.5.8 8.0 4149.5 116.2	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0 2.3 3.7 6.0 3386.6 162.2	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0 4.3 7.9 12.3 4308.1 184.0	$\begin{array}{c} 1991 \\ \hline 1031.1 \\ 0.5 \\ 507.7 \\ 234.3 \\ 131.8 \\ 936.7 \\ 473.4 \\ 221.0 \\ 3536.4 \\ \hline 131.1 \\ 130.5 \\ 265.4 \\ 19.6 \\ 18.0 \\ 44.3 \\ 58.5 \\ 667.4 \\ 0.0 \\ 0.0 \\ 5.2 \\ 6.5 \\ 11.6 \\ 4215.4 \\ 188.7 \\ \end{array}$	1992 1293.4 0.3 626.9 324.9 135.6 1362.4 571.9 456.9 4772.4 150.3 95.7 438.6 16.1 44.4 37.6 116.1 898.7 0.0 0.0 1.8 3.8 5.6 5676.7 140.5	$\begin{array}{c} 1993 \\ 1036.4 \\ 0.0 \\ 429.6 \\ 195.2 \\ 77.8 \\ 570.1 \\ 327.4 \\ 240.4 \\ 2876.8 \\ 85.7 \\ 93.0 \\ 352.1 \\ 12.0 \\ 34.7 \\ 43.9 \\ 78.1 \\ 699.5 \\ 0.3 \\ 0.0 \\ 0.9 \\ 3.5 \\ 4.8 \\ 3581.0 \\ 163.1 \end{array}$	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0 3.6 2.3 6.5 5883.3 196.6
Ponds  Species/Ponds  Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaup Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal Total Ducks	3424.7 1985 1173.3 0.0 588.4 290.1 179.9 1327.3 671.0 520.6 4750.7 219.6 118.8 319.8 21.4 27.1 26.9 128.3 861.8 0.0 0.0 0.0 2.6 1.9 4.5 5617.0	$\begin{array}{r} 2578.5\\ \hline \\ 1986\\ \hline \\ 1542.6\\ 0.0\\ 559.9\\ 292.3\\ 95.9\\ 876.5\\ 538.8\\ 545.9\\ 4451.8\\ \hline \\ 181.6\\ 127.2\\ 468.9\\ 13.7\\ 19.9\\ 33.9\\ 120.2\\ 965.5\\ \hline \\ 0.0\\ 0.0\\ 1.7\\ 0.0\\ 1.7\\ 5419.1\\ \hline \end{array}$	1250.0 1987 1273.3 0.9 539.1 159.4 85.8 674.8 375.8 343.8 3453.1 154.3 184.2 278.2 29.3 22.7 32.9 105.6 807.1 0.0 0.0 0.2.3 6.9 9.1 4269.3	2221.8 1988 1389.2 0.0 376.2 194.1 92.7 755.3 428.3 113.8 3349.6 189.3 119.0 366.9 30.7 4.3 20.4 61.2 791.9 0.0 0.0 0.0 0.2 2.5.8 8.0 4149.5	3070.1 1989 951.7 0.0 387.9 181.4 115.5 578.4 243.8 363.7 2822.5 137.8 81.5 208.1 8.6 20.2 21.9 80.1 558.2 0.0 0.0 0.0 2.3 3.77 6.0 3386.6	1393.6 1990 1253.7 0.0 539.5 177.3 135.7 875.5 447.8 336.7 3766.1 137.2 79.7 199.3 19.8 5.7 31.7 56.2 529.7 0.0 0.0 0.0 4.3 7.9 12.3 4308.1	$\begin{array}{c} 1991 \\ \hline 1031.1 \\ 0.5 \\ 507.7 \\ 234.3 \\ 131.8 \\ 936.7 \\ 473.4 \\ 221.0 \\ 3536.4 \\ \hline 131.1 \\ 130.5 \\ 265.4 \\ 19.6 \\ 18.0 \\ 44.3 \\ 58.5 \\ 667.4 \\ \hline 0.0 \\ 0.0 \\ 5.2 \\ 6.5 \\ 11.6 \\ 4215.4 \end{array}$	$\begin{array}{c} 1992 \\ 1293.4 \\ 0.3 \\ 626.9 \\ 324.9 \\ 135.6 \\ 1362.4 \\ 571.9 \\ 456.9 \\ 4772.4 \\ 150.3 \\ 95.7 \\ 438.6 \\ 16.1 \\ 44.4 \\ 37.6 \\ 116.1 \\ 898.7 \\ 0.0 \\ 0.0 \\ 1.8 \\ 3.8 \\ 5.6 \\ 5676.7 \end{array}$	$\begin{array}{c} 1993 \\ 1036.4 \\ 0.0 \\ 429.6 \\ 195.2 \\ 77.8 \\ 570.1 \\ 327.4 \\ 240.4 \\ 2876.8 \\ 85.7 \\ 93.0 \\ 352.1 \\ 12.0 \\ 34.7 \\ 43.9 \\ 78.1 \\ 699.5 \\ 0.3 \\ 0.0 \\ 0.9 \\ 3.5 \\ 4.8 \\ 3581.0 \end{array}$	1994 1380.3 0.0 639.8 261.0 253.2 980.2 737.5 785.2 5037.1 183.5 117.7 343.9 15.7 34.8 42.1 102.2 839.8 0.6 0.0 3.6 2.3 6.5 5883.3

Appendix 1 (continued). Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Southern Saskatchewan.

