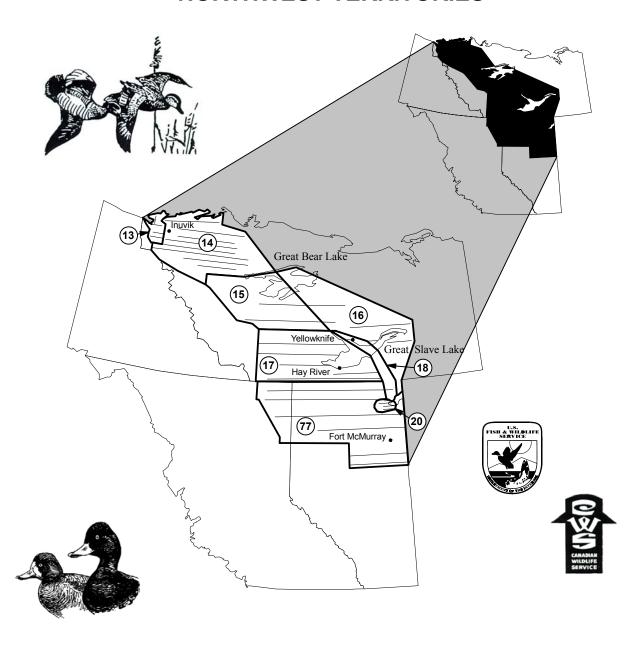
2001

NORTHERN ALBERTA, NORTHEASTERN BRITISH COLUMBIA AND THE NORTHWEST TERRITORIES



The data presented in this report are preliminary. Final estimates are available from the U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Patuxent Wildlife Research Center, Laurel, Maryland 20708-4016.

TITLE: Waterfowl Breeding Population Survey for Northern

Alberta, Northeastern British Columbia, and the Northwest Territories (Mackenzie District)

STRATA SURVEYED: 13, 14, 15, 16, 17, 18, 20, 77

<u>DATE</u>: May 25 to June 17, 2001

<u>DATA SUPPLIED</u>: United States Fish and Wildlife Service

Carl Ferguson, Flyway Biologist Pat Corr, Wildlife Biologist

ABSTRACT:

Spring breeding habitat conditions for waterfowl in the survey unit, overall, were very good. The exceptions were very dry conditions in the southern portion of the unit, the Slave Lake, Peace River, and Fort McMurray areas and the late spring ice-out conditions east of Inuvik in the Northwest Territories. Above average winter precipitation and temperatures prevailed in most of the Northwest Territories surveyed area. Winter precipitation and temperatures were well below normal in the southernmost portion of the survey unit. Water levels in the Athabasca Delta wetlands remain low with the absence of spring flooding in 2001.

Overall, ducks were down 19.8 percent from 2000; dabblers were down 24.0 percent, and divers were down 17.6 percent, and miscellaneous species were down 11.8 percent. Of notable mention for the dabblers, mallards were down -38.3 percent, American wigeon were down -1.6 percent, green-winged teal were down -29.7 percent, northern shoveler were down -31.1 percent, and northern pintail were down -19.3 percent. For the divers, redhead were down -64.6 percent, canvasback were down -43.3 percent, scaup were down -12.0 percent, ring-necked duck were down -50.1 percent, goldeneye were down -46.5 percent, and bufflehead were up +27.8 percent. For miscellaneous species, oldsquaw were up +19.0 percent, scoters were down -3.3 percent, and mergansers were down -47.6 percent.

METHODS:

This survey was conducted using procedures found in the <u>Standard Operating Procedures for Aerial Breeding Ground and Habitat Survey, Section IV (A)</u>; revised 1977. An upgraded data recording system was used again for the fourth year. This involves both the pilot/observer and the observer recording data into two Toshiba Satellite Pro 40 CDX laptop computers mounted the aircraft. GPS location "hits" were fixed to all waterfowl observed and identified. This was the second year for the observer, a retired waterfowl biologist for the Maine Department of Inland Fisheries and Wildlife. The pilot/observer has surveyed 17 years in this crew survey unit either as an observer or as a pilot/observer.

Transect flights in stratum 13 through stratum 77 were flown in N783, a Cessna 206 amphibian. The survey was initiated out of Edmonton, Alberta , beginning just north of Lesser Slave Lake on May 27, and was completed on June 17 at Norman Wells, Northwest Territories. The survey involved approximately 120 flight hours. Survey dates for individual stratum are as follows: stratum 77, May 27 - June 5; stratum 20, June 4; stratum 18, June 7 - June 11; stratum 17, June 5 - June 10; stratum 16, June 8; stratum 15, June 7 - June 11; stratum 14, June 12 - June 17; and stratum 13, June 13 - June 16. Six segments in stratum 14 were not flown due to mechanical problems with the aircraft.

HABITAT CONDITIONS:

Northern Alberta and Northeastern British Columbia

A lack of winter precipitation and high than average temperature resulted in extremely dry conditions in the Slave Lake, Peace River, and Fort McMurray areas. One of the largest forest fires in Alberta history was burning just south of Slave Lake when we arrived in the survey unit. On the two southernmost transects, most of the shallow drainage basins and wetlands were dried up. Beaver flowages were very reduced in acreage. Larger, more permanent lakes were the only potential nesting habitat available for waterfowl. These dry conditions persisted to about 100 miles south of High Level, Alberta. From there to the Northwest Territorial borders, wetland conditions improved as this area received much more normal winter precipitation than the area to the south. This area received some precipitation during late May and early June, but it was too little and too late to benefit nesting waterfowl.

Athabasca Delta

During the survey period, the Delta had very low water levels this spring due to an absence of spring flooding. Many of the shallow lakes had sedges and grasses growing with reduced habitat for breeding waterfowl. Lake Baril was the lowest that I have seen in fifteen years at this time of year. Willows continue to encroach on the wetlands in the Delta, reducing the amount of habitat available for waterfowl. A large grass/brush fire was burning just east of Lake Claire during the survey period.

