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Status of Wildlife Populations,
Fall 1996 and 1983-1995 Hunting
and Trapping Harvest Statistics



20th
Anniversary

Section of Wildlife
Minnesota Department of Natural Resources
St. Paul, Minnesota

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**Status of Wildlife Populations,
Fall 1996 and 1983-1995 Hunting
and Trapping Harvest Statistics**

**compiled by
Margaret H. Dexter**

**Section of Wildlife
Minnesota Department of Natural Resources
St. Paul, Minnesota**

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Note: Data in this report may change as a result of future verification and more comprehensive analysis.

Status of Wildlife Populations, Fall 1996

and

1983-95 Hunting and Trapping Harvest Statistics

This is the 20th year that the Wildlife Populations and Research Unit has compiled this booklet; it is primarily an administrative document intended for DNR personnel. (Since 1984 we have also generated a companion volume containing annual summaries of activities and findings from each ongoing research project in the Unit).

Most of the field work associated with collection of census and survey data for farmland and forest wildlife is performed by wildlife biologists and managers (conservation officers also participate in August roadside counts). The Farmland and Forest Wildlife Population and Research groups coordinate these activities, analyze and interpret data, and prepare recommendations for harvest regulations and season setting.

Much of the census and survey work for wetland species is done by personnel in the Wetland Wildlife Populations and Research Group.

Most of the hunting and trapping harvest estimates are calculated and summarized by St. Paul central office personnel.

This year's edition features some new tables and graphs related specifically to Minnesota's waterfowl population and harvest estimates. There is also a new section that lists the chronology of Minnesota's Waterfowl Regulations from 1915 through 1996.

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FARMLAND WILDLIFE POPULATIONS
Wildlife Research Group
Rt 1, Box 181
Madelia, MN 56062
(507) 642-8478

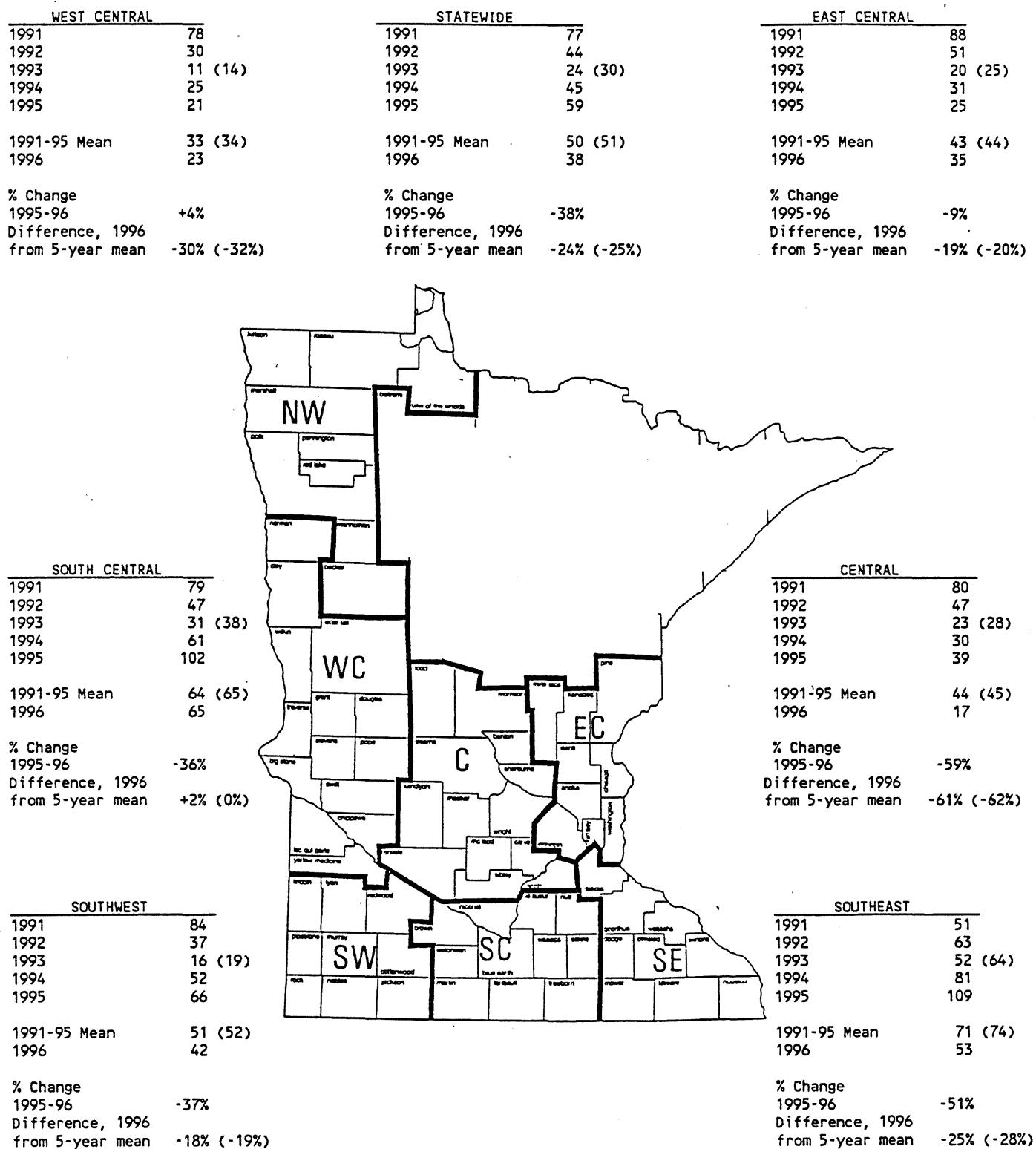


Figure 1. Ring-necked pheasants seen per 100 miles of August roadside count route, 1991-96, and percent change 1995-96 for routes surveyed both years. Numbers in parentheses are adjusted for the correction to the 1993 pheasant index.

Table 1. County, regional, and statewide August roadside count indices for ring-necked pheasants in Minnesota, 1991-1996.

Region and County	Miles surveyed 1996	Pheasants seen per 100 miles driven						Percent change ^a 1995-96	
		1991	1992	1993	1994	1995	1996		
		1991-95 Mean							
West Central	906	78.0	29.5	11.0	24.8	21.4	22.9	32.9	+4.3
Big Stone	78	125	19	17	3	19	0		
Chippewa	50	80	58	10	44	14	58		
Clay	76	13	12	1	0	25	0		
Douglas	51	32	52	0	0	2	8		
Grant	25	18	30	24	0	16	0		
Lac Qui Parle	74	252	45	36	116	70	98		
Norman	50	0	0	2	0	0	0		
Otter Tail	50	22	10	0	2	0	10		
Pope	75	156	57	16	88	17	4		
Stevens	76	128	36	3	19	28	23		
Swift	75	108	79	33	53	60	19		
Traverse	75	31	9	0	2	1	0		
Wilkin	76	9	3	0	0	0	0		
Yellow Medicine	75	39	4	5	16	21	81		
Central	751	80.0	46.6	23.1	29.9	39.5	17.3	43.8	-58.9
Benton	50	36	56	8	20	44	0		
Carver	51	38	28	54	40	52	52		
Kandiyohi	75	207	123	44	44	83	55		
McLeod	51	74	52	2	6	76	17		
Meeker	75	272	88	33	51	120	37		
Morrison	50	68	0	38	44	2	6		
Renville	50	0	0	0	0	14	26		
Scott	48	28	62	28	2	90	19		
Sherburne	50	42	12	2	0	0	0		
Sibley	75	79	49	0	58	27	0		
Stearns	76	39	20	41	41	12	1		
Todd	50	88	12	8	0	0	0		
Wright	50	28	70	20	42	10	0		
East Central	431	88.2	51.3	20.2	31.3	25.3	35.4	43.3	-8.6 ^b
Anoka	51	76	6	0	6	0	0		
Chisago	76	164	136	77	59	24	116		
Hennepin	26	0	36	4	0	88	77		
Isanti	77	105	5	1	20	5	9		
Kanabec	50	8	2	6	30	18	0		
Mille Lacs	50	190	104	34	28	22	32		
Pine	51	66	36	12	28	60	28		
Washington	50	6	58	0	56	26	16		

Table 1. Continued.

Region and County	Miles surveyed	Pheasants seen per 100 miles driven						Percent change ^a 1995-96	
		1991	1992	1993	1994	1995	1996		
Southwest	478	83.6	37.5	15.6	51.8	65.9	41.6	50.9	-36.8
Cottonwood	51	58	26	24	12	172	147		
Jackson	52	22	12	4	98	92	38		
Lincoln	50	390	174	20	86	130	46		
Lyon	50	48	0	0	32	20	16		
Murray	50	10	32	44	4	38	10		
Nobles	75	47	31	7	53	52	32		
Pipestone	50	86	20	38	90	32	52		
Redwood	50	8	32	2	40	20	22		
Rock	50	102	14	6	50	44	16		
South Central	814	79.0	47.2	30.8	61.3	101.9	65.0	64.0	-36.2
Blue Earth	77	--	11	3	51	51	126		
Brown	75	47	5	4	60	68	49		
Faribault	76	7	--	1	12	72	48		
Freeborn	75	52	23	45	73	89	92		
LeSueur	75	323	224	111	113	259	147		
Martin	77	19	19	16	44	65	50		
Nicollet	77	37	5	1	9	20	15		
Rice	76	127	76	73	99	211	59		
Steele	54	116	72	34	74	110	38		
Waseca	77	36	43	49	112	143	52		
Watonwan	75	25	3	1	31	36	29		
Southeast	504	51.0	63.4	52.2	81.2	109.2	53.1	71.4	-51.4
Dakota	50	6	56	10	12	62	84		
Dodge	50	34	94	18	84	204	110		
Fillmore	51	48	134	162	134	184	15		
Goodhue	51	16	22	0	20	46	2		
Houston	50	52	14	6	60	62	22		
Mower	75	59	25	15	91	76	56		
Olmsted	77	131	151	180	228	182	85		
Wabasha	50	70	28	34	22	148	86		
Winona	50	0	22	0	2	0	0		
Statewide	3884	76.9	44.2	24.3	44.7	58.9	38.2	49.8	-38.1

^a Percent change for 1995-96 calculated only for routes surveyed both years.

^b Completion of a Chisago County route in 1996, which was not completed in 1995, caused the increase in the East Central index from 1995 to 1996. However, the percent change is calculated only for routes completed both years, hence, the decrease in the index from 1995 to 1996.

Table 2. Statewide pheasant population parameters calculated from August roadside count results, 1991-96.

Population Parameter	1991	1992	1993	1994	1995	1996	1991-95 Mean	Percent change ^a 1995-96
Cocks/100 Miles	5.9	3.8	2.6	3.8	4.5	3.0	4.1	-34
Hens/100 Miles	10.6	6.5	2.6	5.5	7.7	4.9	6.6	-38
Broods/100 Miles	12.1	6.3	3.3	6.5	8.6	5.5	7.4	-38
Mean Brood Size	5.0	5.4	5.9	5.5	5.5	5.5	5.5	0
Broods/100 Hens	114.6	98.0	126.0	118.0	111.0	112.0	113.5	0
Median Hatch Date	Jun 2	Jun 8	Jun 4	Jun 6	Jun 7	Jun 7	Jun 5 ^b	

^a Percent change for 1995-96 calculated only for routes surveyed both years.

^b Median hatch date, 1991-95.

Table 3. Regional and statewide August roadside count indices for gray (Hungarian) partridge, 1991-96.

Agricultural Region	Miles Surveyed 1996	Partridge seen per 100 miles driven						Percent change ^a 1995-96
		1991	1992	1993	1994	1995	1996	
Northwest	481	15.3	1.7	0.0	0.2	0.0	0.0	3.4
West Central	906	15.5	6.3	0.8	2.2	2.1	1.0	5.4
Central	751	11.6	5.5	1.9	7.4	2.8	0.1	5.8
East Central	431	0.7	0.0	0.0	0.0	0.0	0.0	0.1
Southwest	478	66.5	11.8	3.2	36.0	23.5	7.9	28.2
South Central	814	23.9	10.1	1.0	22.1	24.5	15.4	16.3
Southeast	504	18.4	10.4	11.8	23.4	15.0	22.5	15.8
Statewide	4365	20.9	6.7	2.4	12.5	9.8	6.5	10.5
								-33

^a Percent change 1995-96 for routes surveyed both years only.

Table 4. Statewide gray (Hungarian) partridge population parameters calculated from August roadside count results, 1991-96.

Population Parameter	1991	1992	1993	1994	1995	1996	1991-95	Percent change ^a 1995-96
							Mean	
Adults/100 Miles	8.0	2.4	0.8	2.8	2.7	1.6	3.3	-40
Broods/100 Miles	2.1	0.7	0.1	1.2	0.9	0.5	1.0	-44
Mean Brood Size	6.1	6.0	11.2	7.9	7.9	9.8	7.8	+24
Broods/100 Adults	26.1	30.1	16.2	43.1	33.1	30.6	29.7	-7
Median Hatch Date	Jun 23	Jun 23	Jun 29	Jun 22	Jun 20	Jun 16	Jun 25 ^b	

^a Percent change 1995-96 for routes surveyed both years only.

^b Median hatch date, 1991-95.

Table 5. August roadside count indices for selected farmland wildlife species and percent change 1995-96 by agricultural region.

Agricultural Region	Miles Surveyed 1996	Animals seen per 100 miles driven											
		Eastern Cottontail			White-tailed Jackrabbit			Mourning dove			White-tailed deer		
		1995	1996	Percent change ^a	1995	1996	Percent change ^a	1995	1996	Percent change ^a	1995	1996	Percent change ^a
Northwest	481	0.6	0.2	-65	0.2	0.8	+285	85.2	70.1	-18	27.4	18.9	-31
West Central	906	2.3	1.4	-39	0.4	0.8	+75	242.2	425.3	+72	14.0	12.8	-9
Central	751	3.7	2.9	-22	0.3	0.1	-67	169.1	138.0	-12	4.7	4.8	0
East Central	431	6.7	7.5	+3	0.0	0.0	0	74.5	75.8	-1	8.3	11.9	+24
Southwest	478	4.2	6.6	+58	0.2	0.2	0	112.9	141.4	+25	9.2	10.9	+18
South Central	814	6.5	10.5	+61	1.0	1.0	-1	197.5	181.4	-8	3.6	4.3	+18
Southeast	504	8.1	6.5	-20	0.4	0.2	-50	234.5	232.7	-1	10.8	20.3	+89
Statewide ^b	4365	4.4	5.0	+10	0.4	0.5	+36	173.4	203.6	+19	10.5	11.1	+4

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^a Percent change 1995-96 calculated only for routes surveyed both years.

^b Statewide means include the Northwest agricultural region.

Table 6. Statewide August roadside count indices for selected farmland wildlife species, 1992-1996.

Species	Animals seen per 100 miles driven					Percent change ^a 1995-96
	1992	1993	1994	1995	1996	
Ring-necked pheasant ^b	44.2	24.3	44.7	58.9	38.2	-38
Gray (Hungarian) partridge	6.7	2.4	12.5	9.8	6.5	-33
Mourning dove	222.2	133.5	167.1	173.4	203.6	+19
Eastern cottontail	4.7	3.8	3.4	4.4	5.0	+10
White-tailed jack rabbit	0.6	0.2	0.4	0.4	0.5	+36
White-tailed deer	9.5	9.2	10.3	10.5	11.1	+4
Sharp-tailed grouse	0.09	0.02	0.00	0.02	0.00	-100
Greater prairie-chicken	0.00	0.00	0.00	0.00	0.00	0
Sandhill crane	3.19	2.58	4.71	4.63	2.67	-43
Badger	0.00	0.00	0.02	0.02	0.02	-3
Gray and fox squirrel	0.93	1.30	0.83	1.34	0.39	-71
Gray and red fox	0.67	0.43	0.67	0.28	0.51	+79
Striped and spotted skunk	0.09	0.16	0.25	0.25	0.18	-21

^a Percent change 1995-96 calculated only for routes surveyed both years.

^b Ring-necked pheasant means do not include the Northwest agricultural region.

