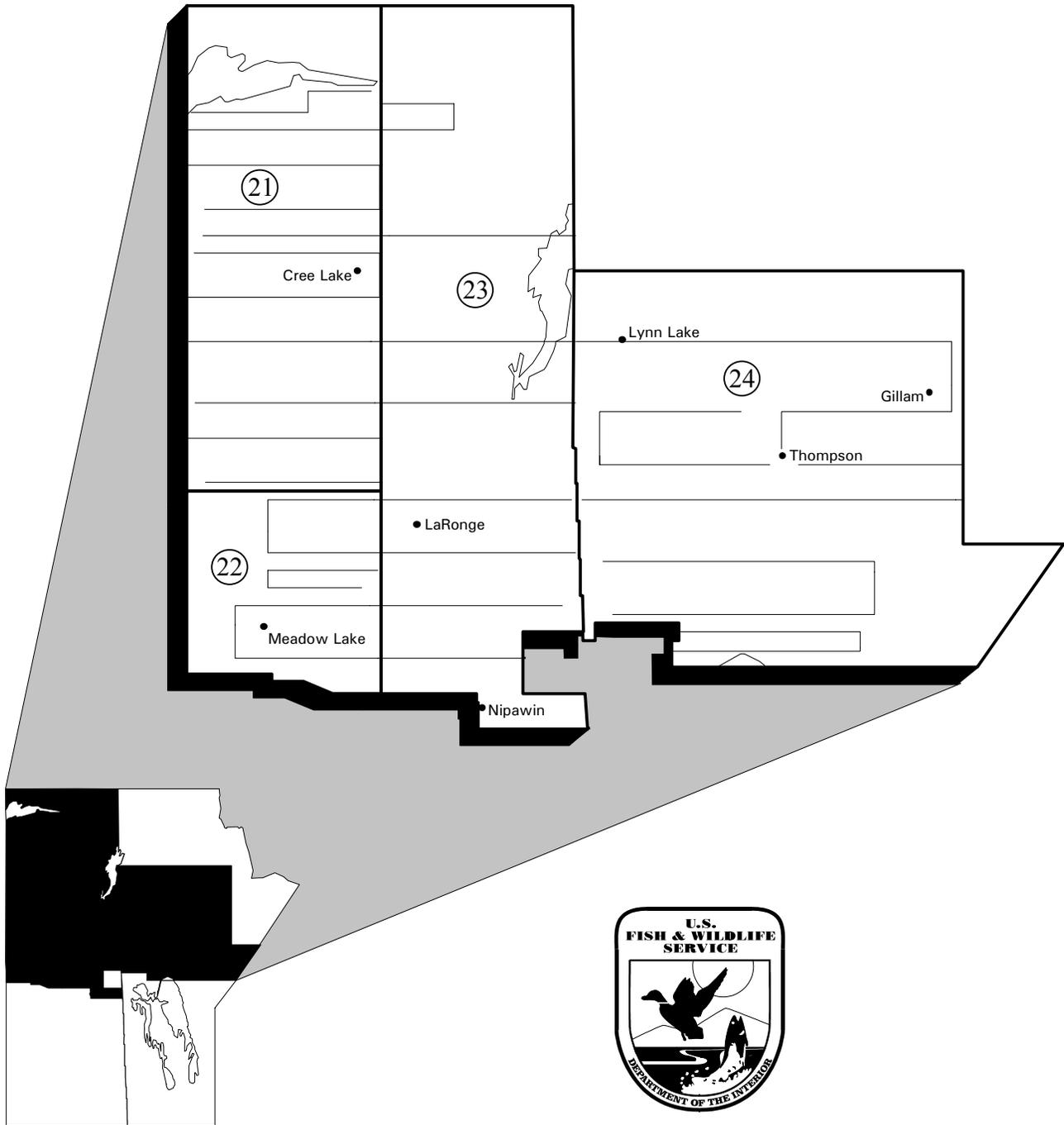


# NORTHERN MANITOBA AND NORTHERN SASKATCHEWAN

## Waterfowl Breeding Population Survey

### 2005



The data presented in this report are preliminary and subject to further editing. Final estimates will be available from the U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, Maryland 20708

**Waterfowl Breeding Population Survey:  
Northern Manitoba, Northern Saskatchewan**

STRATA SURVEYED: 21-24

DATES: May 14-June 8, 2005

DATA SUPPLIED BY: U. S. Fish and Wildlife Service

AERIAL CREW

Pilot/Observer: Fred Roetker, Flyway Biologist  
Division of Migratory Bird Management  
Lafayette, LA

Observer: Barret Fortier, Assistant Refuge Manager  
Mandalay National Wildlife Refuge  
Houma, LA

ABSTRACT: Waterfowl numbers were mixed in northern Saskatchewan and northern Manitoba. Mallard numbers were 43% below 2004 values. Results from selected species are listed below:

	Estimates in thousands	% change from 2004	% change from 10 yr. mean	% change from 1955-04 mean
Mallard	412.3	-43.0%	-44.8%	-49.1%
Wigeon	141.3	0.3%	-5.7%	-30.0%
GW-Teal	287.1	-12.7%	18.8%	83.9%
Scaup	310.2	-44.0%	-16.4%	-31.5%
Ringneck	441.5	18.0%	40.7%	75.3%

**METHODS:** The procedures followed in conducting this survey are contained in the Standard Operating Procedures for Aerial Breeding Population and Habitat Surveys in North America, Section III, revised 1987. Waterfowl data were collected using an aerial onboard computerized recording system designed to attribute each waterfowl observation with a respective latitude/longitude location. Observations were then logged along with sample details, i.e., strata transects, segments, time, and climatic conditions. This survey system began testing in Alaska during 1996 and has been gradually been implemented in each survey crew area since. During this transition, the Migratory Bird Management Office elected to redesign the sampling of stratum 25. This effort, effective during the 1998 and 1999 surveys, was intended to more appropriately sample the number and distribution of breeding waterfowl across the stratified habitat type. Historically, nine segments were concentrated in the Saskatchewan River delta and were not all oriented on latitude. Also, data from Stratum 25 was included in this northern Manitoba report. In the new design, all thirty segments have been oriented on latitude with only five segments in the river delta area. There are now a total of five transects evenly distributed throughout the stratum, however, the sampling area is still identical to the historic survey. Direct comparisons of the 1998-2005 and historic data should be made only after evaluating this design change. Beginning with the May 2000 survey, the Migratory Bird Office elected to report Stratum 25 data in the Southern Manitoba Waterfowl Breeding Population Survey report since the southern Manitoba crew typically flies Stratum 25 and collects the data. Historic tables and graphs in this report have been adjusted to accommodate this change. An amphibian Cessna 206 was used to complete the survey. A crew member change occurred with the introduction of Barret Fortier, Mandalay National Wildlife Refuge, Houma, LA. Barret is an experienced wintering waterfowl observer and completed breeding population survey procedures training prior to the initiation of the survey. The 2005 effort was the 11<sup>th</sup> consecutive in this survey area for the pilot/observer.