Northwest Territories (Mackenzie District)

Above average amount winter precipitation resulted in idea nesting habitat conditions for waterfowl in practically all of the survey portion of the Territories. All shallow wetlands and drainage basins observed were full. Habitat-wise, this is probably as good as it gets in the northern portion of the survey unit. One drawback was the wet and cool spring weather in April and May which may lead to reduce production from early nesting waterfowl species. Spring and the subsequent ice-out arrived late in the Inuvik and area to the east.

SUMMARY:

Habitat conditions for breeding waterfowl were overall the best in several years. Drought conditions persisted in the southernmost area of the unit and spring was delayed in the extreme northeastern portion of the unit.

BREEDING POPULATION ESTIMATES:

The status of waterfowl breeding population estimates by species and stratum with comparisons to the previous year, ten-year mean, and long-term mean are presented in Table 1. The long-term trend in adjusted waterfowl breeding population estimates is presented in Appendix 1. Population indices graphs for individual waterfowl species on an annual basis are presented in Figure 1. Total ducks for 2001 indicated a -19.8 percent decrease from 2000, a -10.5 percent decrease from the ten-year mean, and a -35.2 percent decrease from the long-term mean.

Dabbler population estimates decrease -24.0 percent from 2000, decreased -7.8 percent from the ten-year mean, and decreased -27.5 percent from the long-term mean. Blue-winged teal was the only dabbler species showing an increased population estimate (+53.8 percent) from last year. The remainder of the dabblers dropped sharply, including mallard, down - 38.3; green-winged teal, down -29.7; and northern pintail, down -19.3 percent.

The breeding population estimate for divers decreased - 17.4 percent from 2000, decreased - 17.6 percent from the ten-year mean, and decreased - 38.8 percent from the long-term mean. All diver species were down sharply from last year.

For miscellaneous species, oldsquaw breeding population estimates were up +19.0 percent from 2000, but still down -21.0 percent from the ten-year mean, and down -77.1 percent from the long term mean.

CONCLUSIONS:

- 1. Overall this survey unit had the best breeding habitat conditions that I have seen in several years. Habitat conditions were rated very good for most of the Northwest Territories (Mackenzie District) portion of the survey unit. The exceptions were the area around Inuvik and to the east, which experienced a late ice-out during the spring, the southern portion of the survey unit in northern Alberta and northeastem British Columbia was extremely dry with virtually no water in shallow wetlands and drainage basins. The number and size of wetlands created by beaver flowages was also drastically reduced. This area was rated as poor.
- 2. Waterfowl breeding pairs decreased from 2000 in this survey unit for practically all species of dabblers and divers. The exceptions were blue-winged teal, oldsquaw, and bufflehead.

3. Production this year will be lower than 2000 for dabblers and divers because fewer adult breeding pairs were present this spring and also cool and wet spring weather conditions persisted in the Northwest Territories. This will adversely affect the early waterfowl nesting species.

Submitted by: Carl Ferguson, Flyway Biologist July 23, 2001

Table 1. 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 Northern Alberta, Northeastern British Columbia, and the Northwest Territories.

				Strati	um								%	Change Fro	om
Species/Ponds	13	14	15	16	17	18	20	77	2001 Total	2000 Total	10-Year Mean	Long- Term Mean	2000	10-Year Mean	Long- Term Mean
Ducks															
Dabblers															
Mallard	37.6	102.3	80.7	23.5	58.6	21.4	42.8	108.8	475.7	771.2	647.2	811.2	-38.3%	-26.5%	-41.4%
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	0.1			-100.0%
Gadwall	2.5	0.0	0.0	0.0	5.7	0.0	3.1	13.2	24.5	42.7	42.0	19.4	-42.6%	-41.6%	26.6%
Am. wigeon	96.2	249.7	23.2	30.4	101.0	37.8	35.2	92.9	666.4	677.5	669.3	818.1	-1.6%	-0.4%	-18.5%
Am. green-winged teal	25.8	14.9	80.6	19.2	134.8	6.8	17.8	371.0	671.0	954.8	565.4	640.7	-29.7%	18.7%	4.7%
Blue-winged teal	0.0	0.0	0.0	0.0	14.4	0.0	6.4	22.4	43.2	28.1	98.9	149.2	53.8%	-56.3%	-71.0%
N. shoveler	16.3	5.0	0.0	0.0	19.5	6.1	19.8	36.1	102.7	148.9	145.7	164.2	-31.1%	-29.5%	-37.5%
N. pintail	19.7	44.9	32.3	3.3	24.7	4.6	7.7	31.8	169.1	209.5	165.1	364.3	-19.3%	2.4%	-53.6%
Subtotal	198.0	416.8	216.8	76.3	358.7	76.7	132.9	676.3	2152.5	2832.6	2333.5	2967.2	-24.0%	-7.8%	-27.5%
Divers															
Redhead	3.0	0.0	0.0	0.0	1.4	0.0	1.8	0.0	6.2	7.8	17.5	17.8	-20.3%	-64.6%	-65.2%
Canvasback	7.8	0.0	0.0	0.0	9.6	2.3	18.2	0.0	37.9	72.9	66.8	51.9	-48.0%	-43.3%	-27.1%
Scaups	66.2	494.6	185.1	149.9	191.6	99.5	0.7	79.1	1266.9	1440.0	1629.0	2500.0	-12.0%	-22.2%	-49.3%
Ring-necked duck	12.1	35.4	5.6	7.4	48.6	10.5	10.2	95.1	224.9	450.3	216.5	141.3	-50.1%	3.9%	59.1%
Goldeneyes	7.9	0.0	0.0	0.0	6.7	3.1	6.3	5.9	30.0	56.1	45.9	93.6	-46.5%	-34.7%	-67.9%
Bufflehead	1.8	2.1	14.5	24.3	98.1	36.5	2.3	138.3	317.9	248.8	290.7	264.7	27.8%	9.4%	20.1%
Ruddy Duck	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.8	8.8	14.7	30.0	22.6	-40.1%	-70.6%	-60.9%
Subtotal	98.9	532.1	205.2	181.6	356.1	151.9	43.4	323.2	1892.5	2290.5	2296.4	3092.0	-17.4%	-17.6%	-38.8%
Miscellaneous															
Oldsquaw	0.0	30.3	9.3	12.2	5.6	0.0	0.0	0.0	57.3	48.2	72.6	250.6	19.0%	-21.0%	-77.1%
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7			-100.0%
Scoters	15.9	352.1	50.8	68.2	25.9	5.0	0.0	13.2	531.1	549.0	500.6	907.0	-3.3%	6.1%	-41.4%
Mergansers	2.4	42.0	0.0	20.2	12.4	0.0	5.1	8.3	90.4	172.5	77.6	73.7	-47.6%	16.5%	22.8%
Subtotal	18.3	424.4	60.1	100.6	43.9	5.0	5.1	21.5	678.9	769.6	650.8	1232.0	-11.8%	4.3%	-44.9%
Total Ducks	315.2	1373.3	482.0	358.6	758.7	233.6	181.4	1021.1	4723.9	5892.7	5280.7	7291.2	-19.8%	-10.5%	-35.2%
Canada Goose	0.8	32.9	49.2	11.9	21.9	0.0	22.7	25.6	165.0	115.9	132.9	147.6	42.3%	24.1%	11.8%
Am. coot	0.0	0.0	0.0	0.0	2.2	0.0	18.2	17.9	38.3	67.0	35.8	52.4	-42.8%	7.1%	-26.8%