Table 7. Animals seen per 100 miles of August roadside count for 5 species in Minnesota, statewide, 1955-1996.^a

Year	Animals seen per 100 miles driven				
	Ring-necked Pheasant	Gray Partridge	Eastern Cottontail	White-tailed Jackrabbit	Mourning Dove
1955	368.1	9.9	17.8	7.0	324.5
1956	290.0	6.6	13.0	5.6	422.6
1957	272.6	5.5	11.2	6.3	274.5
1958	409.1	8.7	14.8	8.5	326.0
1959	266.8	9.3	6.2	4.0	311.4
1960	276.3	4.4	9.8	3.6	300.8
1961	336.0	4.5	9.4	3.5	392.4
1962	197.4	5.8	7.9	2.7	334.6
1963	248.1	5.1	7.4	3.6	396.5
1964	149.8	1.6	5.4	2.0	375.9
1965	77.2	3.6	4.4	1.6	271.6
1966	105.0	4.9	5.6	1.8	299.6
1967	61.9	4.6	5.5	2.8	NC ^b
1968	71.4	3.5	5.8	1.9	293.5
1969	39.2	3.7	5.1	2.7	245.6
1970	69.6	9.1	4.9	1.8	348.3
1971	66.4	10.8	3.7	2.1	415.4
1972	47.3	7.5	3.9	1.9	349.8
1973	63.3	19.1	5.8	1.9	428.2
1974	76.3	12.0	6.2	1.5	380.8
1975	34.8	14.6	3.3	1.3	405.8
1976	44.8	17.6	5.2	2.2	407.4
1977	85.0	32.1	6.8	2.4	409.8
1978	79.0	37.0	8.9	3.8	344.5
1979	54.2	33.9	7.3	3.7	347.9
1980	104.9	44.6	6.4	2.8	352.2
1981	133.5	42.9	10.2	2.5	347.6
1982	60.2	24.5 (22.1)	5.6 (5.2)	1.8 (1.7)	325.0 (313.6)
1983	56.2	24.4 (23.4)	7.2 (6.7)	1.0 (1.0)	298.9 (286.6)
1984	28.6	21.3 (20.0)	3.3 (2.9)	0.9 (0.8)	292.0 (279.2)
1985	34.6	40.7 (37.0)	4.8 (4.4)	1.3 (1.2)	273.7 (270.1)
1986	21.2	22.4 (20.6)	4.4 (4.0)	0.4 (0.5)	207.0 (204.1)
1987	50.0	37.1 (33.4)	7.7 (6.9)	0.7 (0.7)	257.1 (252.4)
1988	34.8	41.5 (37.3)	4.3 (4.0)	0.7 (0.7)	252.3 (245.0)
1989	39.8	41.5 (39.7)	5.9 (5.4)	1.7 (1.6)	297.9 (283.4)
1990	57.5	37.1 (35.2)	7.3 (6.7)	1.4 (1.4)	266.0 (255.6)
1991	76.9	21.5 (20.9)	5.7 (5.3)	0.7 (0.8)	252.8 (248.3)
1992	44.2	7.4 (6.7)	5.2 (4.7)	0.6 (0.6)	224.7 (222.2)
1993	24.3	2.7 (2.4)	4.2 (3.8)	0.2 (0.2)	139.8 (133.5)
1994	44.7	14.0 (12.5)	3.8 (3.4)	0.4 (0.4)	179.7 (167.1)
1995	58.9	11.1 (9.8)	4.9 (4.4)	0.4 (0.4)	184.1 (173.4)
1996	38.2	7.4 (6.5)	5.6 (5.0)	0.5 (0.5)	219.4 (203.6)

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982. Numbers in parentheses are statewide means which include the Northwest agricultural region. These were not calculated for ring-necked pheasants because the Northwest counties are outside the pheasant range.

^b No count.

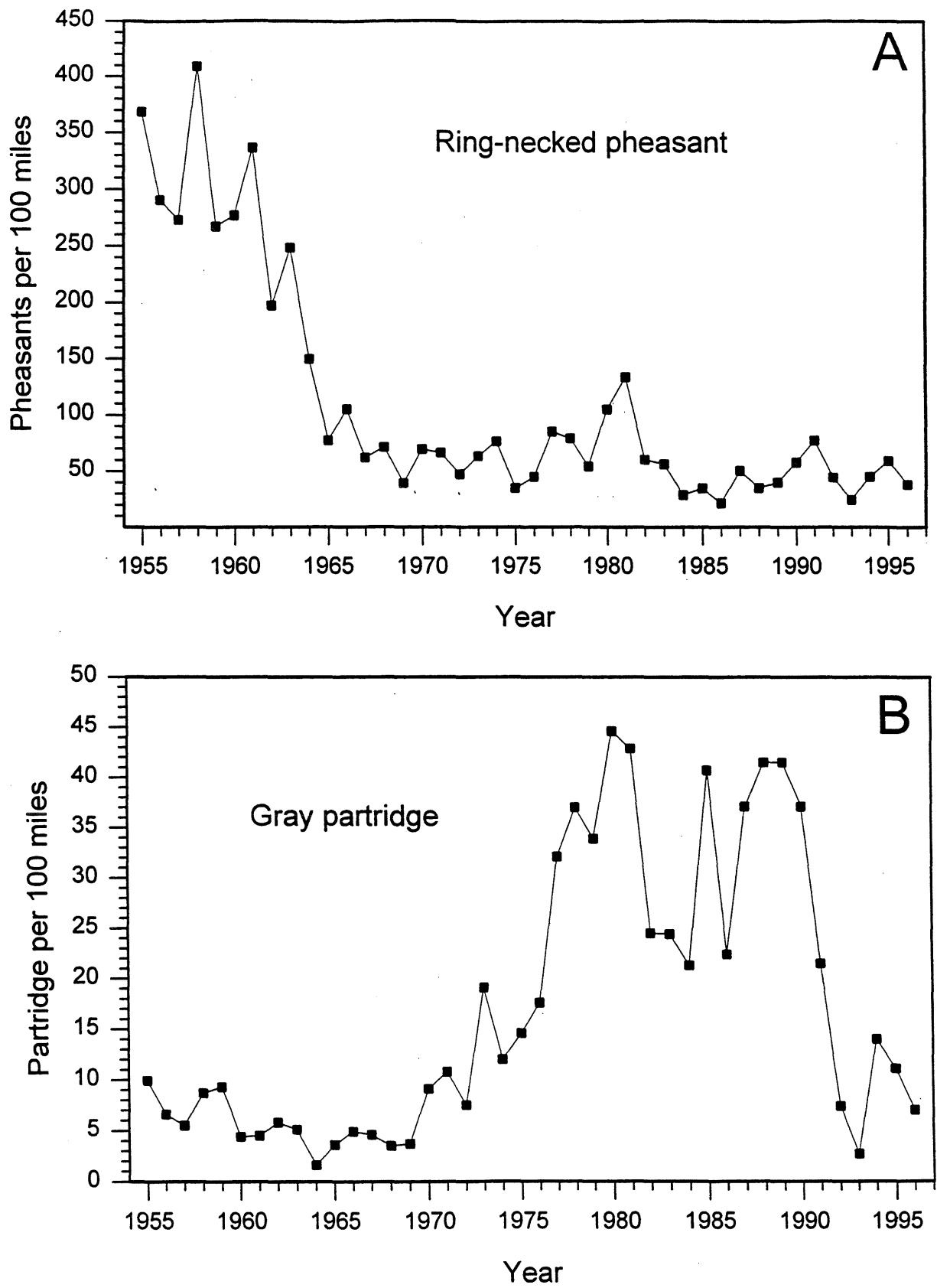


Figure 2. August roadside count indices (birds seen per 100 miles driven) for (A) Ring-necked pheasant and (B) Gray partridge, 1955-1996. Pheasant and partridge indices do not include the Northwest agricultural region.

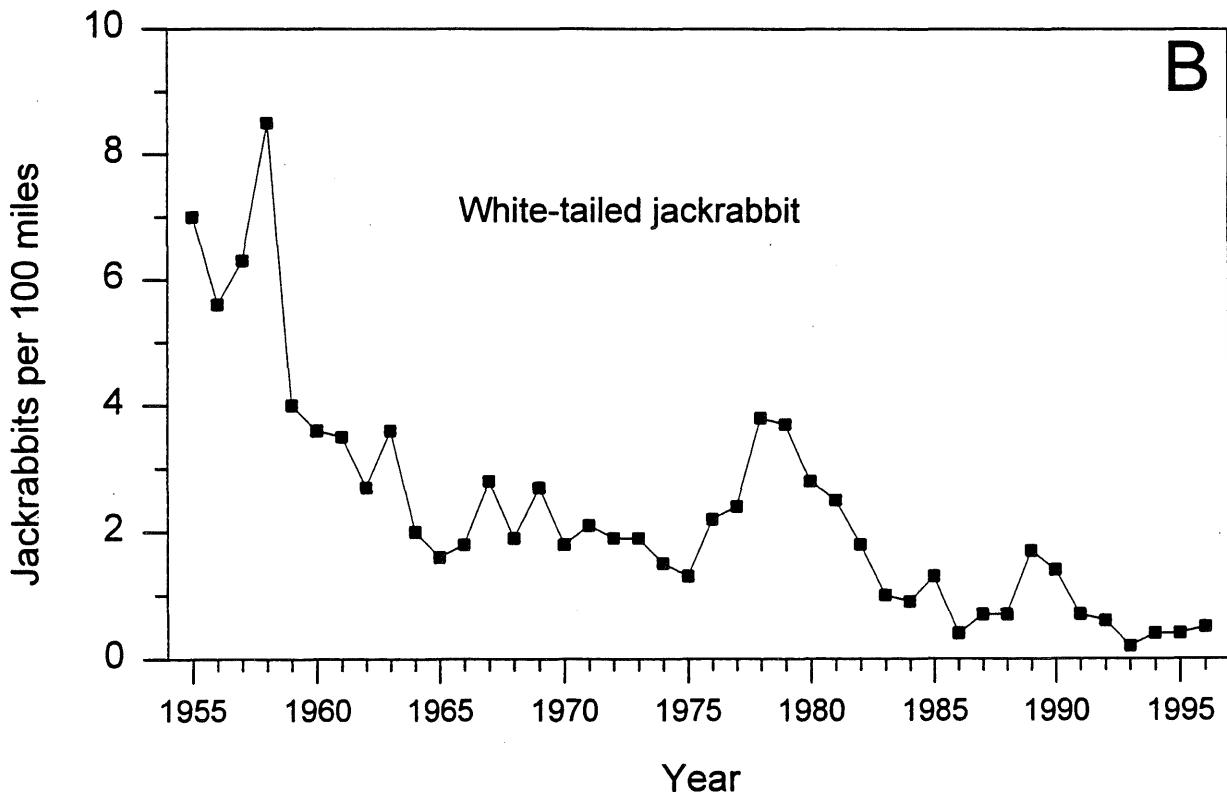
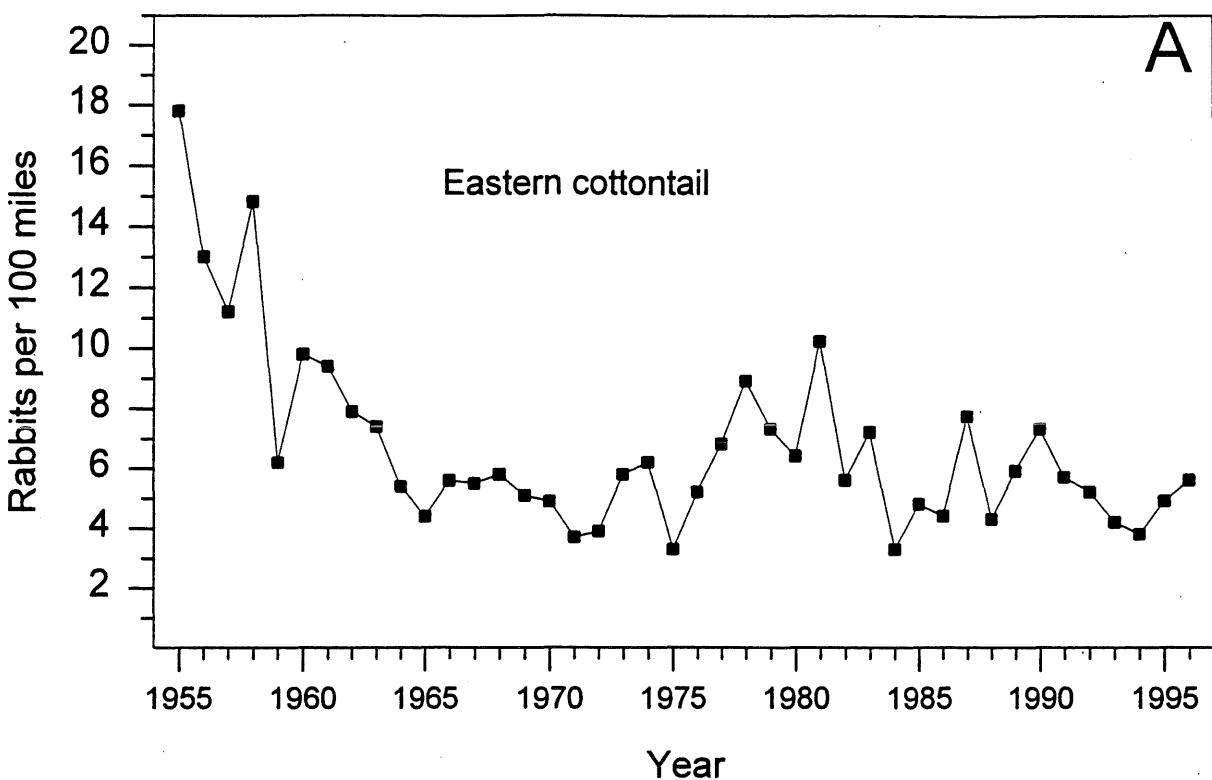


Figure 3. August roadside count indices (animals seen per 100 miles driven) for (A) Eastern cottontail and (B) White-tailed jackrabbit, 1955-1996. Indices do not include the Northwest agricultural region.

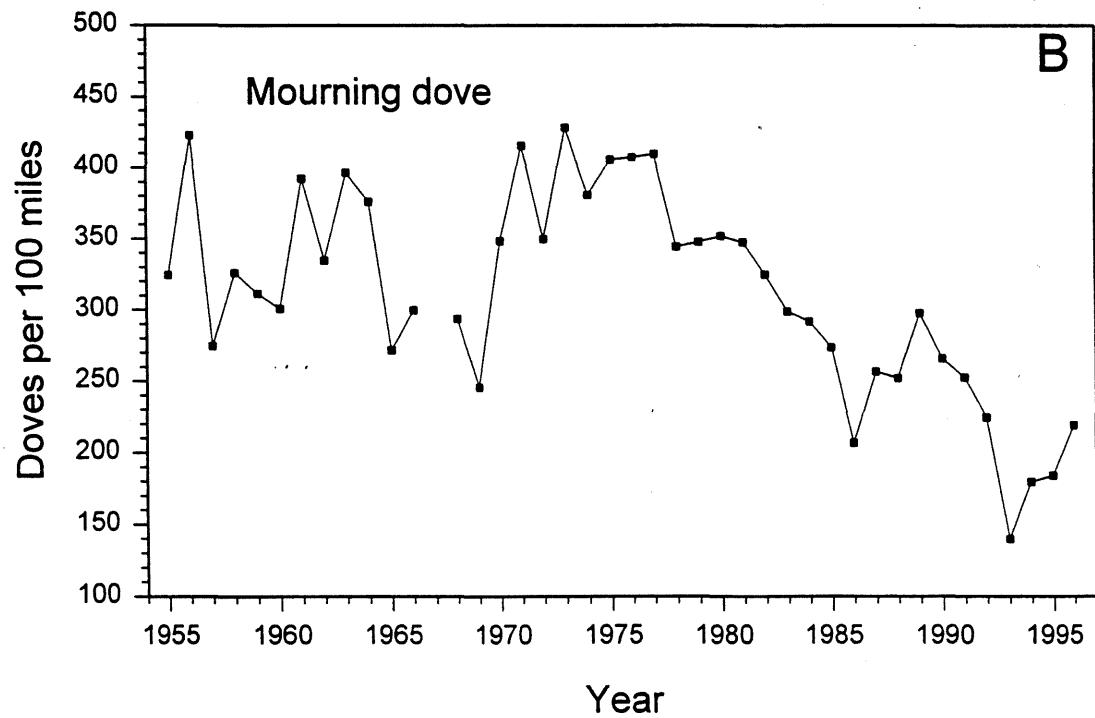
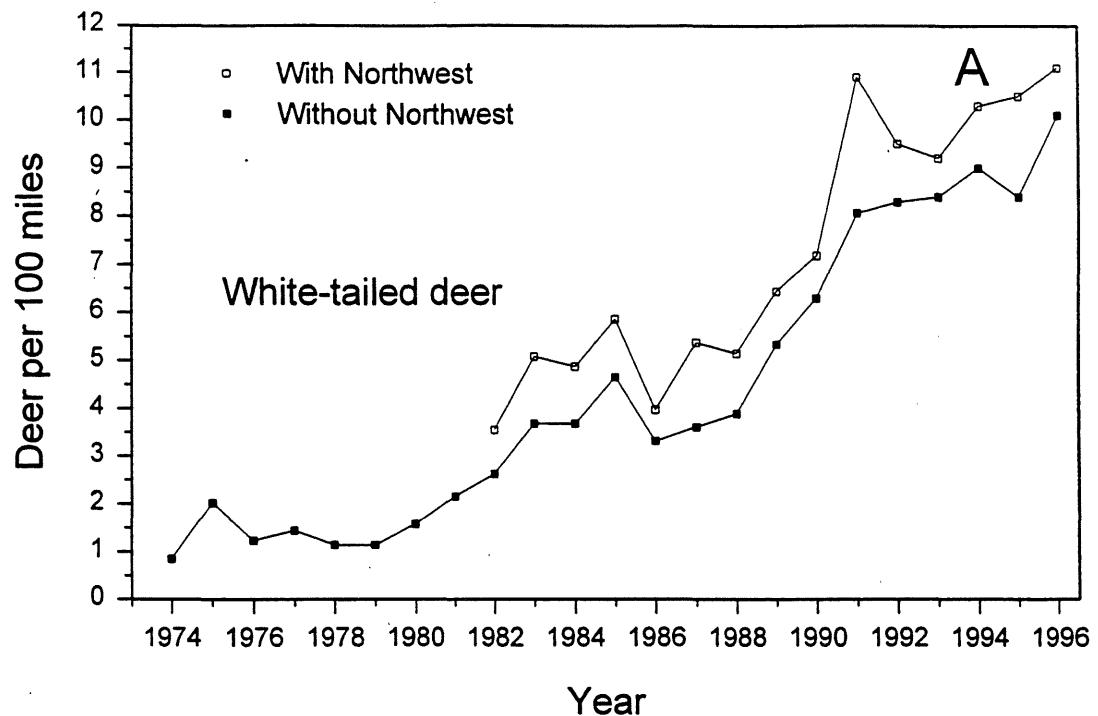


Figure 4. August roadside count indices (animals seen per 100 miles driven) for (A) White-tailed deer, including and excluding the Northwest agricultural region, 1974-1996; and (B) mourning dove, 1955-1996. Dove means do not include the Northwest agricultural region. Doves were not counted in 1967.