**WEATHER AND HABITAT CONDITIONS:** Winter snowfall was plentiful through out most of northern Saskatchewan and Manitoba. A relatively early spring and ice break-up occurred across the region. As a result, rivers and streams were running high in May, often flooding vast areas of prime nesting habitat. Lakes were also high with water flooded into shrub vegetation surrounding many bays and miles of shoreline. Although break-up was early, the late spring tended to be chilly with lots of precipitation. Water levels continued to be high at the end of our survey on June 8. No forest fire activity was noted. Many small wetlands controlled by beaver dams looked ideal, however many more square miles of nesting cover along the major rivers in both Saskatchewan and Manitoba were flooded. Because of this flooding, a large portion of the area is rated fair with a smaller portion rated good.

**BREEDING POPULATION ESTIMATES:** Table 1 presents breeding waterfowl population data along with comparisons to 2004, the 1995 to 2004 average, and the 1955-2004 average. Appendix 1 presents earlier waterfowl breeding estimates.

**CONCLUSIONS:** Breeding waterfowl numbers were mixed in 2005. Mallard and most dabbling population values were down from 2004 and historic averages. The abundant snowfall that occurred over most of the region caused most streams and rivers to run high. Lakes associated with major rivers exhibited extensive shoreline flooding. How this widespread flooding will affect waterfowl production remains to be seen.

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 Saskatchewan and Northern Manitoba.

Species/Ponds	Stratum				2005 Total	2004 Total	10-Year Mean	Long-Term Mean	% Change From		
	21	22	23	24					2004	10-Year Mean	Long-Term Mean
<b>Ducks</b>											
<b>Dabblers</b>											
Mallard	57.2	85.4	127.9	141.7	412.3	723.4	746.6	810.2	-43.0%	-44.8%	-49.1%
Am. black duck	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	--	-100.0%	-100.0%
Gadwall	0.7	8.1	1.4	5.2	15.4	16.4	11.8	16.1	-5.8%	30.1%	-4.2%
Am. wigeon	16.8	36.2	25.9	62.4	141.3	140.9	149.8	201.8	0.3%	-5.7%	-30.0%
Am. green-winged teal	36.3	28.7	91.8	130.3	287.1	328.7	241.6	156.1	-12.7%	18.8%	83.9%
Blue-winged teal	3.0	37.3	21.1	6.8	68.3	38.7	96.9	173.8	76.2%	-29.6%	-60.7%
N. shoveler	0.0	12.8	0.0	6.6	19.3	18.2	22.0	22.8	6.2%	-12.2%	-15.5%
N. pintail	1.2	6.5	0.0	0.0	7.7	9.6	11.1	24.3	-20.3%	-30.7%	-68.4%
Subtotal	115.3	215.0	268.1	352.9	951.3	1275.9	1280.1	1406.7	-25.4%	-25.7%	-32.4%
<b>Divers</b>											
Redhead	0.7	6.1	0.7	0.0	7.5	6.9	6.6	11.7	7.9%	13.7%	-36.1%
Canvasback	0.6	25.9	0.0	0.0	26.5	30.9	15.7	25.6	-14.3%	69.0%	3.2%
Scaups	57.7	52.3	66.0	134.2	310.2	553.5	371.2	452.7	-44.0%	-16.4%	-31.5%
Ring-necked duck	73.8	47.0	143.2	177.5	441.5	374.3	313.7	251.9	18.0%	40.7%	75.3%
Goldeneyes	47.5	37.7	47.7	107.0	239.9	250.7	302.7	161.6	-4.3%	-20.8%	48.5%
Bufflehead	34.8	28.0	88.1	67.2	218.1	279.5	211.6	138.4	-22.0%	3.1%	57.6%
Ruddy Duck	3.4	8.7	0.0	0.0	12.1	0.0	4.9	5.8	--	144.7%	107.0%
Subtotal	218.6	205.6	345.7	485.8	1255.6	1495.8	1226.4	1047.7	-16.1%	2.4%	19.8%
<b>Miscellaneous</b>											
Long-tailed duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	-100.0%
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	--	-100.0%	-100.0%
Scoters	12.0	3.4	13.1	40.1	68.6	124.9	66.9	57.8	-45.1%	2.6%	18.7%
Mergansers	31.1	7.0	73.5	69.8	181.4	441.8	236.6	181.6	-58.9%	-23.3%	-0.1%
Subtotal	43.1	10.4	86.7	109.9	250.0	566.7	303.6	239.5	-55.9%	-17.6%	4.4%
<b>Total Ducks</b>	<b>376.9</b>	<b>430.9</b>	<b>700.5</b>	<b>948.6</b>	<b>2456.9</b>	<b>3338.4</b>	<b>2810.0</b>	<b>2693.9</b>	<b>-26.4%</b>	<b>-12.6%</b>	<b>-8.8%</b>
Canada Goose	17.6	17.2	16.3	183.5	234.6	215.7	177.9	98.8	8.8%	31.8%	137.4%
Am. coot	3.7	4.0	5.3	3.2	16.3	74.4	41.9	58.7	-78.1%	-61.1%	-72.2%

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

Species/Ponds	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Ducks										
Dabblers										
Mallard	572.4	724.4	504.1	904.6	757.9	388.1	430.4	422.2	396.3	511.6
Am. black duck	0.0	0.0	0.0	0.0	2.7	3.6	2.4	10.1	1.6	13.4
Gadwall	1.0	1.0	5.6	0.0	25.7	1.0	34.3	9.9	9.4	8.5
Am. wigeon	105.4	22.9	45.8	23.6	86.6	123.2	104.0	112.4	103.8	147.2
Am. green-winged teal	53.0	35.6	12.3	0.0	76.2	10.7	7.8	27.2	26.5	75.2
Blue-winged teal	13.8	35.9	33.5	143.4	92.6	40.8	13.8	170.8	169.9	305.4
N. shoveler	4.2	1.9	0.0	2.6	19.7	0.0	0.0	9.0	5.8	55.4
N. pintail	21.0	48.0	17.8	9.4	44.6	11.4	111.7	12.8	32.3	33.3
Subtotal	770.7	869.8	619.2	1083.6	1105.9	578.8	704.2	774.4	745.6	1150.0
Divers										
Redhead	30.4	0.0	1.0	0.0	0.0	21.1	6.2	11.4	12.8	30.2
Canvasback	22.3	22.5	0.0	2.3	45.9	13.3	43.4	5.9	42.7	154.4
Scaups	449.2	228.2	779.6	359.9	449.5	131.5	215.2	239.2	277.3	312.5
Ring-necked duck	113.2	46.3	0.0	0.0	2.5	23.1	36.7	90.4	193.1	140.6
Goldeneyes	57.3	1.2	6.4	191.1	489.5	219.8	136.9	126.6	62.3	39.3
Bufflehead	45.9	15.7	18.8	27.4	26.9	124.8	28.0	54.6	39.8	30.0
Ruddy Duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.8	9.9	0.1
Subtotal	718.3	313.8	805.9	580.7	1014.3	533.6	466.5	551.9	638.0	707.0
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	12.1	6.8	71.8	26.7	100.5	5.5	44.4	33.9	13.9	39.5
Mergansers	160.2	51.5	35.7	89.3	77.2	75.0	40.6	99.7	125.7	73.7
Subtotal	172.3	58.3	107.6	116.1	177.7	80.5	85.0	133.7	139.5	113.2
Total Ducks	1661.4	1241.9	1532.6	1780.4	2297.9	1192.9	1255.7	1459.9	1523.2	1970.3
Canada Goose	71.3	65.5	48.7	53.1	147.2	26.5	94.8	17.4	15.7	42.6
Am. coot	0.0	0.0	0.0	0.0	22.5	7.9	0.0	5.5	17.3	6.3