Appendix 1. Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Northern Alberta, Northeastern British Columbia, and the Northwest Territories.

Species/Ponds	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Ducks										
Dabblers										
Mallard	1299.6	1148.0	816.6	1019.1	2016.3	687.2	1862.4	1102.5	1027.7	1171.1
Am. black duck	0.6	0.6	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0
Gadwall	0.6	0.0	1.6	0.6	0.3	0.0	1.3	9.1	0.0	2.5
Am. wigeon	1331.7	1102.1	1105.7	724.4	1828.5	1540.0	1586.6	819.6	788.4	1185.4
Am. green-winged teal	878.0	675.0	529.0	643.6	1726.9	851.5	1067.8	387.3	874.8	1062.1
Blue-winged teal	204.0	159.2	25.5	107.5	360.3	355.7	385.9	162.9	34.1	365.2
N. shoveler	256.4	162.1	94.0	170.1	537.7	193.3	389.7	187.2	76.9	473.7
N. pintail	1078.4	608.1	543.8	920.6	2426.1	685.8	1226.7	441.3	298.0	445.1
Subtotal	5049.2	3855.1	3116.2	3585.9	8899.9	4313.4	6520.2	3109.9	3099.9	4705.1
Divers	3019.2	3033.1	3110.2	5505.7	00//./	1313.1	0320.2	5107.7	30//./	1705.1
Redhead	31.9	27.5	19.6	11.5	46.8	23.8	35.2	56.0	12.9	44.6
Canvasback	45.4	18.4	15.1	63.2	70.7	56.8	37.0	27.8	91.7	69.2
Scaups	2423.2	2297.7	2300.5	2020.8	3629.0	2347.7	2724.1	2620.7	2919.7	2572.7
Ring-necked duck	189.9	200.6	114.1	91.3	393.4	164.5	69.3	122.9	112.5	137.1
_	202.8	93.6	88.5	142.2	492.6	122.8	264.6	230.1	32.2	127.1
Goldeneyes		173.7	152.4	132.2	238.8	209.7	160.7	209.2	151.9	233.9
Bufflehead	156.1									
Ruddy Duck	19.6	15.1	6.9	8.7	44.7	23.5	17.5	1.2	22.2	2.1
Subtotal	3068.9	2826.6	2697.1	2470.1	4916.1	2948.9	3308.3	3267.9	3343.3	3186.8
Miscellaneous	4500	2.47.0	200.1	451.6	607.7	2652	422.4	250.5	1.62.4	500.0
Oldsquaw	450.0	347.8	380.1	451.6	607.7	367.3	432.4	278.7	163.4	522.2
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	1416.2	1219.3	1322.7	1043.0	1602.3	1606.7	1252.5	721.9	759.8	1290.2
Mergansers	101.0	52.5	74.8	127.2	95.3	137.4	131.6	53.2	94.5	82.5
Subtotal	1967.3	1619.5	1777.6	1621.8	2305.3	2111.4	1816.5	1053.8	1017.7	1894.9
Total Ducks	10085.4	8301.2	7590.9	7677.8	16121.3	9373.7	11645.0	7431.7	7460.8	9786.9
Canada Goose	361.6	414.0	148.6	285.5	502.8	264.6	131.3	90.7	232.5	17.7
Am. coot	28.2	3.0	0.0	0.0	156.8	3.9	38.8	19.2	8.7	7.5
Species/Ponds	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Species/Ponds Ducks	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
•	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Ducks	1965 589.9	1966	1967	1968 730.0		1970 753.1	1971 807.6	1972 1132.1	1973	1974 575.4
Ducks Dabblers					1969 530.8 0.0					
Ducks Dabblers Mallard Am. black duck	589.9 0.0	675.9 0.0	604.6 0.0	730.0 0.0	530.8	753.1 0.0	807.6	1132.1 0.0	696.4 0.0	575.4 0.0
Ducks Dabblers Mallard Am. black duck Gadwall	589.9 0.0 6.1	675.9 0.0 1.9	604.6 0.0 6.7	730.0 0.0 0.3	530.8 0.0 0.3	753.1 0.0 14.3	807.6 0.0 1.3	1132.1 0.0 10.7	696.4 0.0 8.6	575.4 0.0 0.9
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon	589.9 0.0 6.1 909.0	675.9 0.0 1.9 888.2	604.6 0.0 6.7 456.1	730.0 0.0 0.3 384.6	530.8 0.0 0.3 578.6	753.1 0.0 14.3 850.7	807.6 0.0 1.3 766.1	1132.1 0.0 10.7 851.9	696.4 0.0 8.6 912.5	575.4 0.0 0.9 492.0
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal	589.9 0.0 6.1 909.0 649.9	675.9 0.0 1.9 888.2 800.5	604.6 0.0 6.7 456.1 457.8	730.0 0.0 0.3 384.6 492.7	530.8 0.0 0.3 578.6 204.7	753.1 0.0 14.3 850.7 358.4	807.6 0.0 1.3 766.1 429.8	1132.1 0.0 10.7 851.9 569.3	696.4 0.0 8.6 912.5 535.4	575.4 0.0 0.9 492.0 242.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal	589.9 0.0 6.1 909.0 649.9 173.3	675.9 0.0 1.9 888.2 800.5 52.1	604.6 0.0 6.7 456.1 457.8 9.6	730.0 0.0 0.3 384.6 492.7 5.3	530.8 0.0 0.3 578.6 204.7 14.7	753.1 0.0 14.3 850.7 358.4 21.0	807.6 0.0 1.3 766.1 429.8 33.0	1132.1 0.0 10.7 851.9 569.3 81.8	696.4 0.0 8.6 912.5 535.4 10.0	575.4 0.0 0.9 492.0 242.2 31.7
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler	589.9 0.0 6.1 909.0 649.9 173.3 165.5	675.9 0.0 1.9 888.2 800.5 52.1 180.8	604.6 0.0 6.7 456.1 457.8 9.6 113.0	730.0 0.0 0.3 384.6 492.7 5.3 101.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4	753.1 0.0 14.3 850.7 358.4 21.0 57.7	807.6 0.0 1.3 766.1 429.8 33.0 108.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3	696.4 0.0 8.6 912.5 535.4 10.0 142.2	575.4 0.0 0.9 492.0 242.2 31.7 72.5
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal	589.9 0.0 6.1 909.0 649.9 173.3 165.5	675.9 0.0 1.9 888.2 800.5 52.1 180.8	604.6 0.0 6.7 456.1 457.8 9.6 113.0	730.0 0.0 0.3 384.6 492.7 5.3 101.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4	753.1 0.0 14.3 850.7 358.4 21.0 57.7	807.6 0.0 1.3 766.1 429.8 33.0 108.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3	696.4 0.0 8.6 912.5 535.4 10.0 142.2	575.4 0.0 0.9 492.0 242.2 31.7 72.5