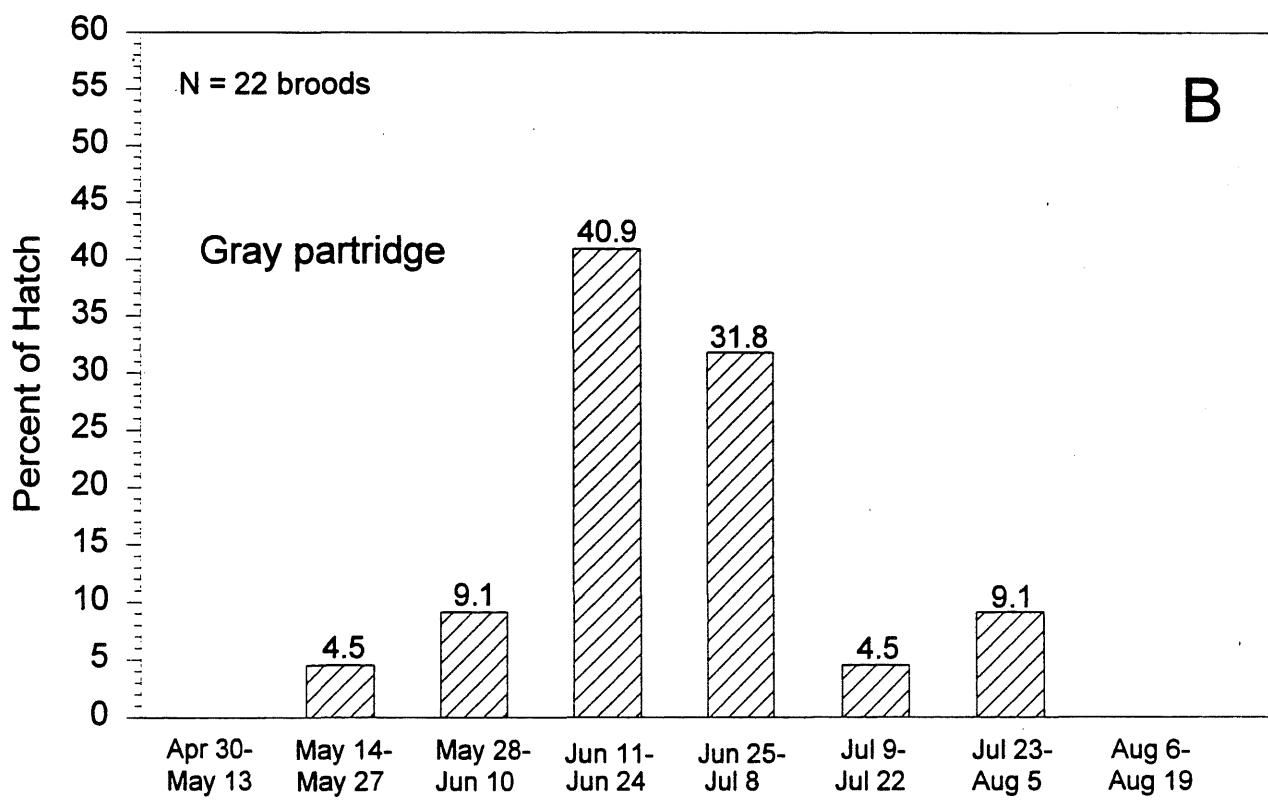
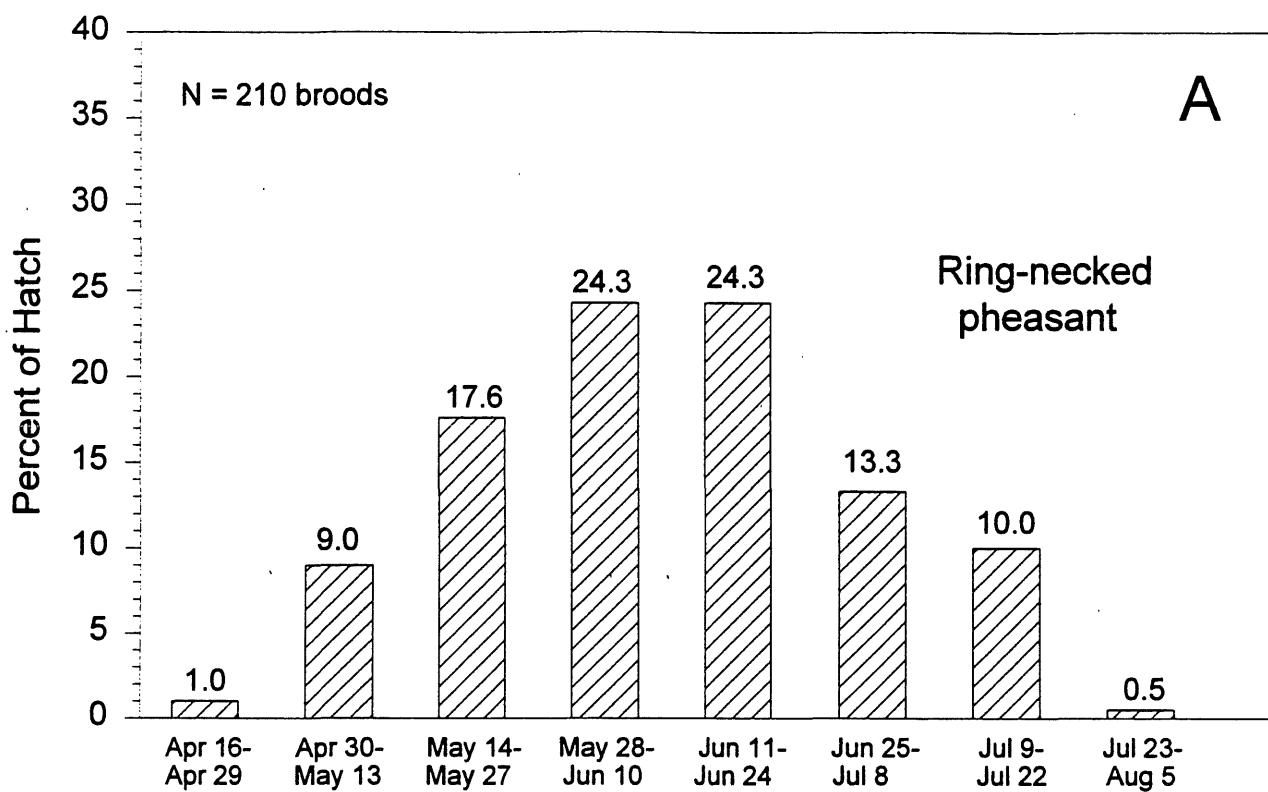


Figure 5. Biweekly distribution of (A) Ring-necked pheasant, and (B) Gray partridge hatch, 1996.

Table 8. Ring-necked pheasants seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1996.

Year	Agricultural region							State- ^a wide
	WC	C	EC	SW	SC	SE	NW	
1955	334.8	163.2	140.0	580.5	620.2	212.0	NO COUNT	368.1
1956	248.8	208.1	175.2	357.2	477.5	169.0		290.0
1957	260.2	130.4	134.6	336.6	522.2	179.6		272.6
1958	490.3	261.9	300.0	473.4	592.9	125.6		409.1
1959	306.6	187.3	73.1	509.5	412.8	55.3		266.8
1960	367.0	243.4	202.5	294.3	356.8	37.7		276.3
1961	494.3	266.7	254.5	365.8	381.3	115.1		336.0
1962	264.2	140.5	143.8	214.7	239.3	114.0		197.4
1963	443.8	191.5	156.9	251.8	227.4	134.8		248.1
1964	224.5	83.1	26.3	185.3	211.1	83.8		149.8
1965	121.4	38.1	8.7	90.4	98.1	68.8		77.2
1966	109.6	67.2	26.3	108.8	175.5	101.8		105.0
1967	56.4	29.7	10.4	51.5	126.2	81.0		61.9
1968	64.9	39.7	16.9	78.1	124.7	94.0		71.4
1969	12.8	22.3	20.2	33.3	68.3	101.9		39.2
1970	19.7	26.9	8.9	55.2	108.6	194.2		69.6
1971	40.3	44.0	14.8	59.3	76.7	175.2		66.4
1972	19.9	28.0	44.0	37.3	66.7	104.8		47.3
1973	38.3	35.4	53.0	36.2	74.5	168.0		63.3
1974	50.6	73.3	84.7	59.8	93.0	107.5		76.3
1975	13.1	33.7	75.1	6.7	24.6	78.6		34.8
1976	11.9	28.1	68.2	2.1	82.8	80.8		44.8
1977	45.8	84.7	101.4	6.4	145.0	125.8		85.0
1978	36.1	79.9	178.4	23.2	106.0	77.2		79.0
1979	44.6	61.7	100.5	13.4	53.3	54.7		54.2
1980	78.8	116.8	221.2	19.5	110.0	84.9		104.9
1981	123.8	139.1	267.8	75.8	125.8	95.2		133.5
1982 ^b	70.8	43.7	155.1	26.1	49.1	28.9	0.0	60.2
1983	89.7	51.5	107.3	10.1	24.9	51.4	0.0	56.2
1984	66.5	13.6	10.1	8.4	25.8	20.6	0.4	28.6
1985	62.9	16.3	41.3	14.3	29.6	31.6	2.5	34.6
1986	19.6	10.7	22.4	19.8	23.5	37.4	0.0	21.2
1987	79.5	36.4	24.5	60.4	41.7	39.0	0.0	50.0
1988	45.3	31.2	40.0	24.7	31.6	30.1	0.0	34.8
1989	33.1	42.3	53.6	32.0	39.6	43.4	0.0	39.8
1990	45.6	60.5	72.0	59.6	61.8	53.6	0.0	57.5
1991	78.0	80.0	88.2	83.6	79.0	51.0	0.0	76.9
1992	29.5	46.6	51.3	37.5	47.2	63.4	0.0	44.2
1993	11.0	23.1	20.2	15.6	30.8	52.2	0.0	24.3
1994	24.8	29.9	31.3	51.8	61.3	81.2	0.0	44.7
1995	21.4	39.5	25.3	65.9	101.9	109.2	0.0	58.9
1996	22.9	17.3	35.4	41.6	65.0	53.1	0.0	38.2

^a Statewide means do not include the Northwest agricultural region because counties there are outside the pheasant range.

^b Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982 for all species except ring-necked pheasants.

Table 9. Gray partridge seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1996.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	16.4	8.0	0.0	10.8	9.5	9.0	NO	9.9	
1956	2.9	8.3	0.0	14.7	6.0	7.8	COUNT	6.6	
1957	6.4	4.5	0.0	11.7	7.0	0.2		5.5	
1958	20.4	8.6	0.0	10.2	0.3	6.0		8.7	
1959	13.0	17.3	0.0	20.4	5.3	0.0		9.3	
1960	3.9	6.5	0.0	12.1	0.6	4.9		4.4	
1961	5.6	13.4	0.0	2.1	0.6	0.0		4.5	
1962	2.5	10.4	0.0	3.1	0.3	22.0		5.8	
1963	3.3	10.8	0.0	11.1	0.9	4.8		5.1	
1964	0.9	2.5	0.0	2.0	1.9	2.4		1.6	
1965	5.3	2.9	0.0	6.8	2.3	4.0		3.6	
1966	1.8	3.5	0.0	18.3	0.1	11.4		4.9	
1967	2.6	2.2	0.0	8.2	13.5	0.0		4.6	
1968	4.4	3.1	0.0	9.5	0.0	5.0		3.5	
1969	5.2	2.6	0.0	10.9	0.0	4.5		3.7	
1970	7.1	8.2	0.0	32.8	3.7	4.0		9.1	
1971	12.7	3.8	0.0	28.9	7.2	10.1		10.8	
1972	6.7	3.3	0.0	18.3	1.6	18.4		7.5	
1973	8.2	7.8	0.0	66.9	11.7	26.0		19.1	
1974	6.9	10.3	0.0	27.4	8.4	20.2		12.0	
1975	11.0	2.3	0.0	67.5	8.6	5.6		14.6	
1976	10.6	8.7	0.0	59.3	15.4	22.4		17.6	
1977	16.0	32.8	0.0	93.3	31.0	31.6		32.1	
1978	26.1	22.6	0.2	144.2	30.7	14.8		37.0	
1979	43.0	24.3	0.0	88.5	34.8	12.2		33.9	
1980	57.9	41.7	0.0	99.0	41.2	27.6		44.6	
1981	38.1	26.8	0.5	138.7	44.4	19.0		42.9	
1982 ^a	23.6	23.0	0.7	69.7	17.1	16.0	3.6	24.5	22.1
1983	29.3	18.7	0.0	64.6	22.8	8.0	15.2	24.4	23.4
1984	18.2	17.3	0.0	49.7	26.5	16.2	9.5	21.3	20.0
1985	30.7	17.5	0.0	94.9	63.3	42.2	2.2	40.7	37.0
1986	10.1	4.6	0.0	59.6	45.3	20.8	3.5	22.4	20.6
1987	14.7	15.1	0.0	99.2	47.0	66.6	3.6	37.1	33.4
1988	25.9	18.2	3.1	110.7	63.6	40.4	3.8	41.5	37.3
1989	20.0	13.1	0.0	93.5	84.1	42.0	24.8	41.5	39.7
1990	14.8	19.5	0.0	101.5	62.7	34.6	20.4	37.1	35.2
1991	15.5	11.6	0.7	66.5	23.9	18.4	15.3	21.5	20.9
1992	6.3	5.5	0.0	11.8	10.9	10.4	1.7	7.4	6.7
1993	0.8	1.9	0.0	3.2	1.0	11.8	0.0	2.7	2.4
1994	2.2	7.4	0.0	36.0	22.1	23.4	0.2	14.0	12.5
1995	2.1	2.8	0.0	23.5	24.5	15.0	0.0	11.1	9.8
1996	1.0	0.1	0.0	7.9	15.4	22.5	0.0	7.4	6.5

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 10. Eastern cottontails seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1996.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	8.1	15.0	14.5	20.3	19.6	32.0	NO	17.8	
1956	9.6	16.2	12.4	16.2	12.8	12.7	COUNT	13.0	
1957	6.6	9.7	8.3	18.3	13.7	14.0		11.2	
1958	12.8	13.5	16.2	22.1	17.2	6.5		14.8	
1959	5.0	16.0	5.6	6.5	5.3	2.2		6.2	
1960	5.9	13.6	6.4	15.6	11.9	4.9		9.8	
1961	6.2	12.4	6.1	13.8	10.9	5.6		9.4	
1962	5.6	7.3	4.2	12.6	10.0	8.2		7.9	
1963	6.8	4.2	4.9	11.6	9.3	8.6		7.4	
1964	5.2	3.3	1.0	11.8	6.6	5.4		5.4	
1965	3.9	4.4	0.9	5.4	5.7	5.8		4.4	
1966	5.3	3.2	1.8	9.5	7.5	6.0		5.6	
1967	5.8	4.6	2.1	7.1	8.7	3.2		5.5	
1968	4.6	3.2	3.5	9.3	8.8	5.8		5.8	
1969	3.6	3.9	0.9	9.5	8.3	4.5		5.1	
1970	3.6	5.0	1.5	6.9	5.7	6.2		4.9	
1971	4.8	2.6	1.5	6.7	3.2	2.1		3.7	
1972	3.8	4.7	3.6	4.8	3.5	3.5		3.9	
1973	5.0	8.6	6.0	6.5	5.4	4.2		5.8	
1974	3.4	6.5	14.2	6.5	6.1	6.4		6.2	
1975	2.3	4.4	8.3	1.6	1.5	3.1		3.3	
1976	3.7	5.5	6.5	2.1	6.1	7.6		5.2	
1977	4.8	6.7	12.9	6.4	4.9	7.8		6.8	
1978	5.0	8.6	21.4	11.8	7.3	4.6		8.9	
1979	4.6	7.7	7.5	12.7	8.0	4.4		7.3	
1980	4.4	7.0	9.9	6.7	7.2	3.8		6.4	
1981	7.0	10.3	18.1	9.9	8.4	12.0		10.2	
1982 ^a	4.8	6.6	7.8	3.2	6.7	4.9	1.9	5.6	5.2
1983	7.0	5.9	13.2	5.7	3.6	12.2	1.9	7.2	6.7
1984	2.4	2.0	3.5	3.8	4.1	4.8	0.2	3.3	2.9
1985	2.4	4.4	4.7	6.5	5.7	7.6	0.2	4.8	4.4
1986	1.5	4.8	5.9	6.3	5.3	4.8	0.2	4.4	4.0
1987	5.7	7.0	11.5	8.2	6.6	10.6	0.6	7.7	6.9
1988	2.7	3.2	6.4	6.4	3.9	5.9	1.3	4.3	4.0
1989	3.6	5.9	8.9	6.7	4.2	9.2	1.3	5.9	5.4
1990	3.6	6.3	10.6	4.0	6.6	16.8	1.9	7.3	6.7
1991	2.8	5.8	8.9	4.2	6.0	9.2	2.0	5.7	5.3
1992	3.0	6.1	8.5	4.0	4.7	7.2	0.4	5.2	4.7
1993	1.1	3.1	8.5	2.1	5.7	7.8	0.4	4.2	3.8
1994	1.1	4.0	4.9	2.3	5.4	6.4	0.0	3.8	3.4
1995	2.3	3.7	6.7	4.2	6.5	8.1	0.6	4.9	4.4
1996	1.4	2.9	7.5	6.6	10.5	6.5	0.2	5.6	5.0