Species/Ponds	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Ducks										
Dabblers										
Mallard	719.7	453.0	1363.3	1221.0	1368.1	1834.2	869.6	724.6	849.6	540.0
Am. black duck	2.6	1.5	7.8	5.8	0.0	1.1	0.0	0.0	0.0	0.0
Gadwall	26.4	22.6	51.3	48.6	46.8	28.9	7.7	18.3	22.5	9.7
Am. wigeon	185.9	178.3	143.4	321.0	345.3	532.7	379.9	240.0	252.1	168.4
Am. green-winged teal	67.1	58.3	80.6	68.1	138.1	102.6	134.2	111.7	99.7	119.8
Blue-winged teal	88.6	65.3	170.9	613.5	392.2	421.7	49.9	78.4	83.6	39.6
N. shoveler	38.1	26.8	10.3	27.0	40.2	50.4	19.6	14.9	10.0	7.3
N. pintail	18.1	22.7	27.9	48.5	58.3	72.7	42.7	14.9	23.7	14.1
Subtotal	1146.6	828.5	1855.6	2353.4	2389.0	3044.3	1503.7	1202.8	1341.2	898.9
Divers										
Redhead	29.6	11.6	27.4	49.4	12.7	49.6	11.3	5.2	7.5	0.8
Canvasback	33.1	25.0	42.1	55.2	18.3	99.4	5.0	11.7	40.0	3.1
Scaups	388.7	232.9	395.7	481.9	537.6	693.3	357.6	652.4	521.4	628.0
Ring-necked duck	172.1	239.5	184.2	277.0	242.1	393.0	338.7	221.6	139.1	110.7
Goldeneyes	62.6	66.6	13.8	39.3	141.5	213.4	107.5	89.4	155.6	103.8
Bufflehead	30.7	42.3	57.5	150.0	107.0	122.6	172.7	148.7	111.9	128.1
Ruddy Duck	7.9	5.0	12.4	37.1	1.3	10.0	0.0	3.9	1.0	0.0
Subtotal	724.8	622.8	733.1	1089.8	1060.5	1581.4	992.8	1133.0	976.5	974.4
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	17.2	39.6	33.2	81.0	126.7	35.5	46.3	92.3	60.0	37.2
Mergansers	138.9	68.1	159.3	118.6	153.5	144.4	100.6	118.9	125.8	128.8
Subtotal	156.0	107.7	192.5	199.6	280.2	179.9	146.9	211.2	185.7	166.0
Total Ducks	2027.4	1559.0	2781.2	3642.8	3729.6	4805.6	2643.5	2547.0	2503.4	2039.3
Canada Goose	96.3	44.6	77.8	69.7	119.7	48.2	57.9	48.7	29.6	29.1
Am. coot	15.5	8.2	29.3	193.7	20.5	47.9	17.3	13.6	41.7	7.8

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

Species/Ponds	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Ducks										
Dabblers										
Mallard	628.2	1074.0	891.0	1406.0	1282.0	968.7	1074.3	821.5	700.9	539.7
Am. black duck	0.0	0.6	6.3	2.6	0.7	1.1	1.0	0.0	0.5	0.0
Gadwall	4.5	8.9	27.0	9.4	4.4	17.8	50.9	13.0	15.0	8.1
Am. wigeon	172.1	247.8	246.7	337.0	272.3	308.4	313.2	232.9	278.9	242.8
Am. green-winged teal	104.4	172.5	165.8	383.7	296.3	393.3	166.7	137.5	174.7	127.0
Blue-winged teal	119.3	311.4	293.4	291.3	111.2	253.6	376.3	160.1	65.5	148.5
N. shoveler	25.3	10.3	56.5	17.9	14.5	27.9	40.2	16.6	18.1	17.8
N. pintail	40.5	35.2	38.9	58.3	25.7	21.6	41.6	16.3	15.2	14.7
Subtotal	1094.3	1860.7	1725.6	2506.2	2007.1	1992.4	2064.0	1398.0	1268.9	1098.7
Divers										
Redhead	3.1	17.0	8.8	7.0	7.6	10.0	27.0	8.0	22.9	7.7
Canvasback	16.1	22.9	28.8	12.4	8.6	24.3	44.9	19.8	13.5	16.5
Scaups	584.6	435.6	470.4	548.8	889.9	435.8	404.1	459.3	738.4	430.5
Ring-necked duck	207.2	279.6	187.2	266.6	167.1	332.8	445.2	283.3	284.1	352.2
Goldeneyes	81.0	242.5	182.5	85.6	66.1	48.8	331.8	110.0	163.6	105.5
Bufflehead	109.2	203.8	147.5	190.2	189.4	148.0	177.5	121.9	221.3	108.6
Ruddy Duck	0.0	4.3	0.7	4.9	4.0	3.4	27.1	1.5	17.1	0.0
Subtotal	1001.1	1205.7	1026.0	1115.6	1332.7	1003.1	1457.6	1003.8	1460.9	1021.0
Miscellaneous										
Oldsquaw	0.0	0.7	1.0	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	52.6	78.6	89.2	88.3	78.9	108.9	86.4	119.2	198.0	64.0
Mergansers	262.1	114.3	181.3	296.3	152.3	282.0	263.8	147.5	302.6	273.0
Subtotal	314.7	193.6	271.6	384.6	231.2	390.9	350.2	266.7	500.6	337.0
Total Ducks	2410.1	3260.1	3023.2	4006.3	3571.0	3386.4	3871.8	2668.5	3230.4	2456.6
Canada Goose	31.1	66.3	50.5	168.1	116.4	80.3	96.8	52.6	93.6	64.9
Am. coot	21.0	50.2	228.5	55.9	12.6	324.3	526.1	33.3	24.5	94.8
Species/Ponds	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Ducks										
Dabblers										
Mallard	509.6	413.9	673.5	913.1	839.1	853.9	947.9	1016.1	928.7	1005.7
Am. black duck	0.4	0.5	0.5	0.0	0.5	0.0	0.9	2.9	2.0	1.1
Gadwall	3.3	9.7	9.2	22.6	8.6	8.6	34.9	7.7	18.4	24.1
Am. wigeon	180.8	142.2	183.8	264.1	287.2	254.5	247.8	202.4	209.7	344.3
Am. green-winged teal	84.9	137.9	199.1	198.6	119.9	170.6	192.3	325.9	320.9	214.1
Blue-winged teal	236.1	65.9	127.0	485.6	281.1	170.4	357.0	374.4	338.0	132.2
N. shoveler	10.9	5.4	20.7	65.3	16.3	33.2	25.1	95.4	25.2	36.0
N. pintail	4.6	13.7	14.9	12.9	7.8	10.7	25.5	9.1	3.8	8.6
Subtotal	1030.5	789.3	1228.6	1962.1	1560.4	1502.0	1831.5	2033.8	1846.8	1766.1
Divers										
Redhead	8.1	12.0	10.0	14.1	2.1	5.7	1.4	7.7	1.1	19.6
Canvasback	14.1	4.6	7.5	31.2	14.6	23.3	16.1	94.7	16.1	9.5
Scaups	696.1	386.2	404.8	419.0	327.1	509.8	981.1	713.3	438.1	318.3
Ring-necked duck	341.5	288.5	445.0	291.2	181.0	278.3	332.6	834.5	373.0	323.1
Goldeneyes	66.4	236.8	145.7	39.6	40.9	57.1	104.4	328.7	178.4	112.6
Bufflehead	102.3	116.8	103.9	86.9	131.4	174.4	171.7	365.8	286.4	163.1
Ruddy Duck	0.7	5.2	5.1	2.8	5.7	28.8	10.7	7.2	0.0	0.0
Subtotal	1229.2	1049.9	1122.0	884.8	702.9	1077.4	1618.0	2351.9	1293.1	946.1
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	47.8	21.6	52.3	25.1	19.8	23.2	44.0	17.6	34.1	46.6
Mergansers	240.4	246.2	287.3	224.1	176.2	173.1	317.2	180.3	186.4	323.8
Subtotal	288.2	267.8	339.5	249.2	196.0	196.3	361.2	197.9	220.5	370.3
Total Ducks	2548.0	2107.1	2690.2	3096.2	2459.3	2775.7	3810.8	4583.7	3360.3	3082.6
Canada Goose	90.7	90.8	112.0	126.3	115.1	127.6	102.1	110.5	133.9	127.1
Am. coot	20.1	16.9	169.1	158.8	129.9	33.2	95.6	17.1	25.7	23.5