Species/Ponds	1995	1996	1997	1998	1999	2000	2001
Ducks							
Dabblers							
Mallard	1808.5	2142.7	2450.8	2448.7	2528.6	2266.7	1649.7
Am. black duck	0.4	0.0	0.0	3.3	0.4	0.4	0.0
Gadwall	583.6	930.1	1155.3	1342.0	1028.7	650.0	715.4
Am. wigeon	401.8	311.8	381.9	305.5	345.5	253.1	177.3
Am. green-winged teal	271.3	351.2	418.5	271.2	342.2	294.8	202.3
Blue-winged teal	1088.4	2046.6	1974.4	1589.0	2110.9	1622.4	1267.5
N. shoveler	763.9	1212.8	1660.7	790.5	1281.3	899.8	718.1
N. pintail	554.2	807.4	1123.9	551.8	875.2	463.6	680.0
Subtotal	5472.2	7802.8	9165.4	7302.2	8512.9	6450.9	5410.3
Divers							
Redhead	345.1	293.2	308.5	268.1	288.3	323.8	224.3
Canvasback	282.3	283.0	280.1	246.9	253.4	232.2	232.2
Scaup	518.6	462.5	489.5	300.2	287.4	272.8	320.6
Ring-necked duck	36.0	82.9	58.1	30.8	57.2	63.9	36.3
Goldeneyes	41.9	53.0	37.4	66.7	29.5	40.5	10.2
Bufflehead	41.9	53.0	91.6	78.8	88.4	112.8	73.7
Ruddy Duck	158.1	166.7	124.1	82.3	170.3	168.2	134.3
Subtotal	1423.9	1394.2	1389.2	1073.7	1174.5	1214.2	1031.5
Miscellaneous							
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	0.3	0.9	1.5	0.2	0.0	0.0	0.3
Mergansers	7.5	4.0	6.5	6.8	2.6	9.2	21.2
Subtotal	7.9	4.9	7.9	6.9	2.6	9.2	21.5
Total Ducks	6903.9	9201.9	10562.5	8382.9	9690.0	7674.2	6463.3
Canada Goose	220.0	176.8	289.6	373.3	238.4	294.4	289.1
Am. coot	625.2	868.1	1661.1	594.3	823.7	848.5	679.2
Ponds	2314.4	3268.9	2992.0	1470.2	2535.3	1403.7	1535.7

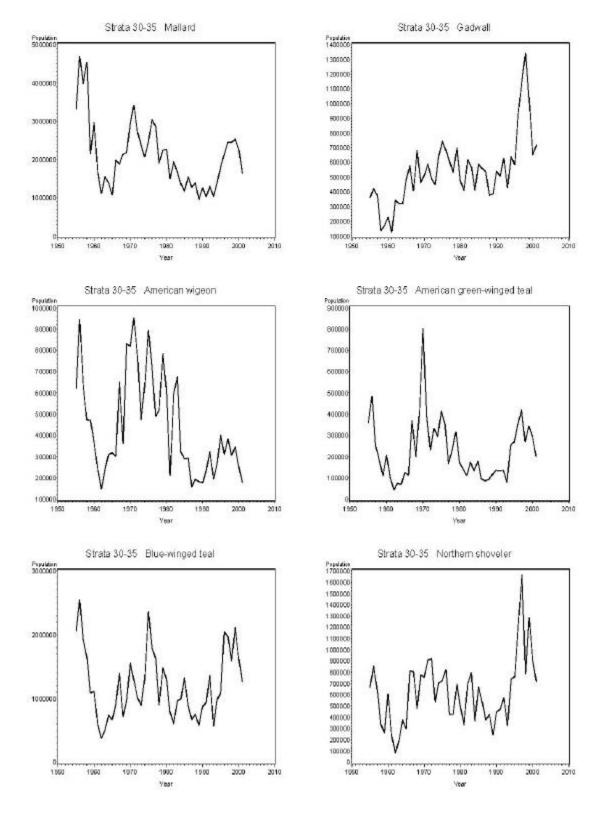


Figure 1. Population indices for individual waterfowl species and ponds for Southern Saskatchewan, May 2001.