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 24.3 212.9 0.6 2404.8	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2	753.1 0.0 14.3 850.7 358.4 21.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2 0.0	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2 402.3 0.0	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 24.3 212.9 0.6 2404.8	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2	753.1 0.0 14.3 850.7 358.4 21.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2 218.8 0.0
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6 2404.8	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 35.4 25.5 3474.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8 0.0	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2 0.0	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2 402.3 0.0	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6 2404.8	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2 460.3 0.0	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9 283.3 0.0	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5 224.6 0.0	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2 105.7 0.0	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9 181.4 0.0	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2 218.8 0.0
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8 0.0 965.9	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2 0.0 611.8	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2 402.3 0.0 712.7	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6 2404.8 165.1 0.0 606.7	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2 460.3 0.0 855.5	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9 283.3 0.0 1172.6	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5 224.6 0.0 640.6	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2 105.7 0.0 1093.5	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9 181.4 0.0 905.4	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2 218.8 0.0 1098.0
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8 0.0 965.9 96.9 1383.6	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2 0.0 611.8 52.5 1124.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2 402.3 0.0 712.7 48.4 1163.4	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6 2404.8 165.1 0.0 606.7 14.3 786.1	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2 460.3 0.0 855.5 30.2 1346.0	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9 283.3 0.0 1172.6 44.9 1500.9	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5 224.6 0.0 640.6 16.1 881.3	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2 105.7 0.0 1093.5 29.2 1228.4	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9 181.4 0.0 905.4 32.1 1118.8	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2 218.8 0.0 1098.0 21.1 1338.0
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal Total Ducks	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8 0.0 965.9 96.9 1383.6 7467.5	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2 0.0 611.8 52.5 1124.5 6983.1	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2 402.3 0.0 712.7 48.4 1163.4 6084.8	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6 2404.8 165.1 0.0 606.7 14.3 786.1 5102.6	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2 460.3 0.0 855.5 30.2 1346.0 5751.5	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 17.6 230.1 1.8 3115.9 283.3 0.0 1172.6 44.9 1500.9 6772.1	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5 224.6 0.0 640.6 16.1 881.3 6587.5	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2 105.7 0.0 1093.5 29.2 1228.4 9975.1	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9 181.4 0.0 905.4 32.1 1118.8 7527.9	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2 218.8 0.0 1098.0 21.1 1338.0 6151.2
Ducks Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal	589.9 0.0 6.1 909.0 649.9 173.3 165.5 392.4 2886.1 6.8 44.6 2607.5 225.5 119.3 191.9 2.1 3197.8 320.8 0.0 965.9 96.9 1383.6	675.9 0.0 1.9 888.2 800.5 52.1 180.8 190.1 2789.5 5.0 120.5 2490.3 159.6 34.7 241.5 17.5 3069.1 460.2 0.0 611.8 52.5 1124.5	604.6 0.0 6.7 456.1 457.8 9.6 113.0 105.4 1753.2 18.6 21.0 2741.4 133.7 60.3 182.2 11.1 3168.2 402.3 0.0 712.7 48.4 1163.4	730.0 0.0 0.3 384.6 492.7 5.3 101.6 197.1 1911.6 9.5 93.0 1970.3 94.3 24.3 212.9 0.6 2404.8 165.1 0.0 606.7 14.3 786.1	530.8 0.0 0.3 578.6 204.7 14.7 42.4 74.8 1446.3 5.3 61.6 2523.7 54.9 35.0 277.7 0.9 2959.2 460.3 0.0 855.5 30.2 1346.0	753.1 0.0 14.3 850.7 358.4 21.0 57.7 100.0 2155.2 8.3 30.4 2719.4 108.4 17.6 230.1 1.8 3115.9 283.3 0.0 1172.6 44.9 1500.9	807.6 0.0 1.3 766.1 429.8 33.0 108.5 85.4 2231.7 6.1 40.5 2934.8 105.9 30.7 354.0 2.5 3474.5 224.6 0.0 640.6 16.1 881.3	1132.1 0.0 10.7 851.9 569.3 81.8 157.3 426.3 3229.5 10.3 16.8 5090.7 59.7 33.3 291.2 15.2 5517.2 105.7 0.0 1093.5 29.2 1228.4	696.4 0.0 8.6 912.5 535.4 10.0 142.2 351.0 2656.1 5.6 21.0 3328.3 106.9 39.3 236.8 15.0 3752.9 181.4 0.0 905.4 32.1 1118.8	575.4 0.0 0.9 492.0 242.2 31.7 72.5 227.3 1642.1 2.9 10.4 2795.1 42.2 36.2 277.7 6.7 3171.2 218.8 0.0 1098.0 21.1 1338.0