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

Species/Ponds	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>Ducks</b>										
<b>Dabblers</b>										
Mallard	1008.6	570.3	843.6	722.8	940.6	800.3	471.1	774.5	610.4	723.4
Am. black duck	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0
Gadwall	24.6	4.3	15.1	4.7	7.4	6.0	6.9	14.1	19.0	16.4
Am. wigeon	156.0	144.1	163.3	157.7	173.7	114.0	84.8	175.1	188.0	140.9
Am. green-winged teal	275.7	193.6	284.4	228.6	255.8	158.7	165.2	257.7	267.1	328.7
Blue-winged teal	77.7	53.9	39.6	103.9	114.3	80.0	111.7	201.2	148.4	38.7
N. shoveler	53.5	25.0	32.7	19.6	18.1	18.1	11.9	19.1	3.7	18.2
N. pintail	25.9	2.8	22.0	7.8	7.5	14.8	6.3	9.0	5.2	9.6
Subtotal	1621.9	994.1	1400.7	1245.1	1521.1	1191.8	857.9	1450.7	1241.7	1275.9
<b>Divers</b>										
Redhead	8.5	3.8	2.5	18.5	0.0	2.8	0.8	6.7	15.1	6.9
Canvasback	13.1	17.2	23.2	15.9	17.9	5.5	13.5	14.5	5.0	30.9
Scaups	391.3	390.6	488.9	204.9	494.9	269.7	239.0	354.5	324.6	553.5
Ring-necked duck	276.5	191.0	274.7	280.6	383.2	224.8	285.1	527.8	319.3	374.3
Goldeneyes	335.9	264.7	338.2	271.4	251.5	234.1	446.3	368.7	265.2	250.7
Bufflehead	156.9	135.5	200.0	211.7	234.6	224.7	191.1	236.0	246.5	279.5
Ruddy Duck	5.0	2.8	9.7	0.0	3.8	0.0	5.1	7.1	15.7	0.0
Subtotal	1187.1	1005.6	1337.3	1003.0	1386.0	961.4	1180.9	1515.3	1191.4	1495.8
<b>Miscellaneous</b>										
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	0.9	0.0	0.0	0.0
Scoters	63.4	40.6	118.4	55.5	68.4	55.3	29.0	55.7	57.4	124.9
Mergansers	257.3	169.6	241.0	179.1	192.9	200.0	172.3	308.5	203.5	441.8
Subtotal	320.7	210.2	359.4	234.6	261.3	255.3	202.2	364.2	260.8	566.7
Total Ducks	3129.7	2209.9	3097.4	2482.7	3168.4	2408.6	2241.0	3330.2	2694.0	3338.4
Canada Goose	136.1	169.8	109.6	143.3	286.6	168.6	165.9	213.6	170.2	215.7
Am. coot	17.6	11.8	13.6	29.6	38.0	83.9	43.0	101.5	6.1	74.4

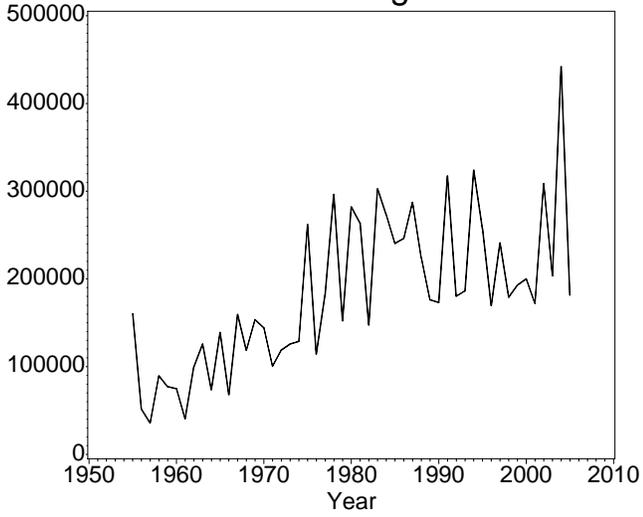
Species/Ponds	2005
<b>Ducks</b>	
<b>Dabblers</b>	
Mallard	412.3
Am. black duck	0.0
Gadwall	15.4
Am. wigeon	141.3
Am. green-winged teal	287.1
Blue-winged teal	68.3
N. shoveler	19.3
N. pintail	7.7
Subtotal	951.3
<b>Divers</b>	
Redhead	7.5
Canvasback	26.5
Scaups	310.2
Ring-necked duck	441.5
Goldeneyes	239.9
Bufflehead	218.1
Ruddy Duck	12.1
Subtotal	1255.6
<b>Miscellaneous</b>	
Oldsquaw	0.0
Eiders	0.0
Scoters	68.6
Mergansers	181.4
Subtotal	250.0
Total Ducks	2456.9
Canada Goose	234.6
Am. coot	16.3

Table 2. Northern Saskatchewan, Northern Manitoba stratum data sheet, May 2005.