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 11. White-tailed jackrabbits seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1996.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	9.0	2.6	1.5	13.0	10.6	1.6	NO COUNT	7.0	
1956	5.8	3.7	1.9	10.1	7.7	2.4		5.6	
1957	4.8	5.2	0.9	19.5	6.1	1.3		6.3	
1958	7.3	6.4	0.7	20.1	11.9	0.9		8.5	
1959	1.4	0.7	0.4	15.4	7.8	0.6		4.0	
1960	3.7	4.8	0.2	9.8	2.5	0.2		3.6	
1961	3.7	5.0	0.0	6.5	3.5	0.2		3.5	
1962	4.2	2.3	0.2	4.5	2.8	0.7		2.7	
1963	9.7	2.2	0.0	2.4	3.0	1.0		3.6	
1964	2.9	1.3	0.0	3.7	2.4	0.6		2.0	
1965	1.9	1.9	0.2	4.2	1.2	0.4		1.6	
1966	2.3	1.8	0.2	4.6	1.1	0.6		1.8	
1967	5.3	1.2	0.2	4.2	4.0	0.0		2.8	
1968	1.7	0.8	0.0	6.9	1.9	1.0		1.9	
1969	3.1	0.7	0.5	10.1	1.8	0.7		2.7	
1970	4.0	1.5	0.0	1.9	1.3	0.4		1.8	
1971	5.3	1.6	0.0	2.9	0.8	0.0		2.1	
1972	3.6	1.3	0.0	1.5	2.1	0.5		1.9	
1973	4.0	0.2	0.0	2.9	1.7	0.2		1.9	
1974	3.9	1.5	0.0	1.5	0.7	0.0		1.5	
1975	3.2	0.6	0.3	2.1	0.2	0.2		1.3	
1976	4.4	0.6	0.0	5.2	1.7	1.2		2.2	
1977	3.5	2.8	0.2	4.9	1.6	0.8		2.4	
1978	3.4	2.8	0.7	13.1	3.0	1.0		3.8	
1979	4.6	5.3	0.5	6.4	2.7	1.1		3.7	
1980	3.7	1.2	1.2	8.3	1.5	2.7		2.8	
1981	2.1	2.2	0.0	7.2	1.5	3.0		2.5	
1982 ^a	2.6	0.9	0.5	4.6	1.1	0.9	1.5	1.8	1.7
1983	2.3	0.9	0.0	0.0	0.9	0.8	1.3	1.0	1.0
1984	1.5	0.8	0.0	1.7	0.4	0.6	0.4	0.9	0.8
1985	1.7	0.4	0.0	3.2	1.5	0.7	1.0	1.3	1.2
1986	0.4	0.4	0.0	0.6	0.9	0.0	1.0	0.4	0.5
1987	1.2	0.3	0.0	0.4	1.0	1.0	0.4	0.7	0.7
1988	0.6	0.4	0.0	2.0	1.0	0.4	0.6	0.7	0.7
1989	2.6	1.1	0.0	2.1	2.4	0.6	1.1	1.7	1.6
1990	2.2	0.4	0.2	1.3	2.1	1.2	2.1	1.4	1.4
1991	1.4	0.7	0.0	0.4	0.4	0.4	2.3	0.7	0.8
1992	0.3	0.8	0.0	1.1	0.8	0.4	0.4	0.6	0.6
1993	0.0	0.3	0.0	0.2	0.2	0.4	0.6	0.2	0.2
1994	0.6	0.1	0.2	0.2	1.0	0.0	0.0	0.4	0.4
1995	0.4	0.3	0.0	0.2	1.0	0.4	0.2	0.4	0.4
1996	0.8	0.1	0.0	0.2	1.0	0.2	0.8	0.5	0.5

^a Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 12. Mourning doves seen per 100 miles of August roadside count in Minnesota, by agricultural region, 1955-1996.

Year	Agricultural region							Statewide Mean	
	WC	C	EC	SW	SC	SE	NW	Without NW	With NW
1955	334.8	274.6	116.0	539.1	395.7	196.8	NO COUNT	324.5	
1956	347.4	552.6	277.7	591.5	461.0	285.9		422.6	
1957	303.3	245.9	167.7	243.3	382.8	200.4		274.5	
1958	350.2	296.8	192.3	270.1	455.6	292.8		326.0	
1959	377.4	307.3	220.9	358.0	447.3	94.4		311.4	
1960	273.7	333.5	121.7	336.8	430.4	186.7		300.8	
1961	377.3	372.7	135.7	480.8	563.0	316.7		392.4	
1962	338.1	337.5	215.3	312.5	395.7	314.3		334.6	
1963	636.2	273.2	212.0	506.2	435.4	313.4		396.5	
1964	680.6	256.5	167.1	399.7	395.3	217.4		375.9	
1965	311.7	244.5	185.2	460.0	217.2	270.8		271.6	
1966	363.4	210.2	152.0	505.3	310.9	229.3		299.6	
1967 ^a									
1968	411.4	207.7	124.9	261.3	254.2	385.0		293.5	
1969	268.3	280.1	124.9	476.5	132.0	194.9		245.6	
1970	601.2	217.9	113.2	527.1	203.7	273.5		348.3	
1971	580.4	256.9	181.6	365.8	258.9	751.7		415.4	
1972	600.2	233.8	169.0	307.7	229.6	314.3		349.8	
1973	601.7	279.6	288.0	480.3	392.1	329.1		428.2	
1974	588.4	321.1	241.5	352.4	269.1	381.5		380.8	
1975	653.5	302.5	152.9	546.0	338.3	259.8		405.8	
1976	599.9	373.4	224.0	535.7	367.0	281.8		407.4	
1977	699.2	308.2	168.0	679.5	281.5	223.7		409.8	
1978	502.1	326.2	173.9	430.6	275.9	282.4		344.5	
1979	600.7	406.1	138.0	379.5	197.5	212.8		347.9	
1980	695.7	302.1	140.3	421.5	235.0	182.3		352.2	
1981	634.1	284.6	153.0	513.6	213.0	178.9		347.6	
1982 ^b	557.3	242.8	175.1	304.0	277.7	213.1	225.1	325.0	313.6
1983	517.0	289.2	130.5	277.9	213.9	193.3	188.6	298.9	286.6
1984	530.9	233.2	128.7	267.4	183.2	269.0	175.6	292.0	279.2
1985	500.6	245.4	93.2	242.5	212.5	151.1	233.9	273.7	270.1
1986	325.0	180.1	115.1	204.0	160.5	180.4	176.8	207.0	204.1
1987	440.9	222.9	104.7	257.3	208.1	161.1	215.2	257.1	252.4
1988	385.7	203.9	121.5	300.0	202.6	210.2	184.4	252.3	245.0
1989	501.4	242.5	125.9	329.7	257.3	180.0	165.9	297.9	283.4
1990	443.1	232.4	128.0	159.4	175.5	353.4	170.3	266.0	255.6
1991	316.9	255.0	187.3	169.5	234.9	287.0	205.8	252.8	248.3
1992	261.2	241.2	134.8	198.3	222.3	236.6	202.1	224.7	222.2
1993	175.4	179.5	86.8	92.8	100.2	165.2	82.1	139.8	133.5
1994	282.4	189.4	86.6	158.5	133.5	153.2	63.6	179.7	167.1
1995	242.2	169.1	74.5	112.9	197.5	234.5	85.2	184.1	173.4
1996	425.3	138.0	75.8	141.4	181.4	232.7	70.1	219.4	203.6

^a Mourning doves were not counted in 1967.

^b Eight counties in the Northwest agricultural region were added to the August Roadside Count in 1982.

Table 13. Greater prairie-chicken spring booming ground counts for 14 northwestern counties, 1984-95 (counts coordinated and summarized by AWM Terry Wolfe, Crookston).

County	Number of booming males (Number of booming grounds)												
	1984 ^b	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Becker	96 (9)	41 (3)	99 (11)	53 (7)	19 (3)	18 (3)	69 (7)	30 (3)	69 (6)	58 (10)	21 (3)	20 (2)	2 (1)
Cass	54 (15)*	58 (14)	52 (14)	60 (15)	59 (13)	48 (9)	51 (8)	52 (12)	55 (10)	38 (8)	30 (5)	18 (5)	17 (5)
Chippewa	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay	110 (7)	127 (7)	86 (9)*	87 (9)	0	83 (8)	307 (18)	411 (28)	654 (45)	366 (36)	306 (31)	422 (38)	539 (46)
Hubbard	5 (1)	16 (6)*	16 (4)	22 (5)	24 (4)	19 (5)	29 (5)	24 (5)	18 (2)	17 (3)	14 (3)	9 (3)	9 (3)
Mahnomen	149 (19)	134 (15)	102 (17)	63 (9)	29 (5)	0	46 (6)	21 (3)	143 (13)	76 (76)	31 (4)	21 (6)	11 (2)
Marshall	2 (2)	0	0	0	0	0	1 (1)	0	0	0	0	0	0
Norman	119 (8)	86 (7)	128 (10)	87 (9)	111 (9)	73 (7)	145 (11)	215 (12)	339 (15)	221 (26)	248 (25)	278 (30)	314 (37)
Ottertail	7 (1)	5 (1)	0*	0	21 (3)	0	0	1 (1)	4 (1)	16 (2)	5 (1)	0	28 (3)
Pennington	4 (1)	3 (1)	0	0	0	0	9 (1)	0	0	0	0	0	0
Polk	146 (22)*	162 (18)	96 (17)*	72 (8)	72 (10)	150 (17)	204 (23)	267 (25)	311 (27)	190 (22)	189 (18)	228 (27)	197 (19)
Red Lake	12 (2)	2 (1)	0	0	0	5 (1)	34 (6)	38 (6)	38 (5)	12 (2)	21 (3)	25 (4)	32 (4)
Wadena	19 (2)	34 (9)*	17 (7)*	105 (20)	99 (16)	59 (13)	134 (17)	145 (21)	38 (7)	43 (8)	12 (4)	9 (2)	15 (3)
Wilkin	60 (6)	149 (15)*	81 (9)*	99 (8)	58 (3)	100 (6)	199 (15)	228 (13)	244 (13)	142 (11)	207 (12)	213 (16)	283 (19)
Total males/ground	783 (95)	817 (97)	677 (98)	648 (90)	492 (66)	555 (69)	1,228(118)	1,432(129)	1,913(144)	1,179(138)	1,084 (109)	1,274 (133)	1,447 (142)
	8.2	8.4	6.9	7.2	7.4	8.0	10.4	11.1	13.3	8.5	9.9	9.6	10.2

* Data include only grounds on which counts were conducted. In several counties booming grounds were located but counts were not made, they are not included in the data presented.

^b Part of the reason for the low number of chickens is incomplete counts of known grounds. This was the case for Polk County and a few others. However, even after allowing for uncounted grounds, chicken numbers were down.

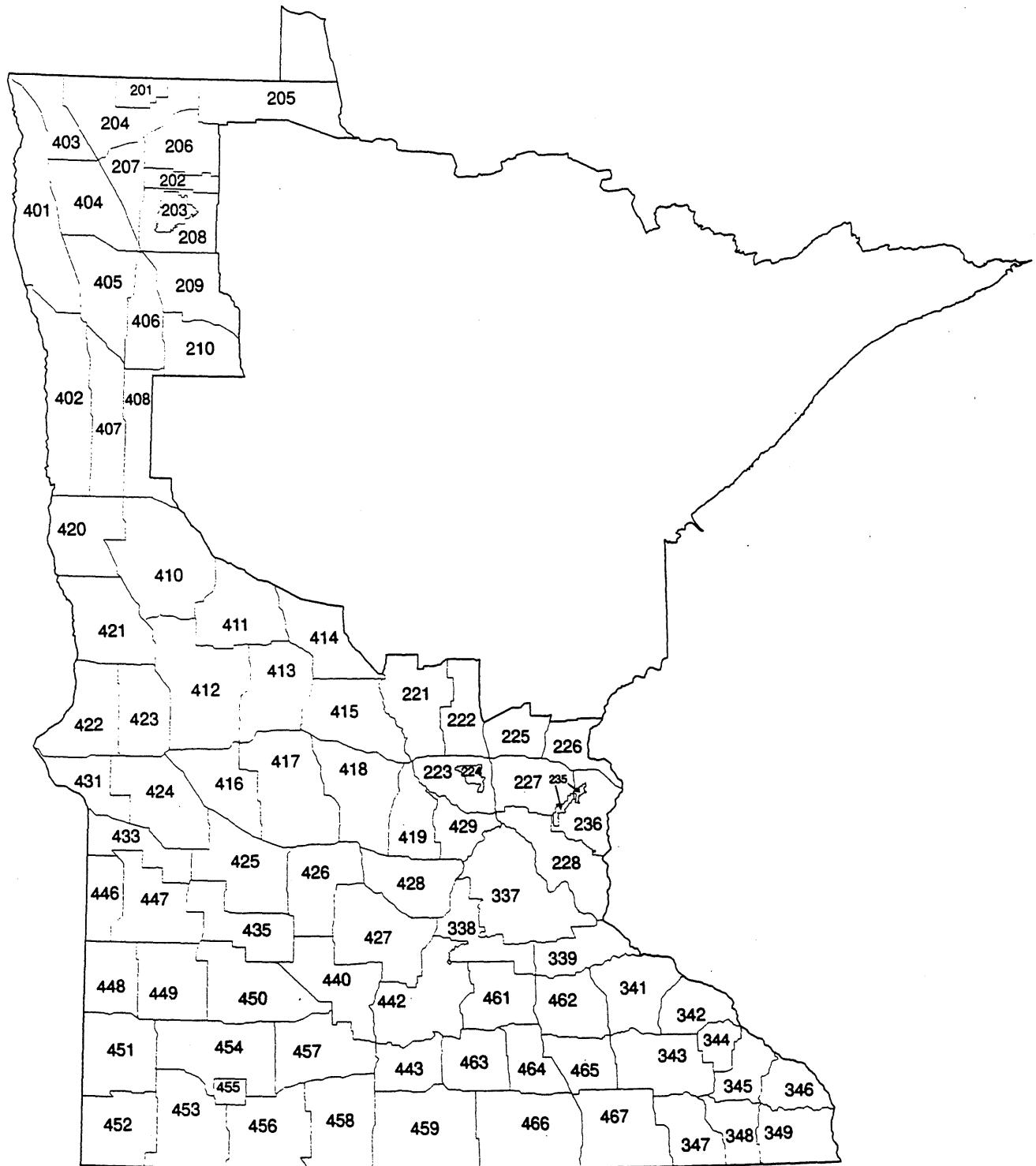


Figure 6. Deer Permit Areas in the Farmland zone.

Table 14. Reproductive performance of white-tailed deer in Minnesota for the Northwest^a Deer Management Unit (DMU), 1991-1996. The mean values (1991-95) are provided as references.

Year	Fawns			Adults		
	n	Percent pregnant	Fetuses per doe	n	Percent pregnant	Fetuses per doe
1996	5	0	0.00	21	81	1.33
1995	4	25	0.25	6	100	2.00
1994	7	14	0.14	13	92	1.38
1993	7	0	0.00	11	100	1.64
1992	13	8	0.08	21	95	1.57
1991	11	9	0.09	15	87	1.60
Mean (1991-95)		11	0.11		95	1.64

^a Red River (East and West) and Agassiz DMUs were combined into the Northwest DMU due to the small sample sizes.

Table 15. Reproductive performance of white-tailed deer in Minnesota for the Big Woods Deer Management Unit, 1991-1996. The mean values (1991-95) are provided as references.

Year	Fawns			Adults			
	Subunit	n	Percent pregnant	Fetuses per doe	n	Percent pregnant	Fetuses per doe
1996		<u>59</u>	<u>9</u>	<u>0.17</u>	<u>112</u>	<u>96</u>	<u>1.84</u>
North	12	25	0.25	29	93	1.69	
Central	8	0	0.00	8	100	2.00	
Metro	29	21	0.24	64	98	1.89	
Southeast	10	0	0.00	11	91	1.82	
1995	21	19	0.19	54	91	1.78	
1994	46	15	0.17	99	94	1.67	
1993	45	38	0.40	92	93	1.71	
1992	65	22	0.25	96	95	1.82	
1991	50	20	0.22	71	96	1.76	
Mean (1991-95)		23	0.25		94	1.75	

Table 16. Reproductive performance of white-tailed deer in Minnesota for the Prairie Deer Management Unit, 1991-1996. The mean values (1991-95) are provided as references.

Year	Subunit	n	Fawns		Adults		
			Percent pregnant	Fetuses per doe	n	Percent pregnant	Fetuses per doe
1996		<u>28</u>	<u>14</u>	<u>0.14</u>	<u>30</u>	<u>90</u>	<u>1.57</u>
	North	1	0	0.00	7	100	1.29
	River	17	18	0.18	14	86	1.71
	Southwest	8	13	0.13	7	86	1.43
	Southeast	2	0	0.00	2	100	2.00
1995		39	21	0.26	50	92	1.72
1994		32	16	0.22	46	98	1.89
1993		39	38	0.41	74	93	1.74
1992		37	19	0.22	44	93	1.93
1991		30	20	0.20	67	94	1.82
Mean (1991-95)			23	0.26		94	1.82

Table 17. Estimated pre-fawning deer density^a (deer/mi²), permit and harvest summary, and pre-fawning population goals (deer/mi²) by deer management unit (DMU), sub-unit (DMSU), and permit area (PA) in Minnesota's farmland zone, 1995-96.