Appendix 1 (continued). Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Northern Alberta, Northeastern British Columbia, and the Northwest Territories.

Species/Ponds	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Ducks										
Dabblers										
Mallard	731.9	314.7	770.4	739.4	794.9	896.2	719.2	534.1	928.4	482.6
Am. black duck	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gadwall	0.0	5.2	17.6	10.2	32.3	43.8	52.5	51.0	2.5	23.1
Am. wigeon	650.3	538.8	846.7	993.4	729.6	992.2	916.0	589.3	556.3	1187.1
Am. green-winged teal	468.3	225.6	370.6	678.7	582.6	585.6	626.2	692.4	842.9	468.5
Blue-winged teal	55.9	111.7	474.5	213.6	187.2	367.8	283.9	159.3	107.5	92.9
N. shoveler	116.3	81.9	256.2	64.4	79.7	207.4	204.5	77.9	74.5	140.9
N. pintail	381.6	246.5	532.6	244.2	196.2	289.6	314.5	103.7	392.0	399.6
Subtotal	2404.3	1524.6	3268.6	2944.0	2602.5	3382.7	3116.8	2207.6	2904.1	2794.7
Divers	2.05	102	3200.0	_,	2002.0	3302.7	3110.0	2207.0	270	_,,,,,,
Redhead	2.4	3.1	23.4	20.2	12.4	28.7	18.4	7.2	9.9	33.8
Canvasback	32.0	37.6	48.1	29.9	28.3	59.6	113.3	48.7	55.3	51.6
Scaups	3215.2	2529.6	2900.0	2676.5	3166.2	3063.0	3028.7	2516.7	3230.8	3667.5
		61.9	179.8	153.5	90.3	101.7	94.6	61.2		89.1
Ring-necked duck	73.3								101.1	
Goldeneyes	33.6	47.5	74.5	112.2	169.7	184.0	108.2	74.1	69.5	298.8
Bufflehead	294.8	267.0	258.7	278.8	328.0	293.9	244.1	185.1	406.3	442.9
Ruddy Duck	4.0	1.6	26.8	8.3	7.8	19.0	28.8	23.0	118.2	51.7
Subtotal	3655.3	2948.2	3511.3	3279.4	3802.8	3750.0	3636.0	2916.1	3991.2	4635.3
Miscellaneous										
Oldsquaw	196.2	176.1	193.7	180.1	626.4	322.0	171.8	193.7	113.0	601.3
Eiders	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.0	0.0	0.0
Scoters	769.7	725.0	922.2	1202.6	1400.9	1101.8	1024.9	846.6	1077.6	1295.4
Mergansers	33.6	83.6	126.1	165.3	121.1	136.2	50.3	58.7	70.3	104.6
Subtotal	999.4	984.6	1242.0	1548.0	2151.7	1560.0	1247.0	1102.0	1260.8	2001.2
Total Ducks	7059.0	5457.5	8021.8	7771.3	8557.0	8692.7	7999.8	6225.7	8156.2	9431.2
Canada Goose	89.4	57.8	45.2	61.8	69.7	58.7	131.4	77.1	172.5	67.8
Am. coot	11.8	0.0	295.1	59.8	5.1	337.0	128.9	54.8	133.9	47.1
Species/Ponds	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Ducks										
Dabblers	632.2	1194.9	705.4	1006.8	581.6	565.9	536.0	501.4	595.1	350.5
Dabblers Mallard	632.2	1194.9	705.4	1006.8	581.6	565.9	536.0	501.4	595.1	350.5
Dabblers Mallard Am. black duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dabblers Mallard Am. black duck Gadwall	0.0 13.7	0.0 48.9	0.0 13.0	0.0 18.3	0.0 28.1	0.0 44.1	0.0 49.9	0.0 58.0	0.0 48.8	0.0 42.6
Dabblers Mallard Am. black duck Gadwall Am. wigeon	0.0 13.7 692.2	0.0 48.9 469.7	0.0 13.0 832.3	0.0 18.3 818.5	0.0 28.1 598.6	0.0 44.1 426.7	0.0 49.9 687.4	0.0 58.0 580.9	0.0 48.8 652.1	0.0 42.6 382.2
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal	0.0 13.7 692.2 615.6	0.0 48.9 469.7 765.6	0.0 13.0 832.3 991.9	0.0 18.3 818.5 882.9	0.0 28.1 598.6 905.7	0.0 44.1 426.7 677.1	0.0 49.9 687.4 396.1	0.0 58.0 580.9 485.0	0.0 48.8 652.1 488.4	0.0 42.6 382.2 575.5
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal	0.0 13.7 692.2 615.6 118.4	0.0 48.9 469.7 765.6 382.2	0.0 13.0 832.3 991.9 250.6	0.0 18.3 818.5 882.9 370.5	0.0 28.1 598.6 905.7 76.3	0.0 44.1 426.7 677.1 29.2	0.0 49.9 687.4 396.1 79.9	0.0 58.0 580.9 485.0 156.6	0.0 48.8 652.1 488.4 205.0	0.0 42.6 382.2 575.5 99.1
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler	0.0 13.7 692.2 615.6 118.4 108.9	0.0 48.9 469.7 765.6 382.2 204.8	0.0 13.0 832.3 991.9 250.6 210.2	0.0 18.3 818.5 882.9 370.5 239.5	0.0 28.1 598.6 905.7 76.3 184.6	0.0 44.1 426.7 677.1 29.2 160.6	0.0 49.9 687.4 396.1 79.9 160.9	0.0 58.0 580.9 485.0 156.6 184.1	0.0 48.8 652.1 488.4 205.0 216.5	0.0 42.6 382.2 575.5 99.1 101.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail	0.0 13.7 692.2 615.6 118.4 108.9 276.3	0.0 48.9 469.7 765.6 382.2 204.8 175.7	0.0 13.0 832.3 991.9 250.6 210.2 218.9	0.0 18.3 818.5 882.9 370.5 239.5 188.2	0.0 28.1 598.6 905.7 76.3 184.6 178.2	0.0 44.1 426.7 677.1 29.2 160.6 146.6	0.0 49.9 687.4 396.1 79.9 160.9 218.3	0.0 58.0 580.9 485.0 156.6 184.1 266.7	0.0 48.8 652.1 488.4 205.0 216.5 226.0	0.0 42.6 382.2 575.5 99.1 101.7 92.3