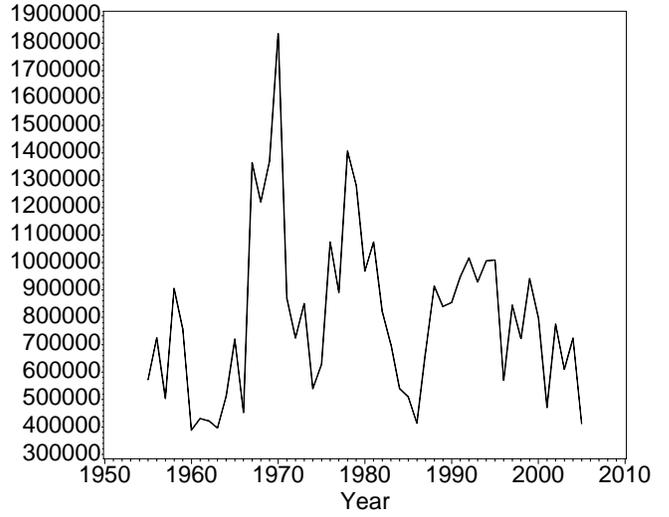
	Strata				Total
	21	22	23	24	
Square miles in stratum	44,922	20,278	68,320	82,966	216,486
Square miles in sample	418.5	166.5	301.5	513.0	1,399.5
Linear miles in sample	1,674	666	1,206	2,052	5,598
Number of transects in sample	11	6	9	8	34
Number of segments in sample	93	37	67	114	311
Expansion factor	107.341	121.790	226.600	161.727	

Current Year Design:	Strata				Total
	21	22	23	24	
Square mile in stratum	44,922	20,278	68,320	82,966	216,486
Square miles in sample	391.5	166.5	301.5	486.0	1,345.5
Linear miles in sample	1,566	666	1,206	1,944	5,382
Number of transects in sample	10	6	9	8	33
Number of segments in sample	87	37	67	108	299
Expansion factor	114.75	121.79	226.60	170.71	