DMU DMSU PA	1995						1996						Pre-fawning population goal						
	Density	Total permits issued ^b	Registered harvest			Density	Total permits offered ^d	Projected harvest			Buck	Antler- less	Total ^c						
			Buck	Antler- less	Total ^c			Buck	Antler- less	Total ^c									
RED RIVER																			
West																			
401	1.7	427	286	192	478	1.7	1000	239	607	846	0.8-1.2								
402	2.2	737	392	438	830	2.2	1600	333	1211	1544	1.7-2.3								
Total	1.9	1164	678	630	1308	1.9	2600	572	1818	2390									
East																			
403	3.6	571	329	361	690	5.1	600	277	461	738	2.2-2.8								
404	4.4	1178	523	760	1283	4.5	1200	426	821	1247	2.7-3.3								
405	3.8	1297	524	811	1335	4.0	1800	433	1356	1789	2.2-2.8								
406	5.4	1194	525	846	1371	6.8	2000	441	1775	2216	2.7-3.3								
407	3.7	1297	531	813	1344	3.2	2000	417	1650	2067	3.6-4.4								
408	4.6	1090	490	715	1205	4.6	2200	380	1748	2128	3.6-4.4								
Total	4.2	6627	2922	4306	7228	4.5	9800	2374	7811	10185									
RED RIVER TOTAL	3.3	7791	3600	4936	8536	3.5	12400	2946	9629	12575									
AGASSIZ																			
201	6.7	300	135	171	306	5.1	100	103	60	163	9.0-11.0								
202	11.3	792	281	403	684	10.9	600	230	313	543	10.0-12.0								
203	12.5	635	211	346	557	14.4	200	203	115	318	13.5-16.5								
204	6.8	1953	729	1126	1855	6.7	2000	658	1211	1869	5.0-6.0								
205	7.5	2359	869	1535	2404	7.2	1500	678	1187	1865	6.2-7.4								
206	6.9	1413	569	735	1304	7.1	1500	465	808	1273	5.3-6.3								
207	7.5	978	331	505	836	6.7	800	294	424	718	7.7-9.2								
208	4.2	813	315	378	693	4.7	600	286	322	608	2.7-3.3								
209	3.5	1201	425	660	1085	3.6	1500	343	1042	1385	2.3-2.7								

Table 17. Continued.

DMU	DMSU	PA	1995				1996				Pre-fawning population goal	
			Density	Registered harvest			Density	Projected harvest				
				Total permits issued ^b	Buck	Antler- less		Total permits offered ^d	Buck	Antler- less		
AGASSIZ												
210		6.4	2000	581	1032	1613	5.4	2500	435	1558	1993	2.3-2.7
AGASSIZ TOTAL		7.3	12444	4446	6891	11337	6.3	11300	3695	7040	10735	
BIG WOODS												
25	North											
	409	17.4	2927	1171	2277	3448	6.7	5500	582	5422	6004	5.6-6.8
	410	7.8	4620	1585	3088	4673	7.1	9000	1140	6611	7751	5.5-6.5
	411	11.3	4360	1501	3064	4565	9.1	8000	1019	6645	7664	5.0-6.0
	412	6.4	4200	1346	2519	3865	9.7	4600	1136	3121	4257	3.6-4.4
	413	7.5	3161	1111	2083	3194	7.5	3600	820	2578	3398	5.0-6.0
	414	11.3	3053	1149	2230	3379	8.4	2000	828	1590	2418	8.5-10.0
	415	6.8	2597	870	1534	2404	6.0	2600	639	1555	2194	4.5-5.5
	416	5.7	1772	745	1101	1846	5.6	2000	595	1320	1915	3.6-4.4
	417	5.7	3330	1146	1783	2929	6.2	3600	936	2070	3006	3.5-4.5
	418	4.7	2351	842	1308	2150	5.9	2600	669	1583	2252	3.6-4.4
	419	9.3	1700	492	839	1331	5.3	1900	364	1188	1552	3.0-4.0
	429	6.0	689	199	338	537	1.9	800	119	446	565	3.0-4.0
	Total	8.3	34760	12157	22164	34321	6.8	46200	8847	34129	42976	
Central												
221		7.3	1400	739	1155	1894	7.4	1250	736	1219	1955	9.0-11.0
222		13.0	2000	671	1250	1921	11.6	2000	734	1481	2215	10.8-13.2
223		8.4	1785	532	956	1488	11.0	1900	574	1305	1879	7.0-9.0
224		11.3	275	100	146	246	20.5	200	128	111	239	18.0-22.0
225		8.5	1921	658	1146	1804	10.3	2200	624	1635	2259	7.2-8.8
226		8.9	2254	784	1348	2132	7.3	2500	455	2200	2655	5.4-6.6
Total		9.6	9635	3484	6001	9485	9.6	10050	3251	7951	11202	

Table 17. Continued.

DMU	DMSU PA	1995						1996						Pre-fawning population goal	
		Density	Total permits issued ^b	Registered harvest			Density	Total permits offered ^d	Projected harvest			Buck	Antler- less	Total ^c	
				Buck	Antler- less	Total ^c			Buck	Antler- less	Total ^c				
Metro^e															
227		5.8	2624	825	1203	2028	6.5	3000	665	1652	2317			4.8-5.8	
235		19.3	150	71	90	161	13.1	125	39	101	140			18.0-22.0	
236		6.7	2281	694	953	1647	5.6	3000	626	1795	2421			2.9-3.5	
338		4.2	937	341	342	683	4.6	1200	279	460	739			4.5-5.5	
339		4.9	957	369	383	752	5.1	1600	303	777	1080			3.2-3.8	
Total		8.2	6949	2300	2971	5271	5.6	8925	1912	4785	6697				
Southeast															
26	341	6.6	2058	845	970	1815	8.6	2700	828	1410	2238			4.5-5.5	
	342	8.9	1469	672	772	1444	11.0	2000	637	1216	1853			8.1-9.9	
	343	6.3	1583	833	718	1551	8.3	1800	850	1003	1853			4.5-5.5	
	344	17.7	1500	628	751	1379	20.0	1400	671	756	1427			18.0-22.0	
	345	9.7	1423	725	710	1435	9.6	1900	729	1055	1784			8.1-9.9	
	346 ^f	12.3	2024	978	1106	2084	14.4	2500	835	1580	2415			9.0-11.0	
	347	8.1	1325	691	748	1439	9.4	1400	571	1045	1616			5.4-6.6	
	348	13.6	1674	914	1031	1945	12.2	1800	786	1214	2000			9.0-11.0	
	349	10.0	2003	1090	1176	2266	9.9	2000	996	1321	2317			9.0-11.0	
	Total	10.3	15059	7376	7982	15358	10.5	17500	6903	10600	17503				
BIG WOODS TOTAL		9.1	66403	25317	39118	64435	7.9	82675	20913	57465	78378				
PRAIRIE															
North															
420		3.6	456	358	541	899	4.1	1400	362	1191	1553			1.7-2.3	
421		2.6	884	390	523	913	2.7	1500	339	1163	1502			1.6-2.2	
422		2.9	558	248	357	605	2.3	650	224	576	800			1.4-2.0	
423		2.9	785	301	431	732	2.7	850	240	589	829			1.3-1.9	

Table 17. Continued.

DMU	DMSU	PA	1995				1996				Pre-fawning population goal							
			Density	Total permits issued ^b	Registered harvest		Density	Total permits offered ^d	Projected harvest									
					Buck	Antler- less			Buck	Antler- less								
PRAIRIE																		
North																		
424	4.1	1456	459	633	1092		3.0	1700	414	946	1360	1.8-2.0						
425	2.3	687	290	432	722		2.2	750	294	657	951	1.2-1.8						
426	3.7	998	336	582	918		2.1	500	235	348	583	2.0-3.0						
427	2.2	750	397	499	896		2.5	750	397	596	993	1.3-1.7						
428	3.6	1100	304	536	840		2.8	1000	250	583	833	2.3-2.8						
Total	3.1	7674	3084	4534	7617		2.7	9100	2755	6649	9404							
River																		
27	431	4.5	757	226	307	533	3.1	850	189	468	657	2.2-2.5						
	433	6.3	957	511	689	1200	6.2	1200	426	1168	1594	4.0-5.0						
	435	4.4	1271	500	629	1129	4.2	1350	418	835	1253	3.2-3.8						
	440	3.2	600	486	523	1009	3.4	600	371	570	941	3.2-3.8						
	442	3.8	1075	572	749	1321	3.6	1000	465	790	1255	3.2-3.8						
	443	4.4	650	361	499	860	4.4	700	263	688	951	3.2-4.0						
	Total	4.4	4440	2656	3396	6052	4.0	5700	2132	4519	6651							
Southwest																		
446	3.2	600	256	386	642		3.2	600	232	437	669	3.2-4.0						
447	2.3	400	344	324	668		2.8	600	359	558	917	2.5-3.1						
448	3.6	300	271	269	540		3.1	270	268	280	548	3.2-4.0						
449	3.6	500	415	494	909		3.5	450	415	495	910	3.2-4.0						
450	2.1	400	310	366	676		2.0	500	316	616	932	1.2-1.8						
451	2.9	500	219	214	433		2.3	500	329	432	761	2.4-3.0						
452	1.7	250	272	196	468		2.3	500	296	431	727	1.4-2.0						
453	1.7	350	312	234	546		2.4	450	343	335	678	1.4-2.0						
454	3.1	650	554	530	1084		3.5	700	595	658	1253	2.0-2.6						

Table 17. Continued.

DMU	DMSU	PA	1995				1996				Pre-fawning population goal	
			Density	Total permits issued ^b	Registered harvest		Density	Total permits offered ^d	Projected harvest			
					Buck	Antler-less			Buck	Antler-less		
PRAIRIE Southwest												
455	4.5	145	59	72	131	3.0	150	52	153	205	3.7-4.5	
456	2.5	600	339	410	749	2.5	600	346	467	813	1.7-2.3	
457	3.1	200	321	244	565	2.6	300	352	406	758	1.7-2.3	
458	2.5	400	333	331	664	2.6	500	331	462	793	1.5-2.1	
459	2.7	525	589	446	1035	3.4	650	647	656	1303	1.7-2.3	
Total	2.8	5820	4594	4516	9110	2.8	6770	4881	6286	11167		
Southeast												
461	4.3	1400	460	822	1282	3.4	1550	378	944	1322	2.5-3.1	
462	4.7	1520	537	714	1251	4.4	1900	474	1041	1515	2.7-3.3	
463	2.1	600	294	390	684	2.7	625	257	411	668	1.7-2.3	
464	3.2	625	303	334	637	3.5	750	279	431	710	1.7-2.3	
465	2.6	519	243	328	571	2.5	650	201	505	706	1.5-2.1	
466	2.5	900	528	534	1062	2.6	1200	505	754	1259	1.6-2.2	
467	2.6	500	522	316	838	3.5	600	549	434	983	1.0-1.6	
Total	3.1	6064	2887	3438	6325	3.2	7275	2643	4520	7163		
PRAIRIE TOTAL	3.4	23998	13221	15884	29104	3.0	28845	12411	21974	34385		
FARMLAND												
TOTAL	5.8	110636	46584	66829	113412	4.9	135220	39965	96108	136073		

^a Pre-fawning deer density estimates are determined from population modeling. Historical density estimates may differ from those previously published due to periodic recalculation as more accurate modeling information is available.

^b Total permits issued includes antlerless permits and management permits.

^c Total harvest includes deer tagged with regular firearms, multizone firearms, muzzleloader, archery, and management permit licenses.

^d Total permits offered includes projected antlerless permits based on research and management recommendations.

^e Excluding permit areas 228 and 337, which are not modeled.

^f Permits and antlerless harvest represent Orchard Subpermit Area.

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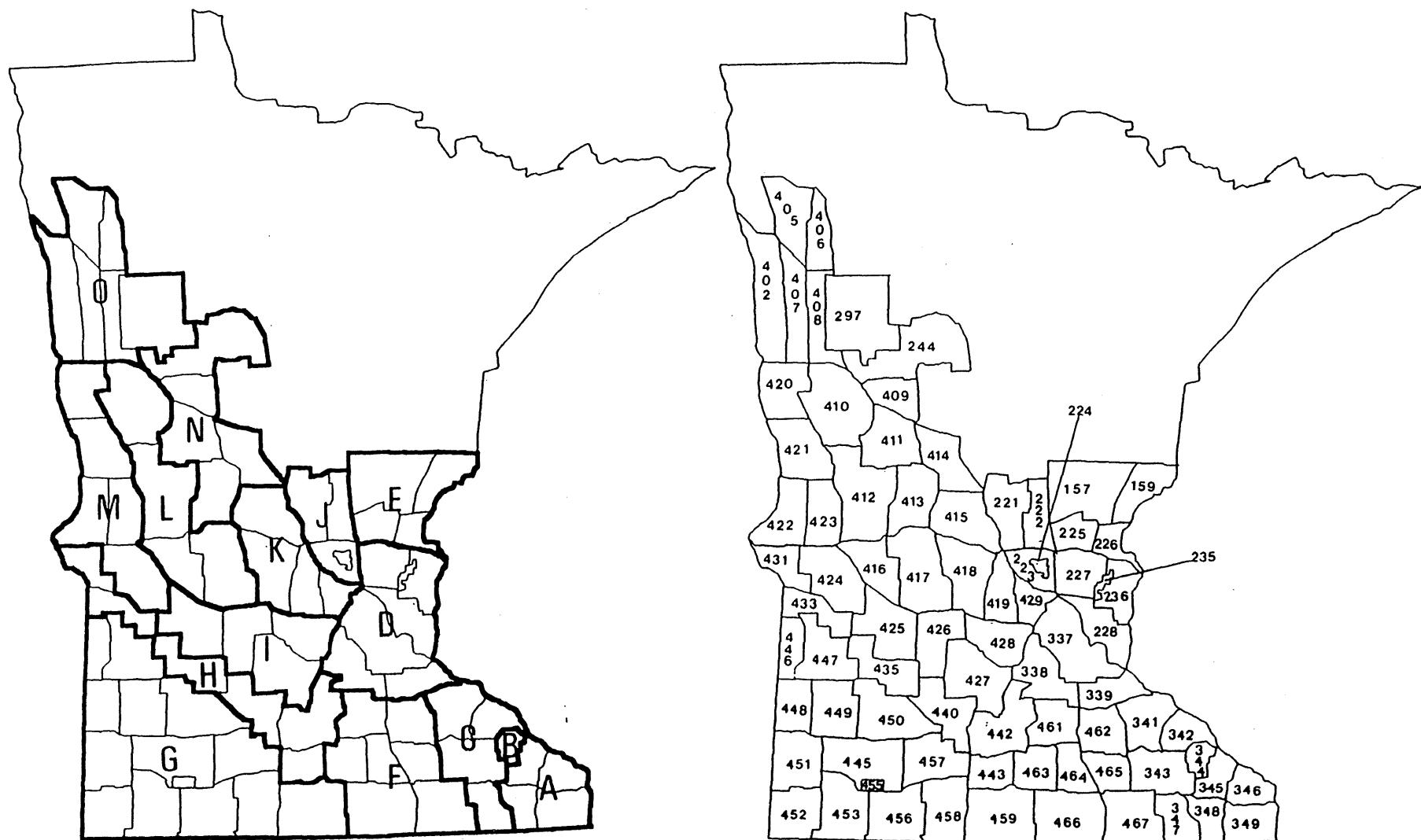


Figure 7. (a) Location of turkey management units (TMU's) and (b) antlerless deer permit areas used for the wild turkey survey, Minnesota, November-December, 1994.

Table 18. Percent of antlerless-deer hunters observing wild turkeys (HOWT) in Minnesota,
November-December, 1993-94.

Note: This survey was not done in 1995, but will be scheduled again for 1996.

Turkey Management Unit	Year	n (Respondents)	HOWT	99% CI on HOWT for 1993-94
A	1992	629	62.8	7.0
	1993	637	64.8	
	1994	618	61.2	
B	1992	473	62.4	8.6
	1993	467	53.1	
	1994	421	59.6	
C	1992	632	52.4	7.2
	1993	637	57.6	
	1994	615	55.0	
D	1992	563	17.1	5.6
	1993	633	17.4	
	1994	633	19.3	
E	1992	581	3.4	3.4
	1993	647	7.1	
	1994	638	4.7	
F	1992	583	19.0	6.4
	1993	594	24.8	
	1994	652	27.6	
G	1992	625	3.7	3.6
	1993	644	5.3	
	1994	616	7.6	
H	1992	598	16.4	5.3
	1993	655	16.0	
	1994	636	17.1	
I	1992	596	4.5	2.7
	1993	569	3.9	
	1994	562	2.7	
J	1992	560	2.1	2.7
	1993	609	1.6	
	1994	539	4.6*	
K	1992	600	6.0	3.7
	1993	624	5.6	
	1994	614	8.5	
L	1992	653	1.7	2.5
	1993	687	2.5	
	1994	667	4.2	
M	1992	578	2.9	2.6
	1993	597	3.4	
	1994	613	3.1	
N	1992	663	2.1	2.0
	1993	710	1.7	
	1994	657	2.3	
O	1992	576	3.8	2.2
	1993	626	1.9	
	1994	620	2.6	

* Significant change in index from 1993 to 1994 ($p < 0.01$)

PREDATOR SCENT POST SURVEY

NOTE: This survey is organized and coordinated by the Forest Wildlife Populations and Research Group, 1201 E. Hwy 2, Grand Rapids, MN 55744. Results are presented at this location in the book because of the statewide nature of the data.