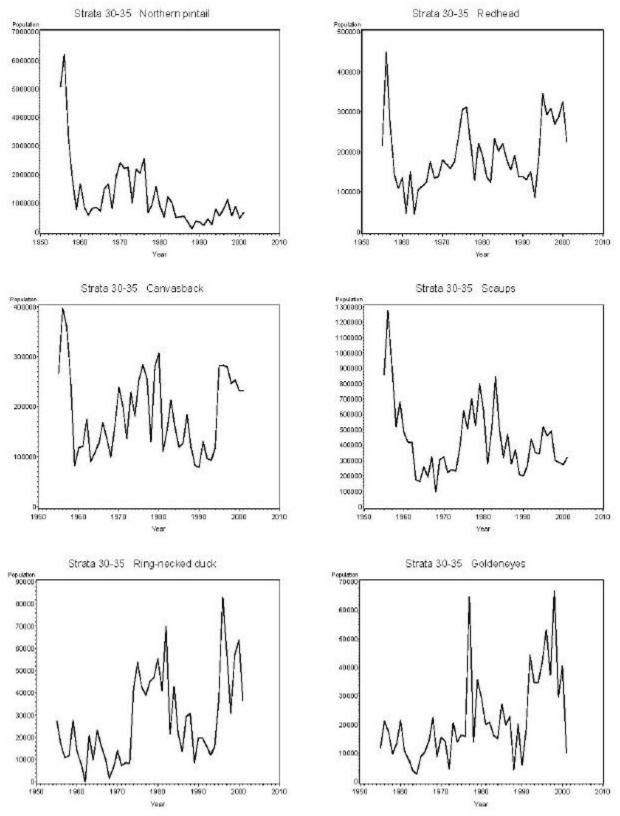


Figure 1. Continued.

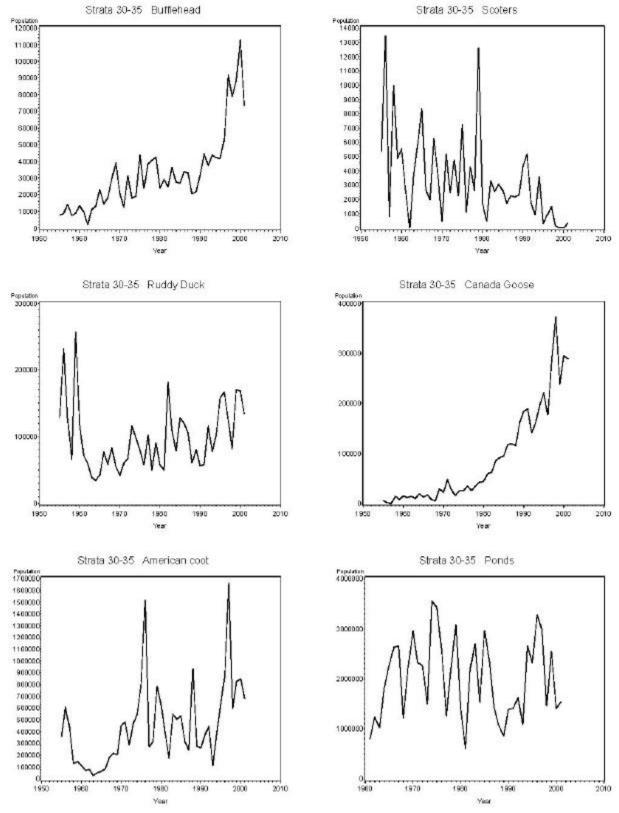


Figure 1. Continued.

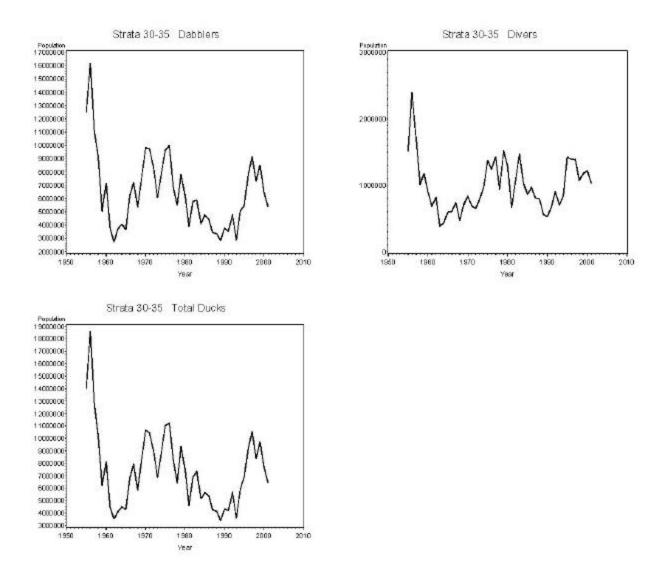


Figure 1. Continued.