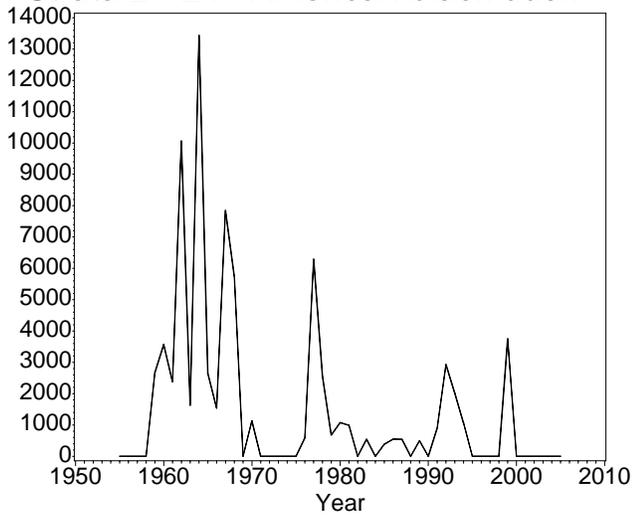
**Strata 21-24 Mergansers**



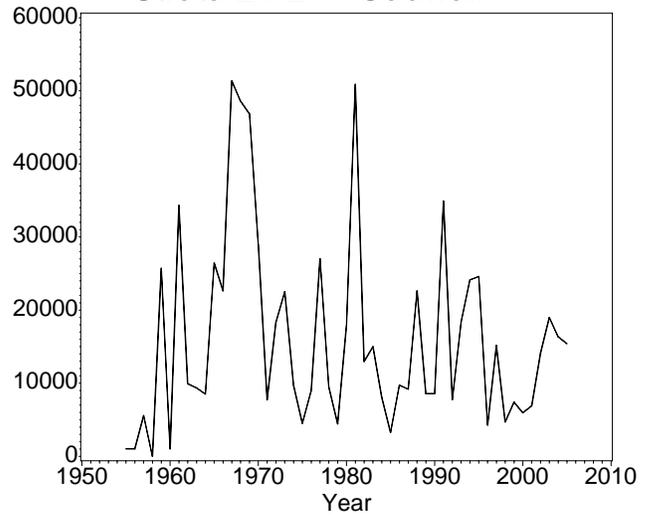
**Strata 21-24 Mallard**



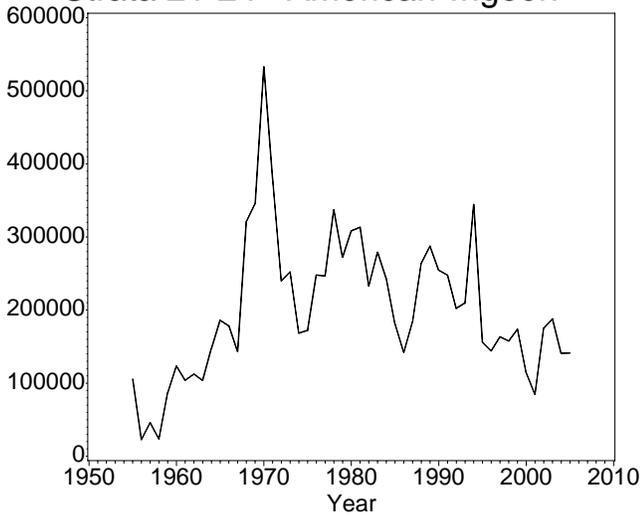
**Strata 21-24 American black duck**



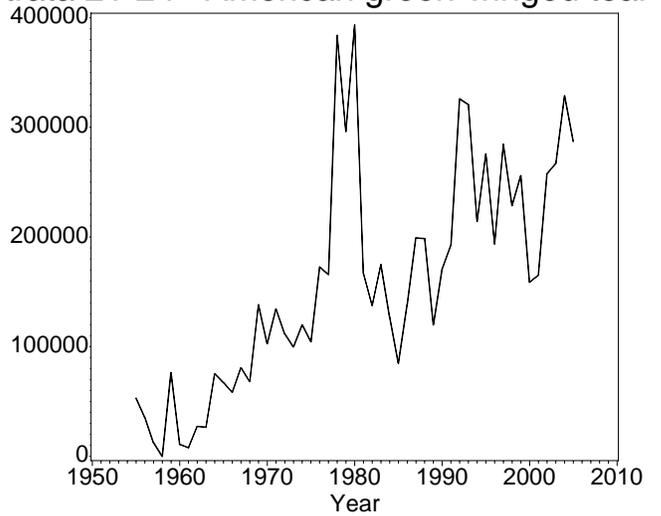
**Strata 21-24 Gadwall**



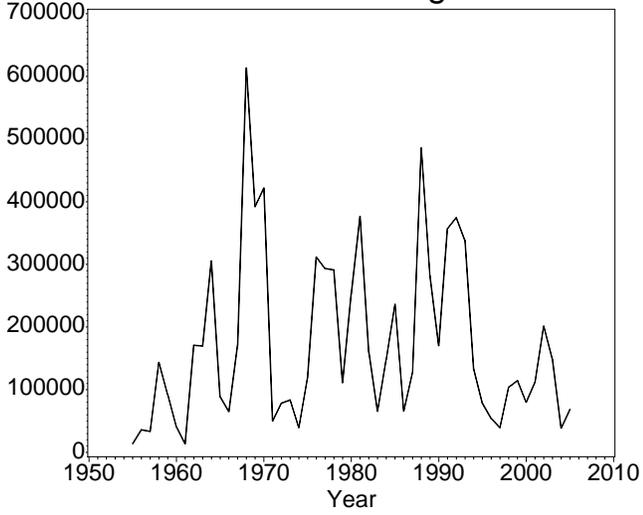
**Strata 21-24 American wigeon**



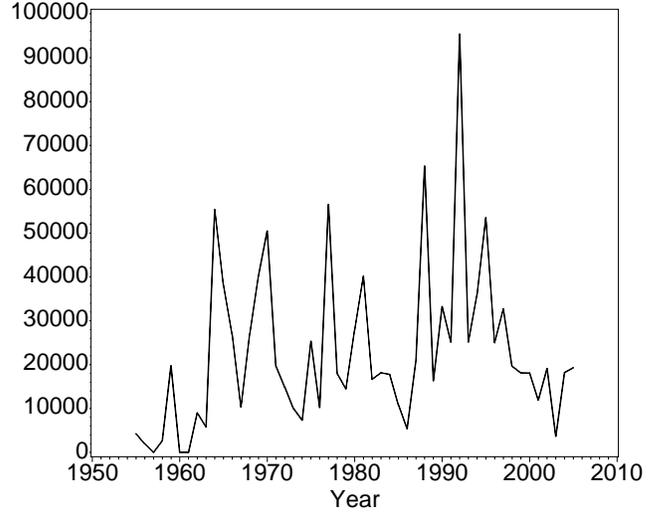
**Strata 21-24 American green-winged teal**