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal	0.0 13.7 692.2 615.6 118.4 108.9	0.0 48.9 469.7 765.6 382.2 204.8	0.0 13.0 832.3 991.9 250.6 210.2	0.0 18.3 818.5 882.9 370.5 239.5	0.0 28.1 598.6 905.7 76.3 184.6	0.0 44.1 426.7 677.1 29.2 160.6	0.0 49.9 687.4 396.1 79.9 160.9	0.0 58.0 580.9 485.0 156.6 184.1	0.0 48.8 652.1 488.4 205.0 216.5	0.0 42.6 382.2 575.5 99.1 101.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1	0.0 58.0 58.0 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1	0.0 58.0 58.0 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1	0.0 58.0 58.0 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8 270.2 0.0	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2 231.1 2.0	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7 279.3 4.5	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1	0.0 58.0 58.0 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0 267.7 16.2 1045.4	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2 113.7 2.9 909.0	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8 270.2 0.0 1188.9 64.2	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2 231.1 2.0 748.6	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7 279.3 4.5 1129.0	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3 43.6 0.0 432.7	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1 76.3 0.0 647.4	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6 47.0 0.0 549.1	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8 64.6 0.0 633.8	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7 79.1 0.0 372.6 106.7
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0 267.7 16.2 1045.4 69.9	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2 113.7 2.9 909.0 31.9	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8 270.2 0.0 1188.9	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2 231.1 2.0 748.6 40.9	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7 279.3 4.5 1129.0 67.9	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3 43.6 0.0 432.7 52.2	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1 76.3 0.0 647.4 42.3	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6 47.0 0.0 549.1 119.9	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8 64.6 0.0 633.8 61.8	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7 79.1 0.0 372.6
Dabblers Mallard Am. black duck Gadwall Am. wigeon Am. green-winged teal Blue-winged teal N. shoveler N. pintail Subtotal Divers Redhead Canvasback Scaups Ring-necked duck Goldeneyes Bufflehead Ruddy Duck Subtotal Miscellaneous Oldsquaw Eiders Scoters Mergansers Subtotal	0.0 13.7 692.2 615.6 118.4 108.9 276.3 2457.3 9.8 14.1 2375.4 80.5 93.9 249.1 16.2 2839.0 267.7 16.2 1045.4 69.9 1399.3	0.0 48.9 469.7 765.6 382.2 204.8 175.7 3241.8 30.6 47.1 2315.4 64.8 149.2 318.2 92.9 3018.2 113.7 2.9 909.0 31.9 1057.5	0.0 13.0 832.3 991.9 250.6 210.2 218.9 3222.4 4.9 27.8 2518.1 90.9 42.2 386.2 8.6 3078.8 270.2 0.0 1188.9 64.2 1523.3	0.0 18.3 818.5 882.9 370.5 239.5 188.2 3524.7 15.7 61.5 2267.3 164.2 53.3 370.5 17.8 2950.2 231.1 2.0 748.6 40.9 1022.6	0.0 28.1 598.6 905.7 76.3 184.6 178.2 2553.0 20.1 81.1 2339.3 127.5 76.6 358.6 44.5 3047.7 279.3 4.5 1129.0 67.9 1480.8	0.0 44.1 426.7 677.1 29.2 160.6 146.6 2050.1 16.0 30.0 1843.2 114.8 30.8 272.7 34.7 2342.3 43.6 0.0 432.7 52.2 528.5	0.0 49.9 687.4 396.1 79.9 160.9 218.3 2128.4 40.0 74.5 1936.5 113.7 39.8 264.3 38.4 2507.1 76.3 0.0 647.4 42.3 765.9	0.0 58.0 580.9 485.0 156.6 184.1 266.7 2232.7 10.6 46.8 1658.2 106.9 44.1 208.5 43.5 2118.6 47.0 0.0 549.1 119.9 716.0	0.0 48.8 652.1 488.4 205.0 216.5 226.0 2431.9 40.8 68.9 1701.9 184.2 51.0 247.6 59.6 2353.8 64.6 0.0 633.8 61.8 760.2	0.0 42.6 382.2 575.5 99.1 101.7 92.3 1643.9 7.9 27.0 1845.7 136.8 96.9 310.7 7.7 2432.7 79.1 0.0 372.6 106.7 558.4