1995 SCENT STATION ROUTE SPECIFICS

Zone	Rts. Done	No. Segments	Segment Density	Station Nights
Forest	38	161	1/201 mi ²	1,556
Transition	23	90	1/281 mi ²	857
Farm	<u>18</u>	<u>76</u>	1/346 mi ²	<u>719</u>
	79	327		3,132

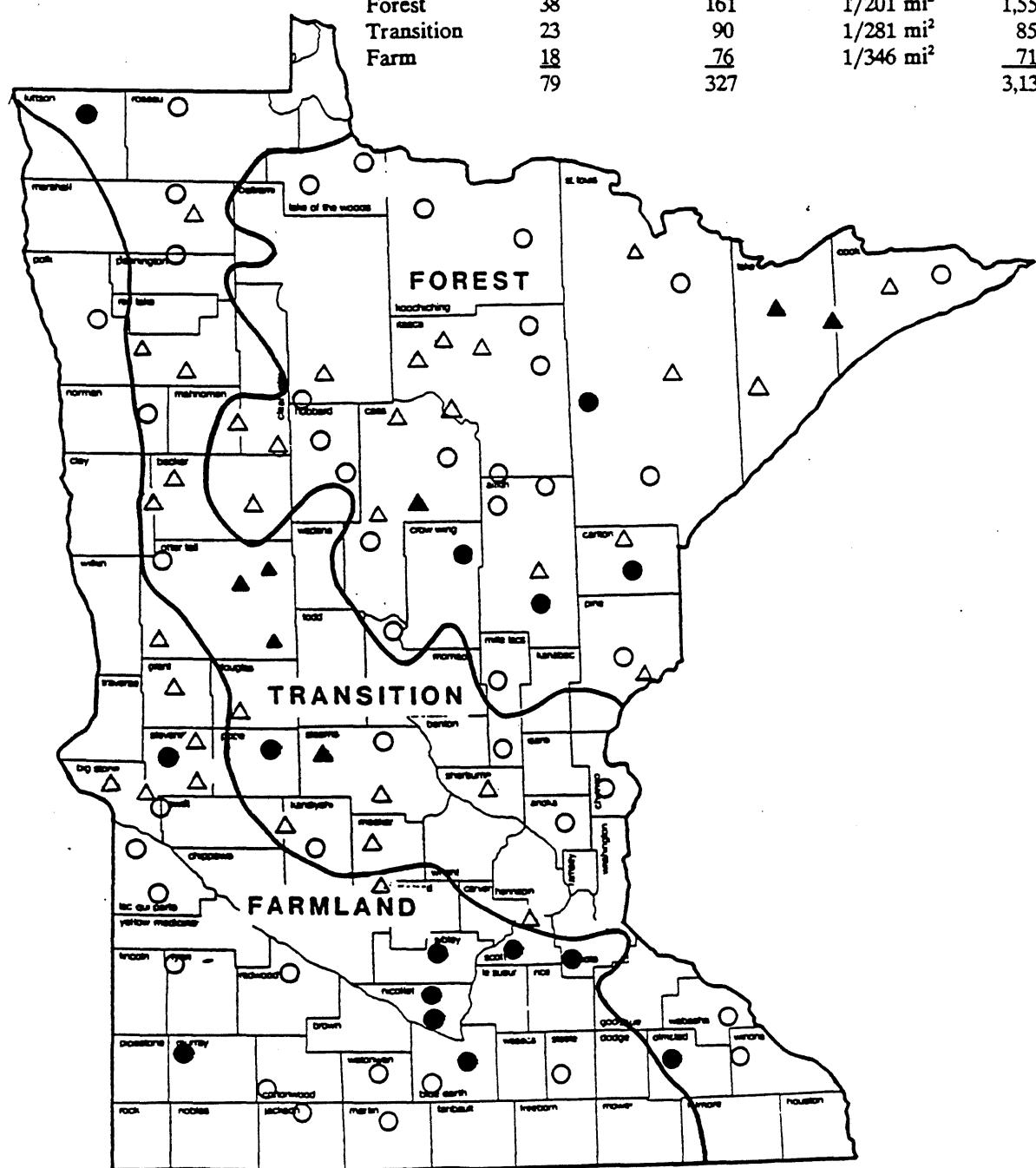


Figure 8.

Approximate locations of scent post routes conducted by DNR Section of Wildlife (O) and cooperators (Δ) in the Forest, Transition, and Farmland Survey Zones, 1995. Shaded symbols indicate routes not completed in 1995.

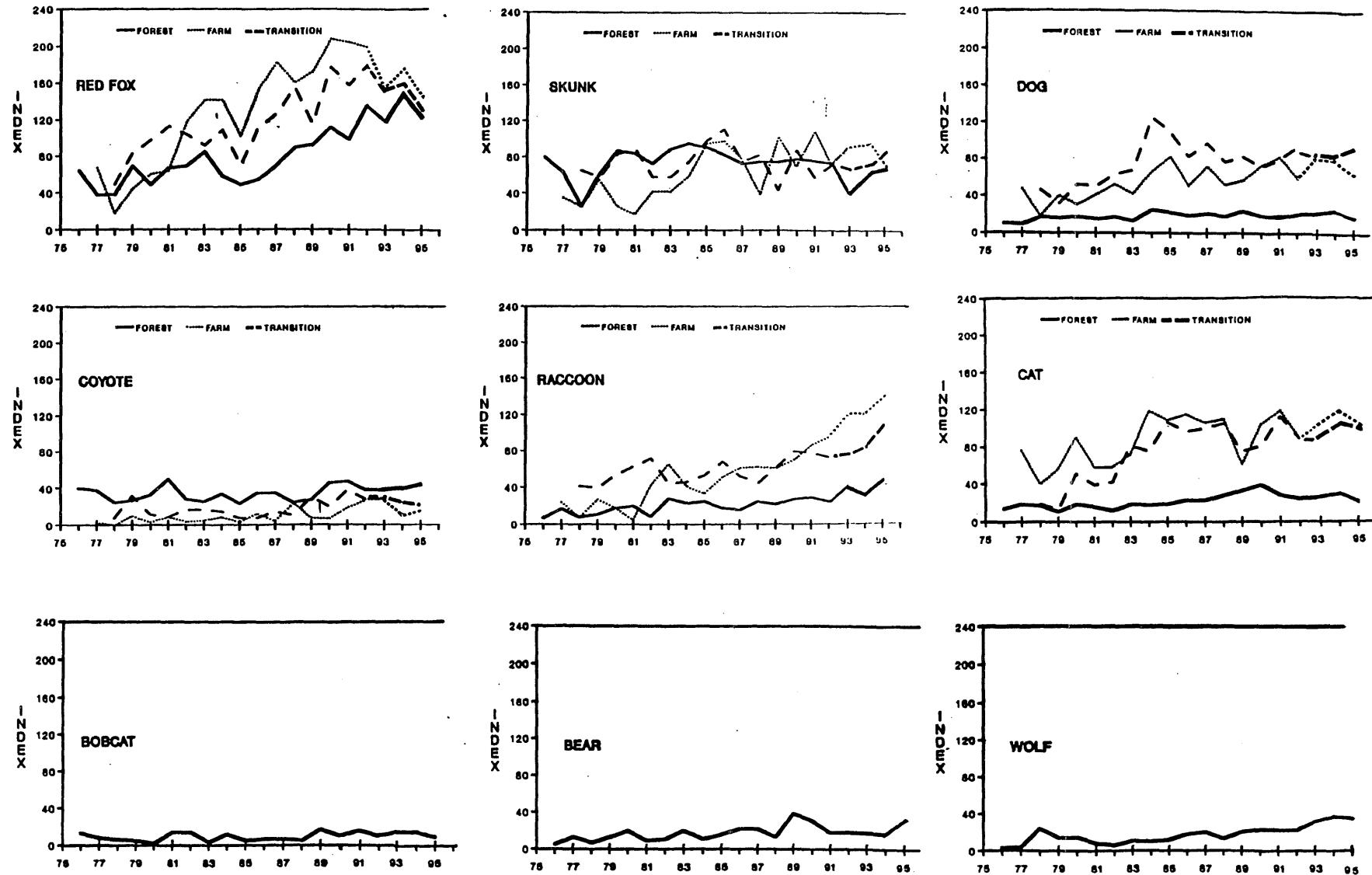


Figure 9. Scent post visitation indices for nine species in the Forest, Transition, and Farmland survey zones, 1976-95.

FOREST WILDLIFE POPULATIONS
1201 E. Hwy 2
Grand Rapids, MN 55744
(218) 327-4432

Table 19. Mean number of ruffed grouse drums per stop by census zone, 1961-96.

Year	CensusZone					Rangewide mean
	Northwest	North	Northeast	Central Hardwoods	Southeast	
1961	1.4	2.2	0.9	1.0	1.0	1.4
1962	3.0	2.1	0.5	1.2	1.6	1.6
1963	0.4	0.6	0.5	0.4	1.1	0.6
1964	0.4	0.7	0.9	0.3	0.6	0.6
1965	1.5	1.3	0.7	0.6	1.4	1.0
1966	1.6	1.2	0.6	0.7	1.9	1.0
1967	2.8	1.9	1.3	1.0	2.2	1.6
1968	3.8	2.3	1.6	1.0	2.4	2.0
1969	3.3	2.7	1.4	1.4	2.3	2.2
1970	2.1	3.2	0.9	1.6	2.1	2.2
1971	1.4	3.6	1.0	1.7	3.7	2.4
1972	2.1	3.7	1.0	2.1	3.1	2.7
1973	0.5	1.5	0.6	0.9	3.7	1.1
1974	0.7	1.1	0.8	0.7	3.0	1.0
1975	1.2	1.4	0.8	0.8	2.6	1.3
1976	0.8	1.5	0.4	0.9	1.8	1.1
1977	0.9	1.6	0.7	0.9	2.5	1.2
1978	2.1	2.4	0.8	1.4	2.3	1.7
1979	1.7	2.2	0.7	1.3	2.2	1.6
1980	1.9	2.1	0.7	1.9	2.7	1.7
1981	1.2	1.7	0.8	1.8	2.4	1.4
1982	0.9	1.1	0.3	0.9	1.1	0.8
1983	0.6	1.1	0.6	0.8	1.5	0.9
1984	1.0	1.1	0.6	0.5	1.4	0.8
1985	0.7	1.2	0.6	0.6	1.5	0.9
1986	1.7	1.1	0.4	0.6	2.5	1.0
1987	1.6	1.6	0.7	0.8	1.2	1.2
1988	1.3	2.0	1.0	1.0	1.1	1.4
1989	2.2	2.6	1.5	1.2	1.2	1.9
1990	0.8	2.5	0.9	1.1	1.2	1.6
1991	1.0	1.7	0.8	0.7	0.7	1.2
1992	1.0	1.0	0.5	0.6	0.6	0.8
1993	0.9	0.8	0.5	0.6	0.5	0.7
1994	1.7	1.0	0.5	0.5	0.4	0.9
1995	2.1	1.5	0.6	0.9	0.5	1.2
1996	2.4	1.8	0.7	0.8	0.5	1.4

Ruffed Grouse 1995-1996

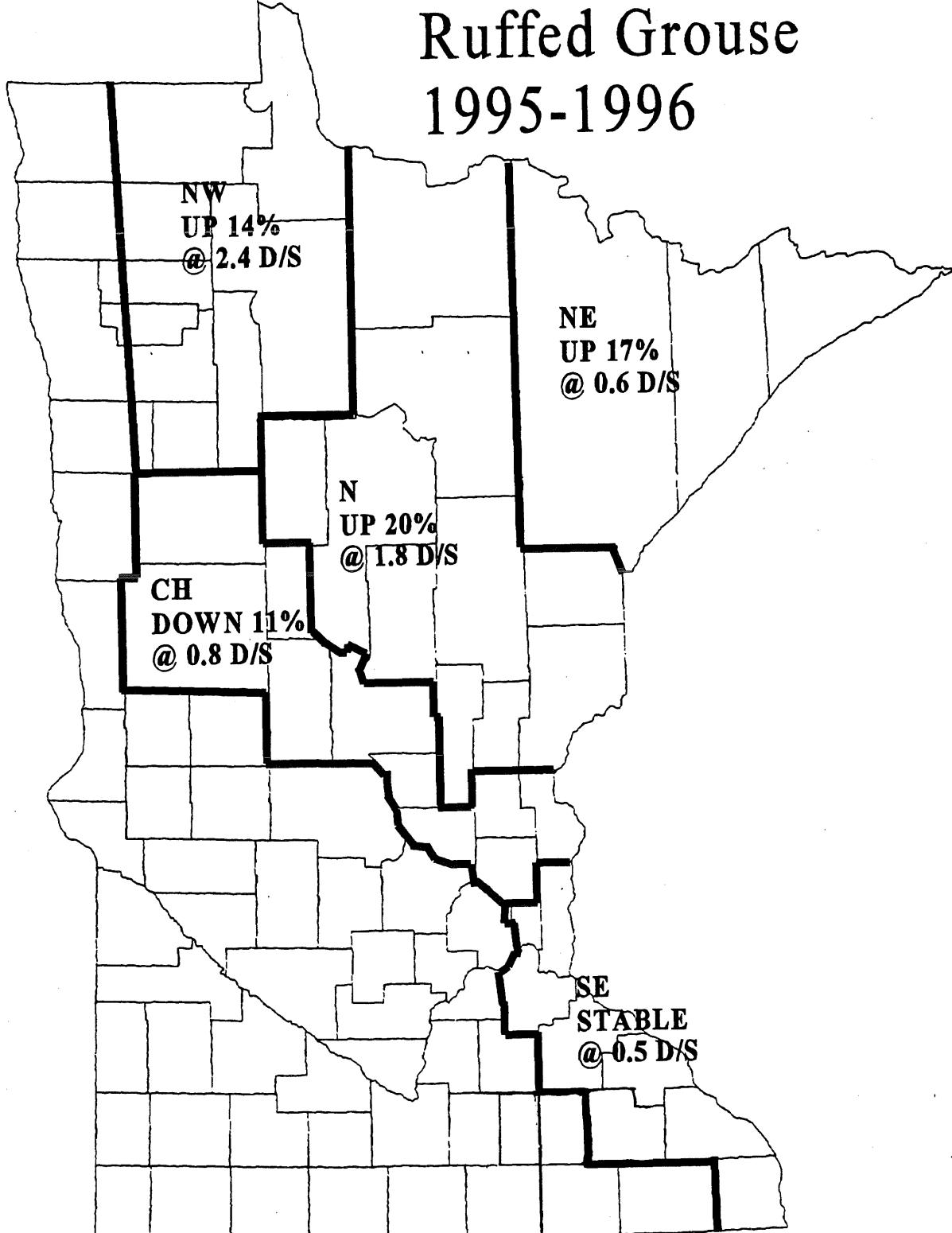


Figure 10. Changes in average numbers of ruffed grouse drums per stop on roadside counts, 1995-1996.

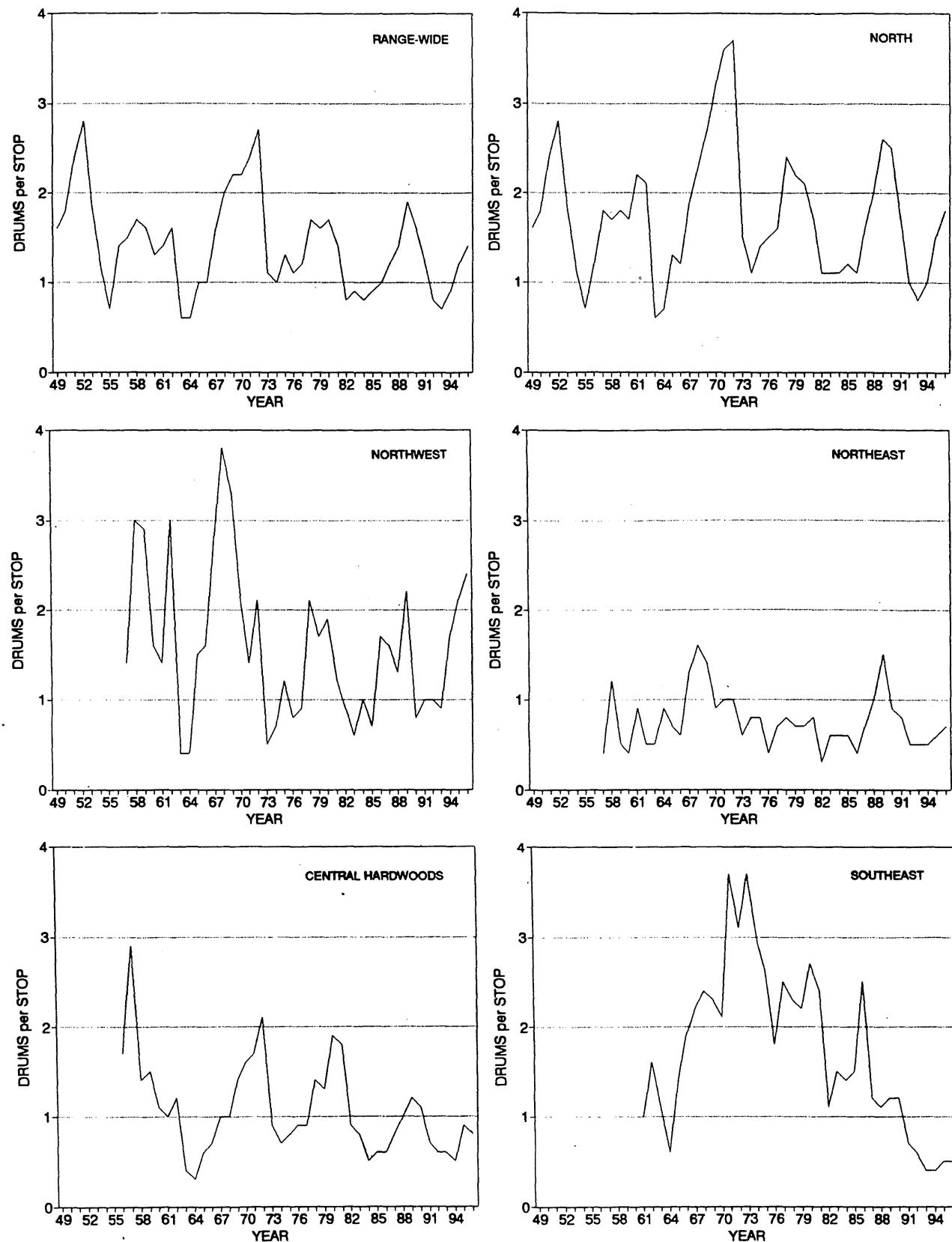


Figure 11. Summary of ruffed grouse drumming trends range-wide and in each of five survey zones, 1949-96.