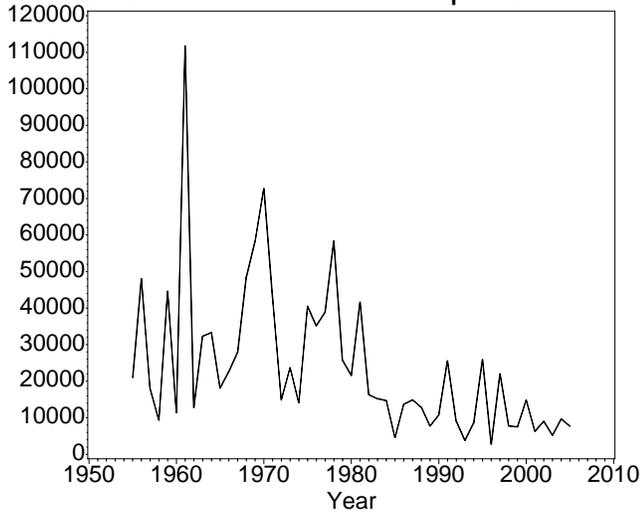
**Strata 21-24 Blue-winged teal**



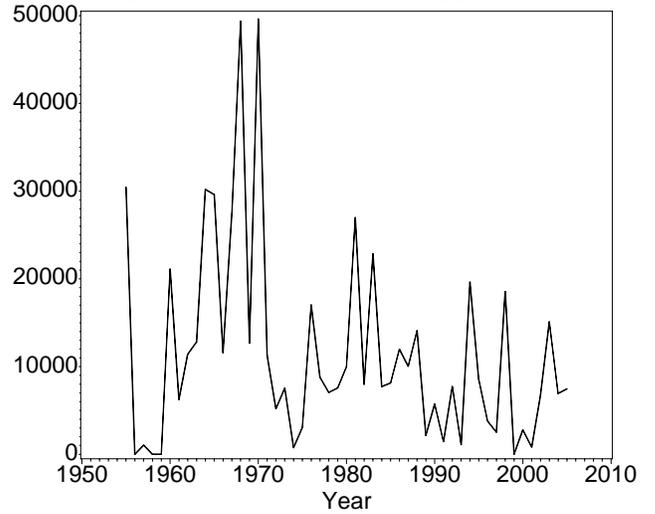
**Strata 21-24 Northern shoveler**



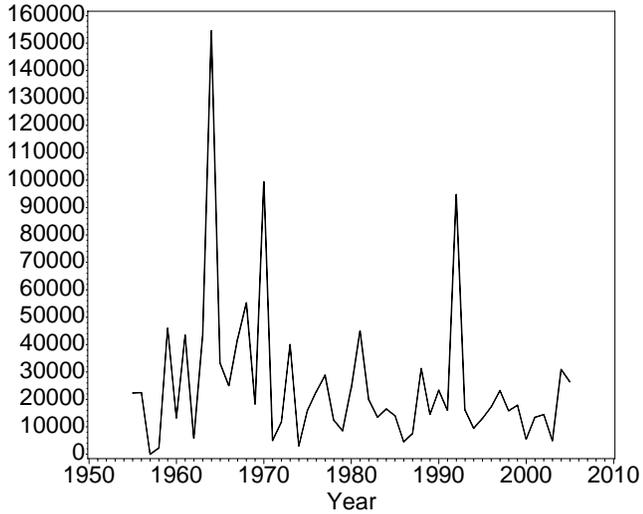
**Strata 21-24 Northern pintail**



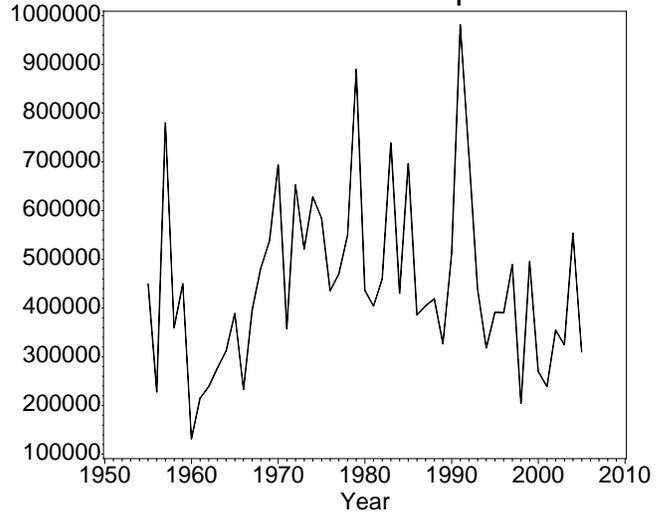
**Strata 21-24 Redhead**



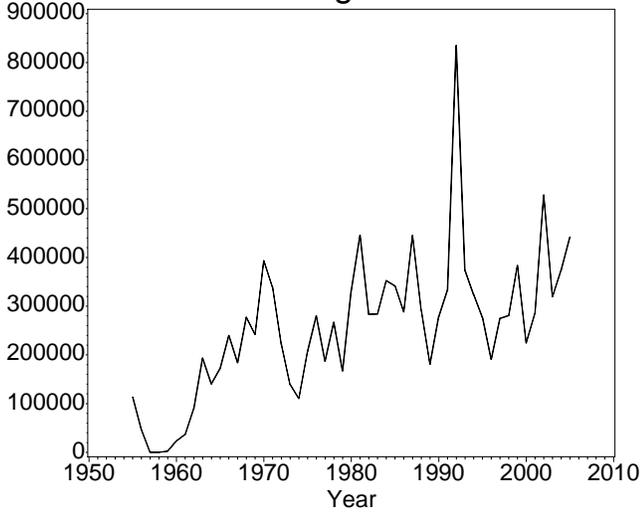
**Strata 21-24 Canvasback**



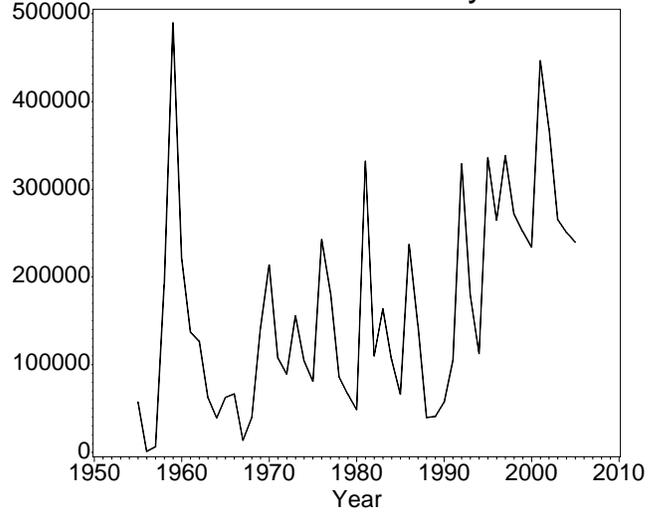
**Strata 21-24 Scaups**



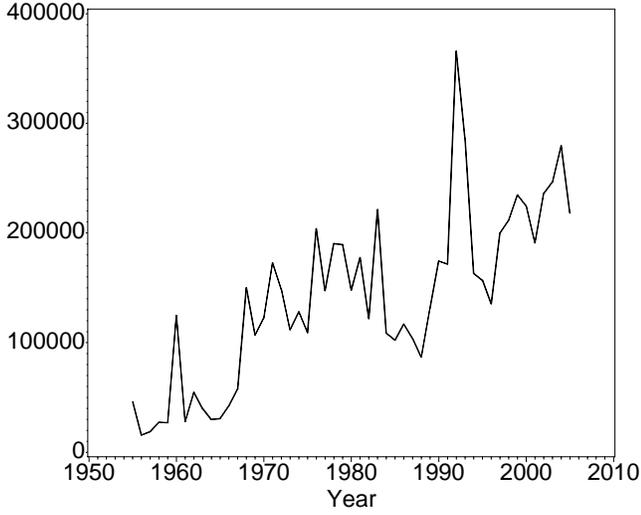
Strata 21-24 Ring-necked duck



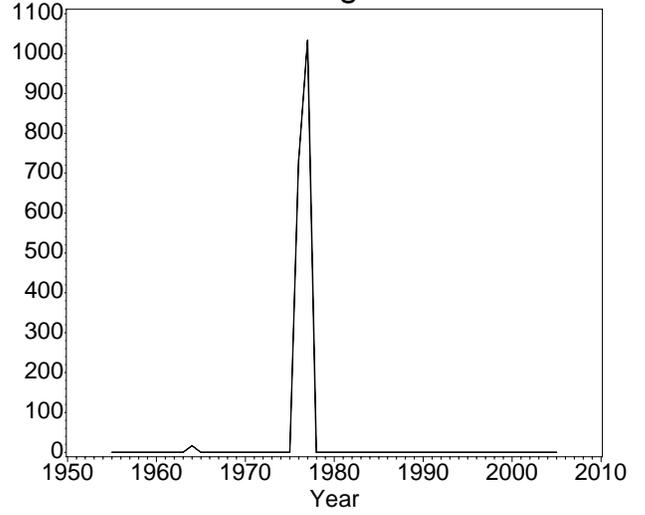
Strata 21-24 Goldeneyes