47.8

Am. coot

32.0

70.1

227.8

131.7

38.4

70.9

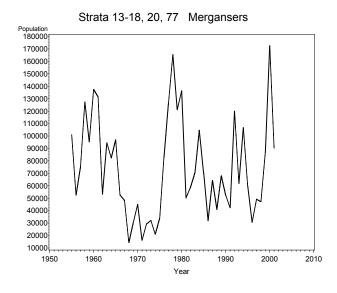
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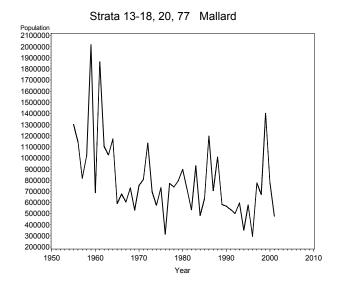
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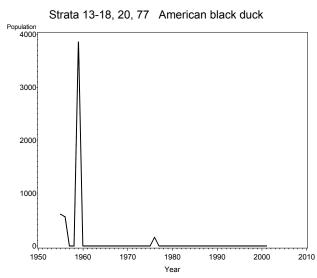
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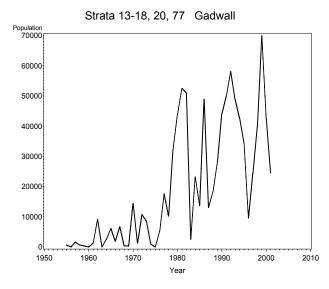
Appendix 1 (continued). Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Northern Alberta, Northeastern British Columbia, and the Northwest Territories.

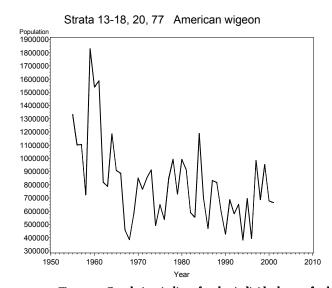
Species/Ponds	1995	1996	1997	1998	1999	2000	2001
Ducks							
Dabblers							
Mallard	576.5	295.1	773.7	671.8	1400.3	771.2	475.7
Am. black duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gadwall	34.3	9.6	24.4	39.9	69.9	42.7	24.5
Am. wigeon	694.8	394.0	983.7	687.2	952.8	677.5	666.4
Am. green-winged teal	605.5	281.7	440.2	616.4	810.4	954.8	671.0
Blue-winged teal	90.0	30.9	86.8	156.6	56.2	28.1	43.2
N. shoveler	65.0	41.7	90.9	306.9	140.6	148.9	102.7
N. pintail	88.4	38.3	175.1	173.1	162.9	209.5	169.1
Subtotal	2154.5	1091.3	2574.8	2651.9	3593.0	2832.6	2152.5
Divers							
Redhead	6.6	5.5	26.7	17.4	11.9	7.8	6.2
Canvasback	109.6	45.6	66.7	39.1	116.9	72.9	37.9
Scaups	1657.9	1294.4	1473.4	1355.4	1926.6	1440.0	1266.9
Ring-necked duck	125.1	99.3	359.5	285.4	303.9	450.3	224.9
Goldeneyes	31.0	22.9	17.5	55.7	44.2	56.1	30.0
Bufflehead	323.1	235.1	387.9	269.9	410.9	248.8	317.9
Ruddy Duck	15.2	10.4	24.0	16.1	70.5	14.7	8.8
Subtotal	2268.5	1713.2	2355.6	2038.8	2885.0	2290.5	1892.5
Miscellaneous							
Oldsquaw	93.7	47.1	107.7	50.5	111.6	48.2	57.3
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	407.2	359.9	679.0	282.9	525.2	549.0	531.1
Mergansers	59.5	30.6	49.1	47.3	86.7	172.5	90.4
Subtotal	560.4	437.6	835.8	380.6	723.6	769.6	678.9
Total Ducks	4983.4	3242.0	5766.1	5071.4	7201.6	5892.7	4723.9
Canada Goose	162.4	151.8	79.1	82.2	163.8	115.9	165.0
Am. coot	5.6	3.6	10.6	91.7	17.1	67.0	38.3











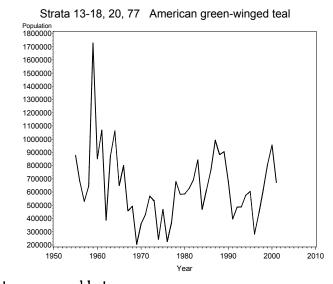
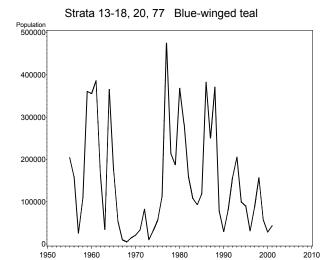
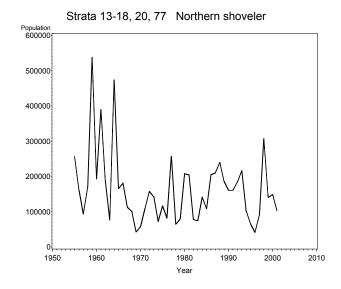
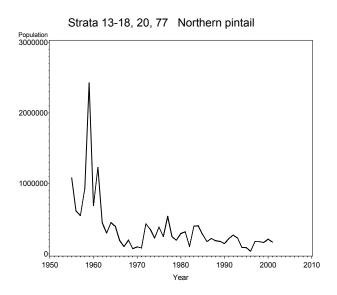