Figure 12. Status of male sharp-tailed grouse on 113 Northwest and 127 East-Central range hunting grounds, 1995-1996.

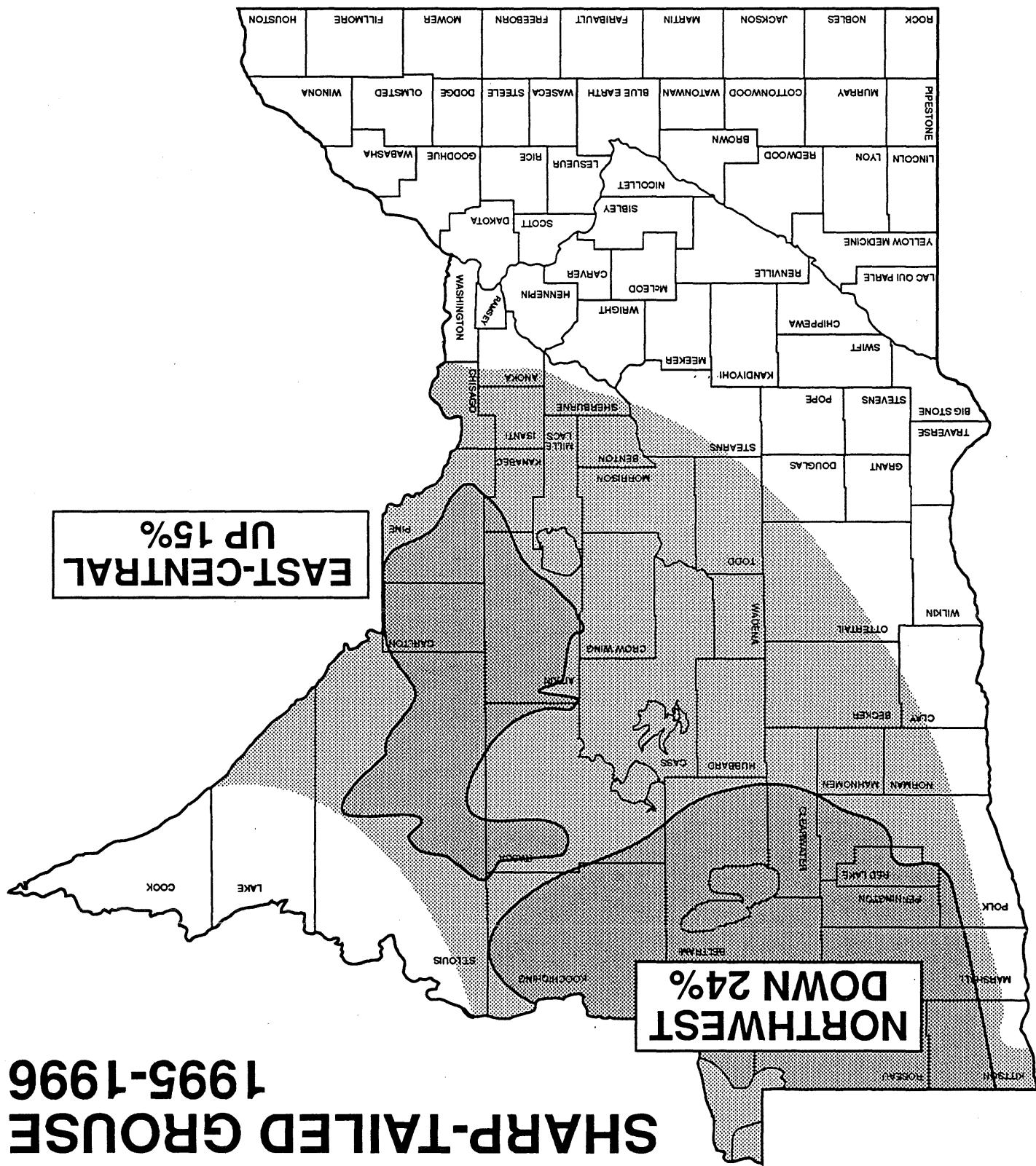


Table 20. Number of snowshoe hares seen per 100 km of ruffed grouse drumming routes in the North, Northwest, and Northeast survey zones, 1974-96.

Year	Hares seen per 100 km
1974	0.4
1975	0.0
1976	2.0
1977	2.8
1978	9.0
1979	8.8
1980	14.1
1981	9.8
1982	1.8
1983	0.7
1984	0.2
1985	0.3
1986	0.2
1987	0.5
1988	0.9
1989	2.7
1990	2.3
1991	1.2
1992	1.4
1993	0.5
1994	0.2
1995	0.5
1996	0.8

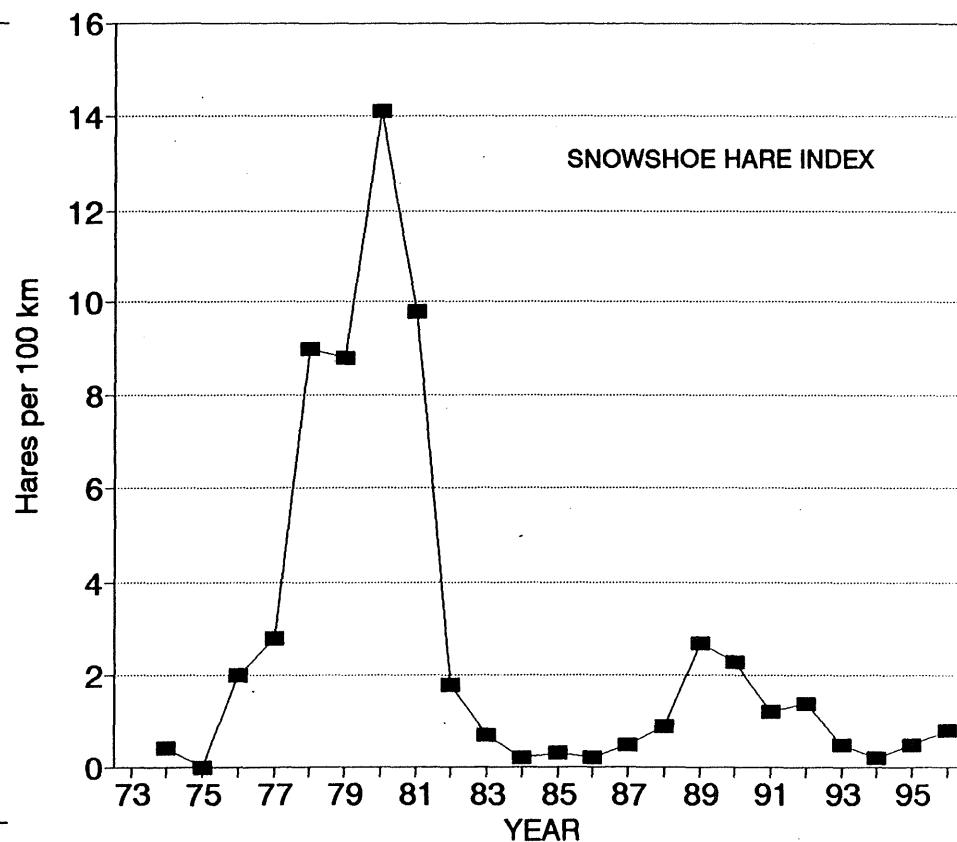


Figure 13.

Snowshoe hare index (hares/100 km) based on hares seen on northern ruffed grouse drumming routes, 1974-96.

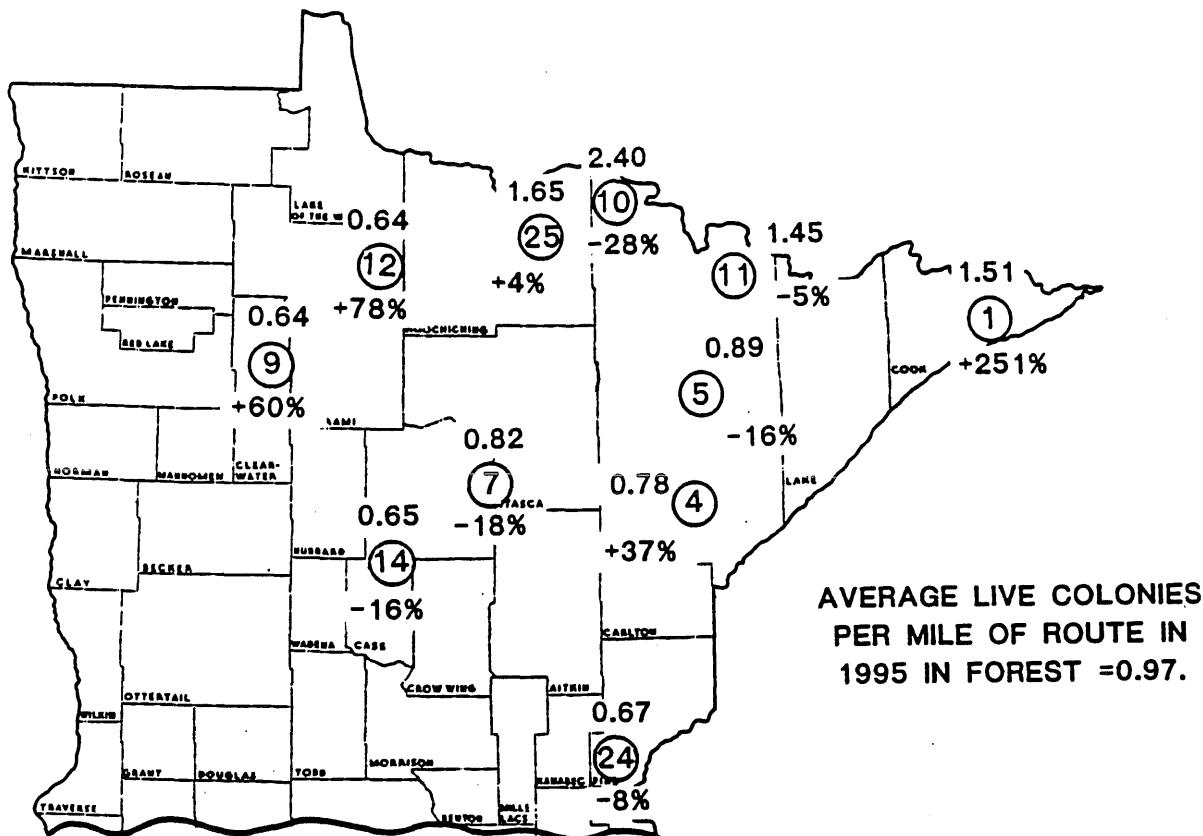


Figure 14. Approximate locations of 11 aerial beaver routes (Route Nos. circled) surveyed in 1994 and 1995, live colonies per mile in 1995, and percent change from 1994.

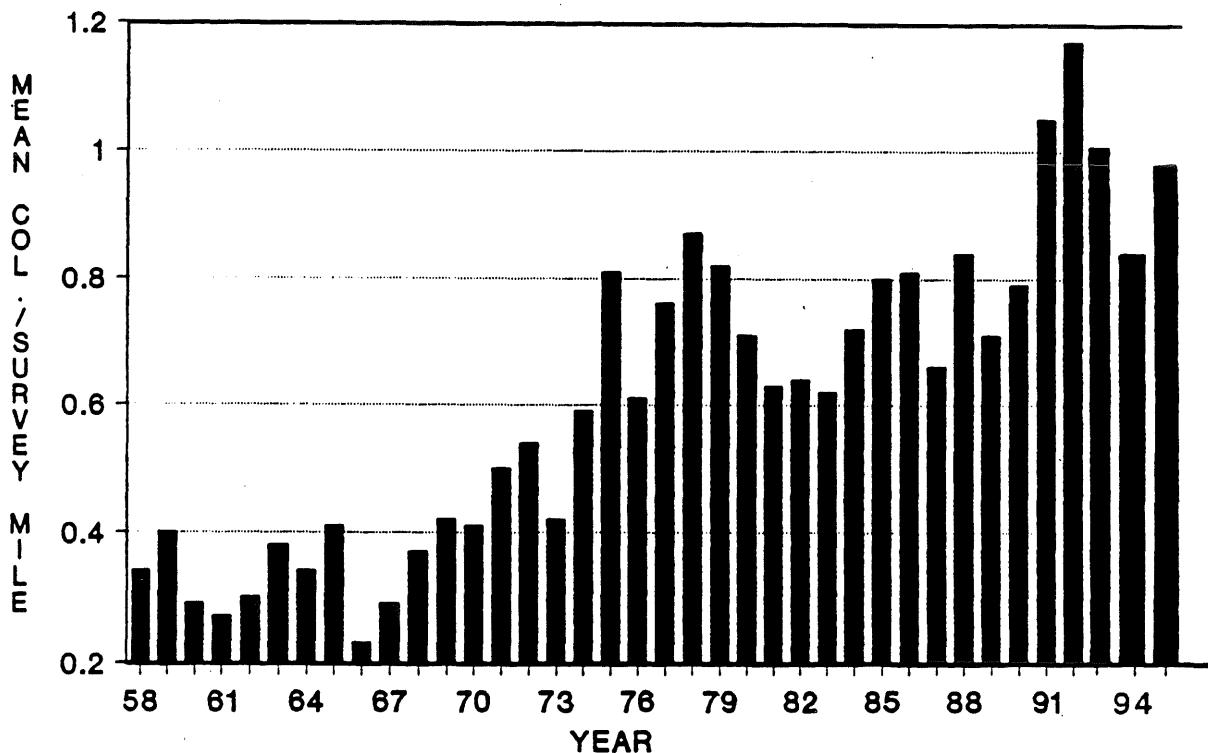


Figure 15. Range-wide (except Kabetogama peninsula) mean number of live beaver colonies per mile of survey route, 1958-95.

Table 21. Live beaver colonies per mile of census route in northern Minnesota, 1989-95.