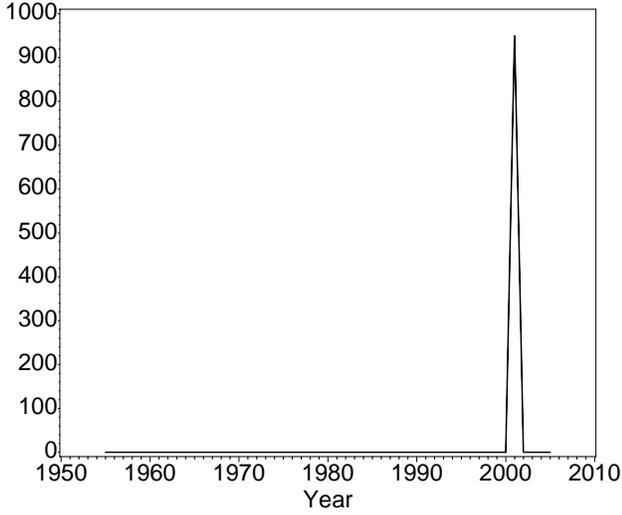
Strata 21-24 Bufflehead



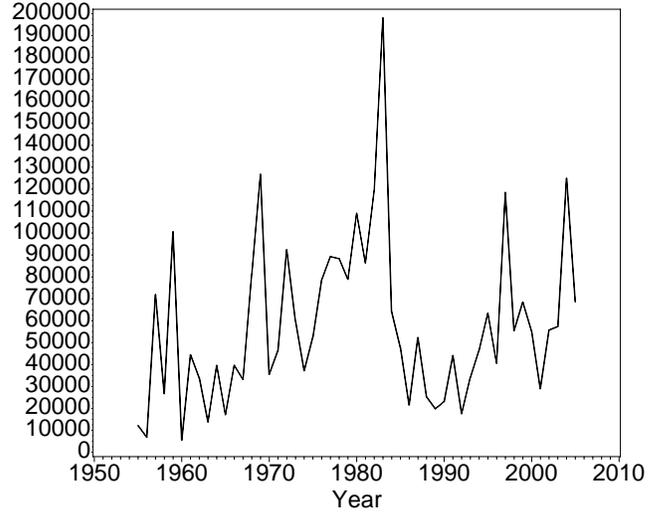
Strata 21-24 Long-tailed duck



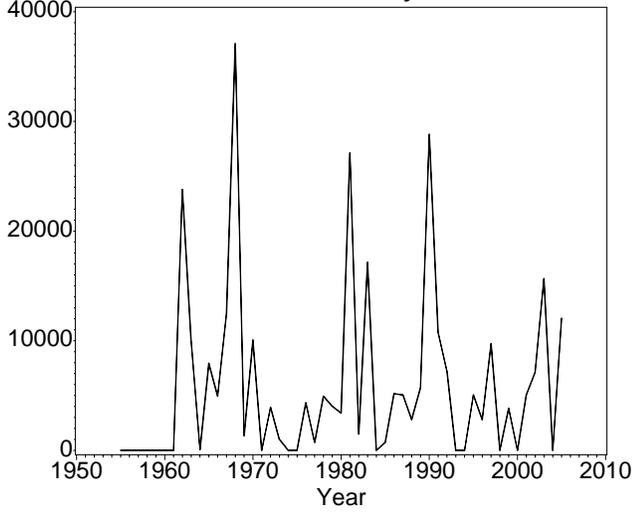
Strata 21-24 Eiders



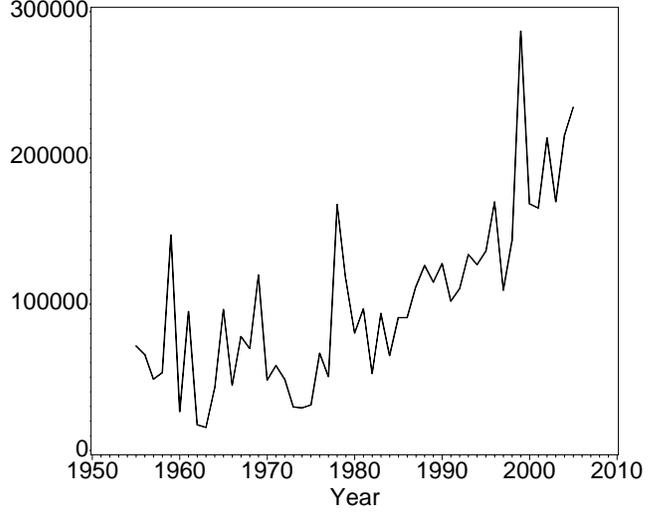
Strata 21-24 Scoters



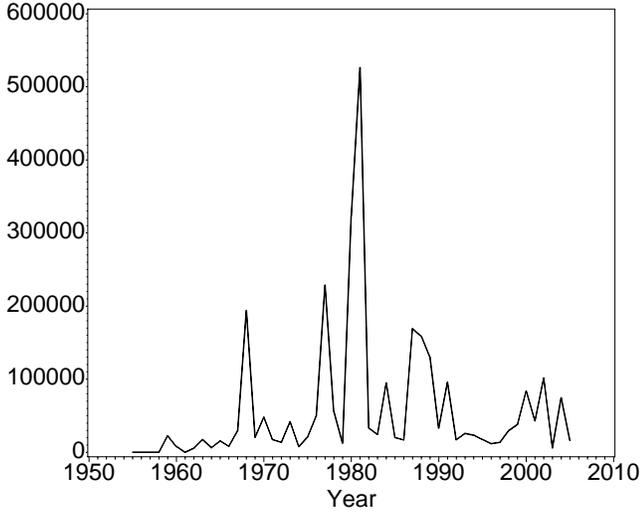
Strata 21-24 Ruddy Duck



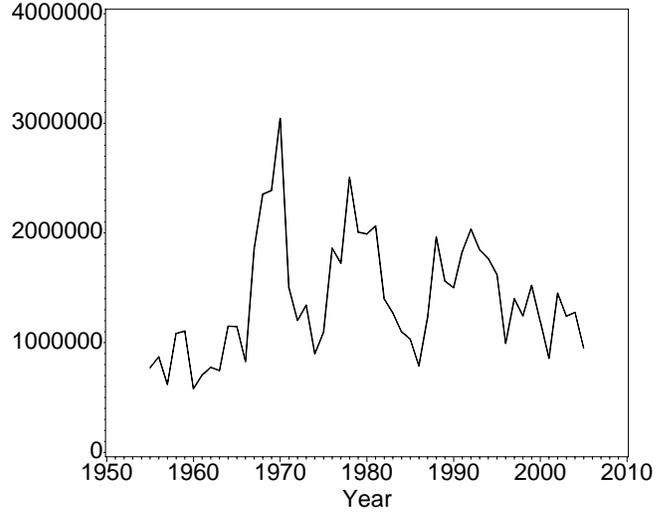
Strata 21-24 Canada Goose



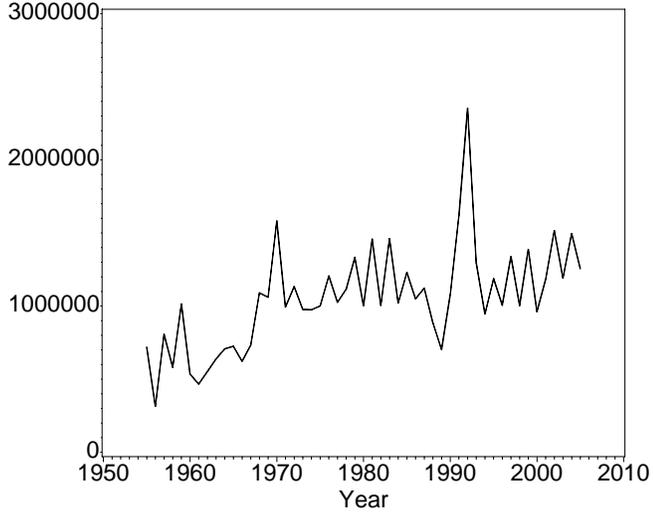
Strata 21-24 American coot



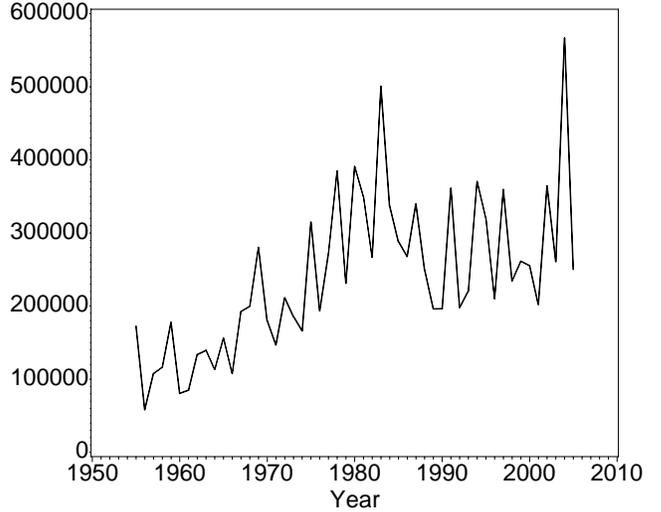
Strata 21-24 Dabblers



Strata 21-24 Divers



Strata 21-24 Miscellaneous



Strata 21-24 Total Ducks