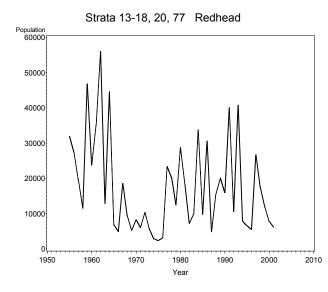
Figure 1. Population indices for the individual waterfowl species on an annual basis.

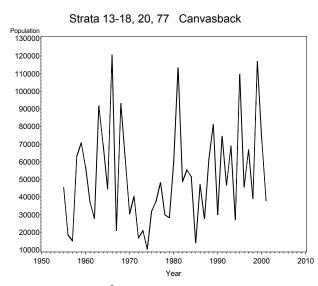


Year









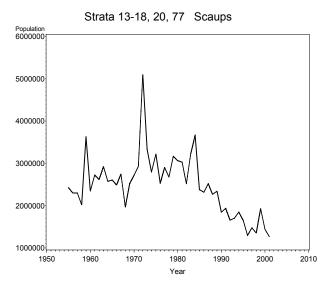
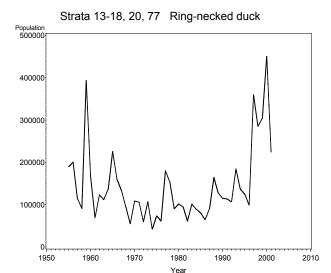
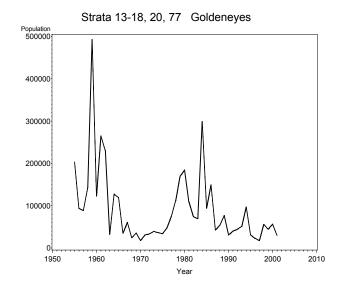
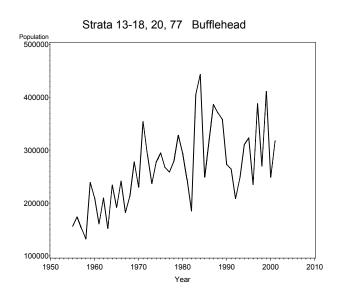
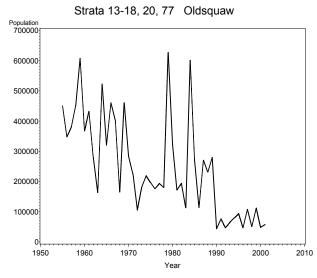


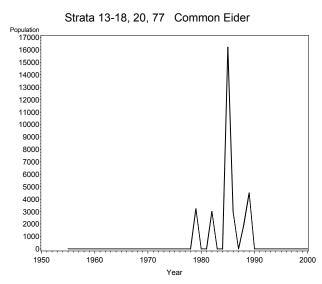
Figure 1 continued.











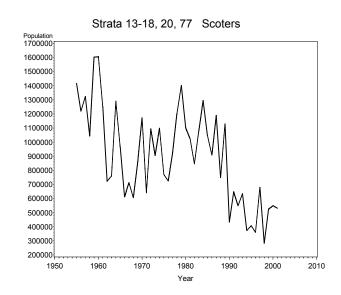
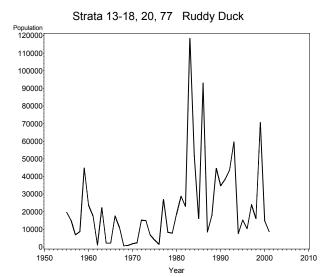
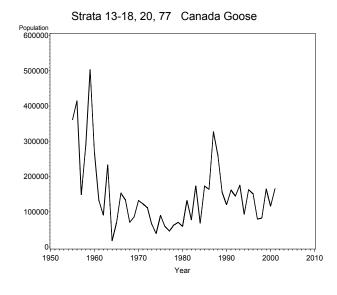
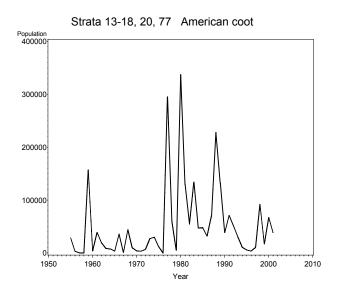
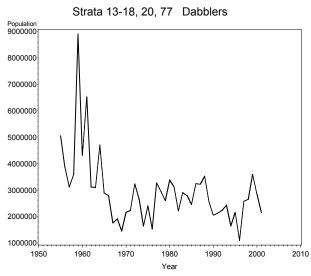


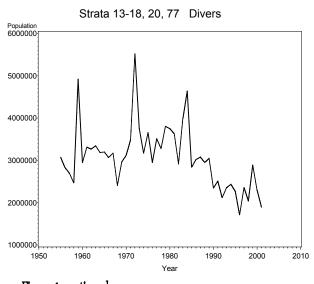
Figure 1 continued.











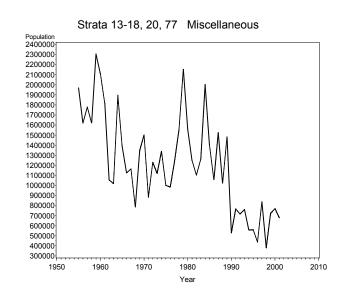


Figure 1 continued.