Number	Route name	Year							1989-94 Mean	% Change from 1989-94 mean
		1989	1990	1991	1992	1993	1994	1995		
1	Cascade	0.43	0.44	1.13	1.50	0.68	0.43	1.51	0.66	+129
2	Kawishiwi	0.47	0.80	1.03	1.08	-	-	-	0.48	-
3	Itasca	0.56	0.45	0.92	1.09	-	-	-	0.43	-
4	South St. Louis	-	0.92	1.35	0.87	0.70	0.57	0.78	0.63	+ 24
5	Central St. Louis	0.83	0.81	1.12	1.02	0.98	1.06	0.89	0.83	+ 7
6	Carlton & Pine	-	1.06	1.50	1.09	-	-	-	0.52	-
7	Cass	0.84	0.98	1.16	1.62	1.14	1.00	0.82	0.96	- 15
8	Balsam-Hennepin	0.59	0.46	0.61	-	-	-	-	0.24	-
9	Pinewood-Mississippi	0.36	0.49	0.41	-	0.79	0.40	0.64	0.35	+ 83
10	Kabetogama Peninsula	2.92	3.3	2.62	2.85	3.10	3.33	2.40	2.59	- 7
11	Ely-Finger Lakes	1.09	1.20	1.67	1.35	1.40	1.52	1.45	1.18	+ 23
12	Hay Creek-Kelliher	0.56	0.46	0.58	0.78	0.84	0.36	0.64	0.51	+ 25
13	Cook County Transect	0.68	0.38	1.18	0.83	-	-	-	0.44	-
14	Cass-Crow Wing	0.89	0.87	0.96	0.88	0.75	0.77	0.65	0.73	- 11
15	Little Willow-Aitkin	0.59	0.63	0.68	-	-	-	-	0.27	-
16	East Aitkin County	0.80	-	-	-	-	-	-	0.11	-
17	West Vermilion	-	1.29	-	1.25	-	-	-	0.36	-
18	Blackduck	-	1.24	-	1.55	-	-	-	0.40	-
19	Splitrock	0.53	0.73	2.42	1.80	-	-	-	0.78	-
20	Isabella	-	-	-	-	-	-	-	-	-
21	Red Lake-Pine Island	0.36	0.33	0.51	0.56	-	-	-	0.25	-
22	Northome	-	1.14	0.78	1.08	-	-	-	0.43	-
23	Kanabec County	0.94	0.81	0.58	0.77	-	-	-	0.44	-
24	Southern Pine	1.03	0.93	0.89	1.15	0.86	0.86	0.67	0.82	- 18
25	Koochiching North	1.15	1.05	1.43	1.62	2.00	1.58	1.65	1.26	+ 31

BOBCAT

POPULATION ESTIMATE

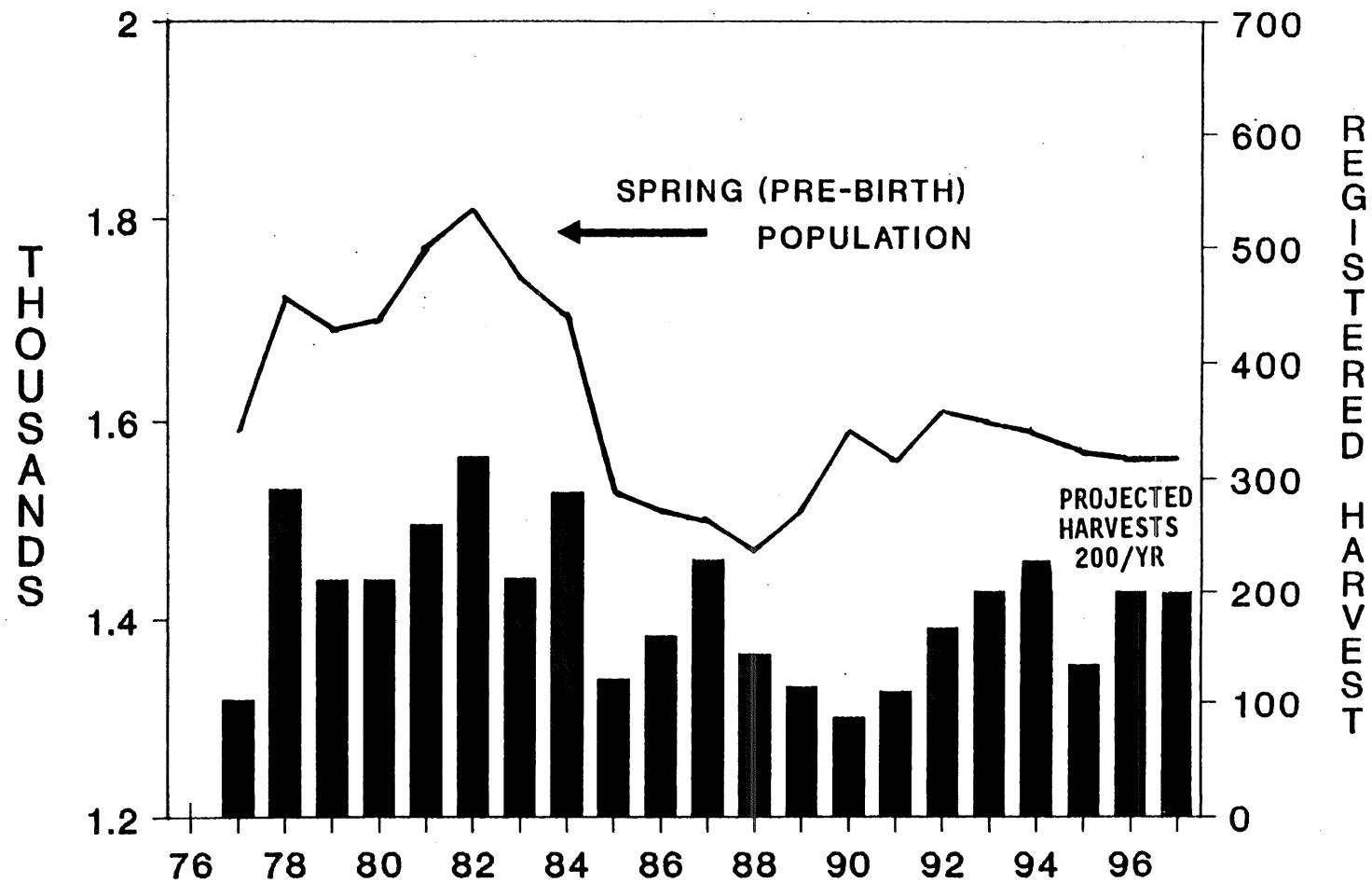


Figure 16. Population modeling summaries for bobcat, 1977-97.

Table 22. Bobcat harvest, age structure, and population index data, 1980 to 1995.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Registered take	210	260	274	208	280	119	160	214	140	129	84	106	167	201	238	134
% autumn pop. taken ¹	10	12	14	10	13	6	8	11	8	6	5	6	9	12	14	9
Carcasses examined	48	230	261	205	288	99	132	163	114	119	62	93	151	161	187	96
% juveniles	31	37	35	37	37	33	26	33	49	39	20	35	28	32	26	31
% 1.7 yrs. old	33	23	15	26	13	19	17	16	18	17	34	33	22	20	16	15
% ≥ 2.7 yrs. old	36	40	50	37	50	48	57	51	42	44	46	32	50	48	58	54
Juv.::≥2.7 yr. females	1.9	2.1	1.3	1.5	1.4	1.2	0.9	1.4	1.7	2.0	0.8	3.6	1.2	1.4	0.8	2.7
% male juveniles	80	59	47	54	52	41	53	44	58	49	58	59	55	51	64	57
% male 1.7 yrs.	69	63	49	53	66	41	32	52	62	53	80	55	45	45	43	71
% male ≥ 2.7 yrs.	56	55	47	30	44	43	51	48	46	56	44	70	53	52	45	79
Overall % males	66	58	48	45	51	42	51	48	54	53	59	61	53	50	50	71
Mean pelt price	\$79	\$73	\$66	\$61	\$76	\$70	\$120	\$101	\$68	\$48	\$43	\$37	\$28	\$43	\$36	\$34
Scent post index ²	2	14	14	3	12	5	8	7	5	17	10	16	10	14	14	10
Snowshoe hare index ³	9.8	1.8	0.7	0.2	0.3	0.2	0.5	0.9	2.7	2.3	1.2	1.4	0.5	0.2	0.5	-

¹ estimated from population model

² index for autumn prior to harvest

³ index for spring after harvest season

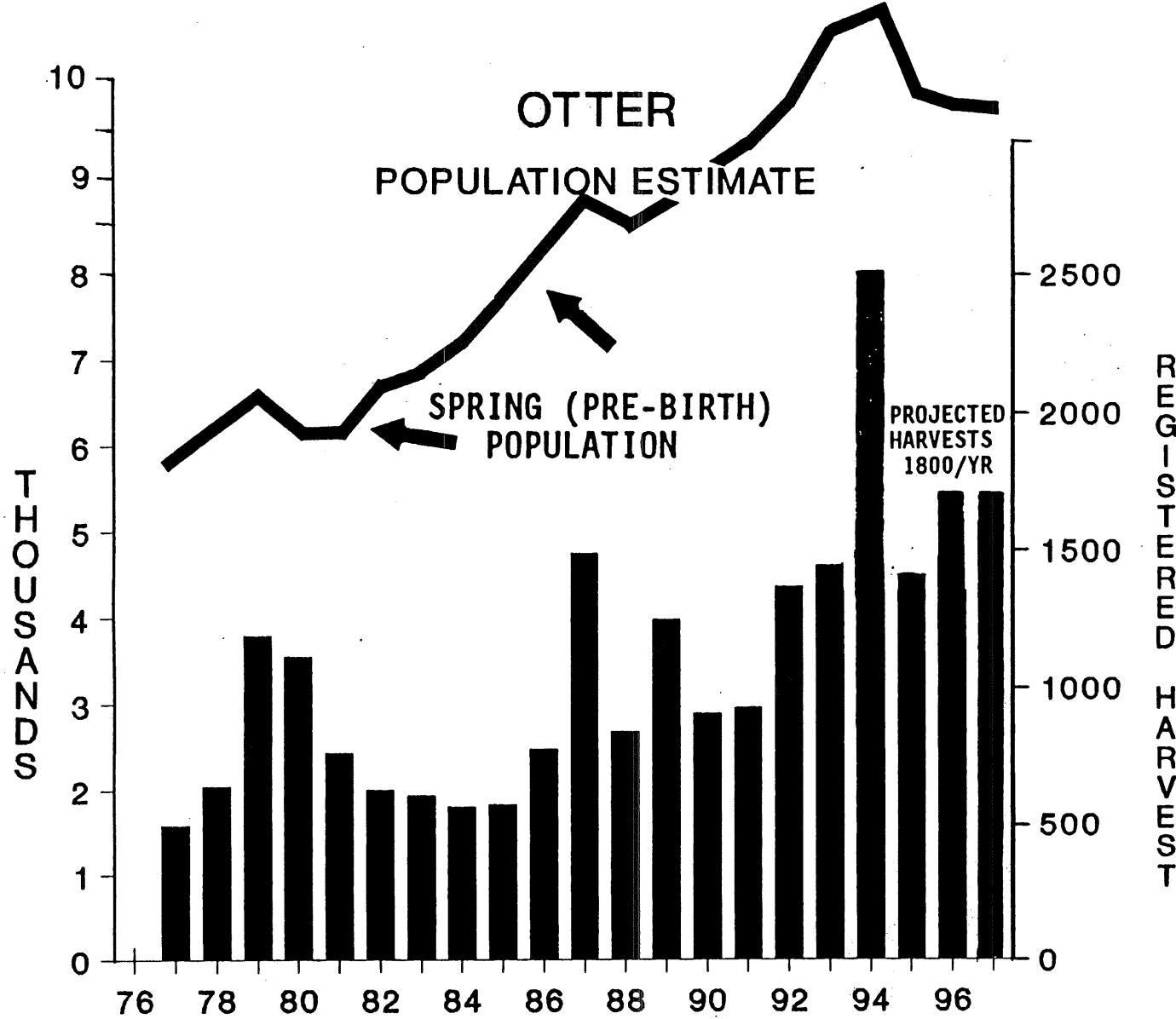


Figure 17. Population modeling summaries for otter, 1977-97.

Table 23. Otter harvest, carcass collection, and pelt price data, 1982-95. Carcasses were not collected after 1986.

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Season dates	11/13-11/27	11/12-11/26	11/17-12/01	11/16-12/15	10/24-11/29	10/24-11/29	10/29-11/27	10/28-12/17	10/27-1/6	10/26-1/5	10/24-1/3	10/23-1/9	10/29-1/8	10/28-1/7
Limit	2	2	2	3	3	3	3	3	3	3	4	4	4	4
Registered harvest	385	408	513	559	777	1,386	922	1,294	903	855	1,365	1,454	2,445	1,435
% of autumn pop. harvested*	11	10	9	9	11	20	12	17	13	13	17	18	22	14
No. of carcasses examined	389	433	549	572	745	---	---	---	---	---	---	---	---	---
% juveniles	50.6	42.3	47.9	43.4	45.2	---	---	---	---	---	---	---	---	---
% yearlings	25.6	30.9	23.3	22.9	23.3	---	---	---	---	---	---	---	---	---
% male juveniles	56.7	55.7	47.1	53.3	45.1	---	---	---	---	---	---	---	---	---
% males ≥ 1.7 yrs.	65.1	56.8	50.0	50.0	48.1	---	---	---	---	---	---	---	---	---
Mean pelt prices:														
Otter	\$26	\$25	\$22	\$21	\$24	\$23	\$22	\$22	\$24	\$25	\$29	\$43	\$48	\$38
Beaver (fall)	\$11	\$12	\$12	\$15	\$20	\$17	\$14	\$12	\$9	\$9	\$7	\$11	\$14	\$13

* From population modeling; includes an additional 25% accidental harvest over registered total.

FISHER

POPULATION ESTIMATE

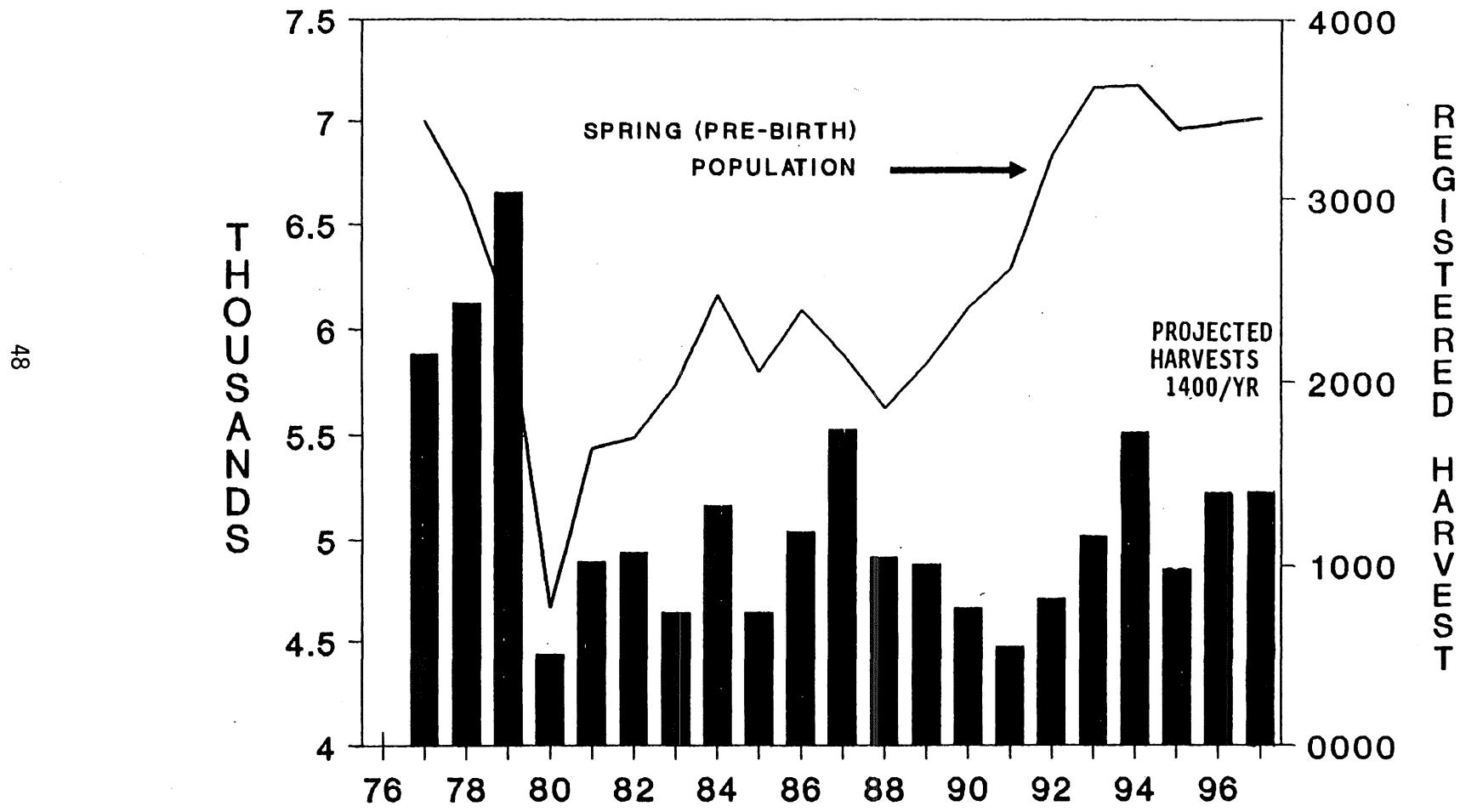


Figure 18. Population modeling summaries for fisher, 1977-97.

Table 24. Fisher harvest, carcass collection, and pelt price data, 1982-95.

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Season	12/1-12/10	12/1-12/11	12/1-12/16	11/30-12/15	11/23-12/4	11/28-12/13	11/26-12/11	12/2-12/17	12/1-12/16	11/30-12/15	11/28-12/13	12/4-12/19	12/3-12/18	12/2-12/17
Limit	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Registered Harvest	912	631	1285	678	1068	1642	1025	1243	746	528	777	1158	1771	942
% of available fall population harvested ¹	17	10	18	10	14	21	16	15	12	10	11	16	21	12
No. carcasses examined ²	1073	662	1270	712	1186	1534	805	1024	592	410	629	937	1360	---
% juveniles	66	69	63	63	59	53	70	64	65	66	54	59	56	---
% 1.7 yrs.	19	18	20	20	24	15	15	19	14	21	25	22	18	---
% ≥ 2.7 yrs.	15	13	17	18	18	22	15	17	21	13	21	19	26	---
Juv.:adult female ratio	9.4:1	8.8:1	7.2:1	5.4:1	5.3:1	4.7:1	6.8:1	5.8:1	4.5:1	7.8:1	4.9:1	5.3:1	4.0:1	---
% male juveniles	46	45	52	46	48	46	48	47	44	50	42	47	47	---
% male 1.7 yrs.	41	40	45	40	50	40	45	47	55	52	55	37	54	---
% male ≥ 2.7 yrs.	52	40	45	34	37	37	33	36	30	35	45	42	44	---
% males overall	46	44	49	43	46	43	45	45	43	48	46	44	48	---
Pelt price: males	\$70	\$71	\$70	\$74	\$84	\$84	\$54	\$26	\$35	\$21	\$16	\$14	\$19	\$16
females	\$99	\$121	\$122	\$130	\$162	\$170	\$100	\$53	\$46	\$48	\$29	\$28	\$30	\$25
Snowshoe hare index ³	0.7	0.2	0.3	0.2	0.5	0.9	2.7	2.3	1.2	1.4	0.5	0.5	0.5	---

¹ estimated from population model

² may exceed registration totals due to accidental catches, Indian Reservation season framework, etc.

³ index for Spring after harvest season.

PINE MARTEN POPULATION ESTIMATE

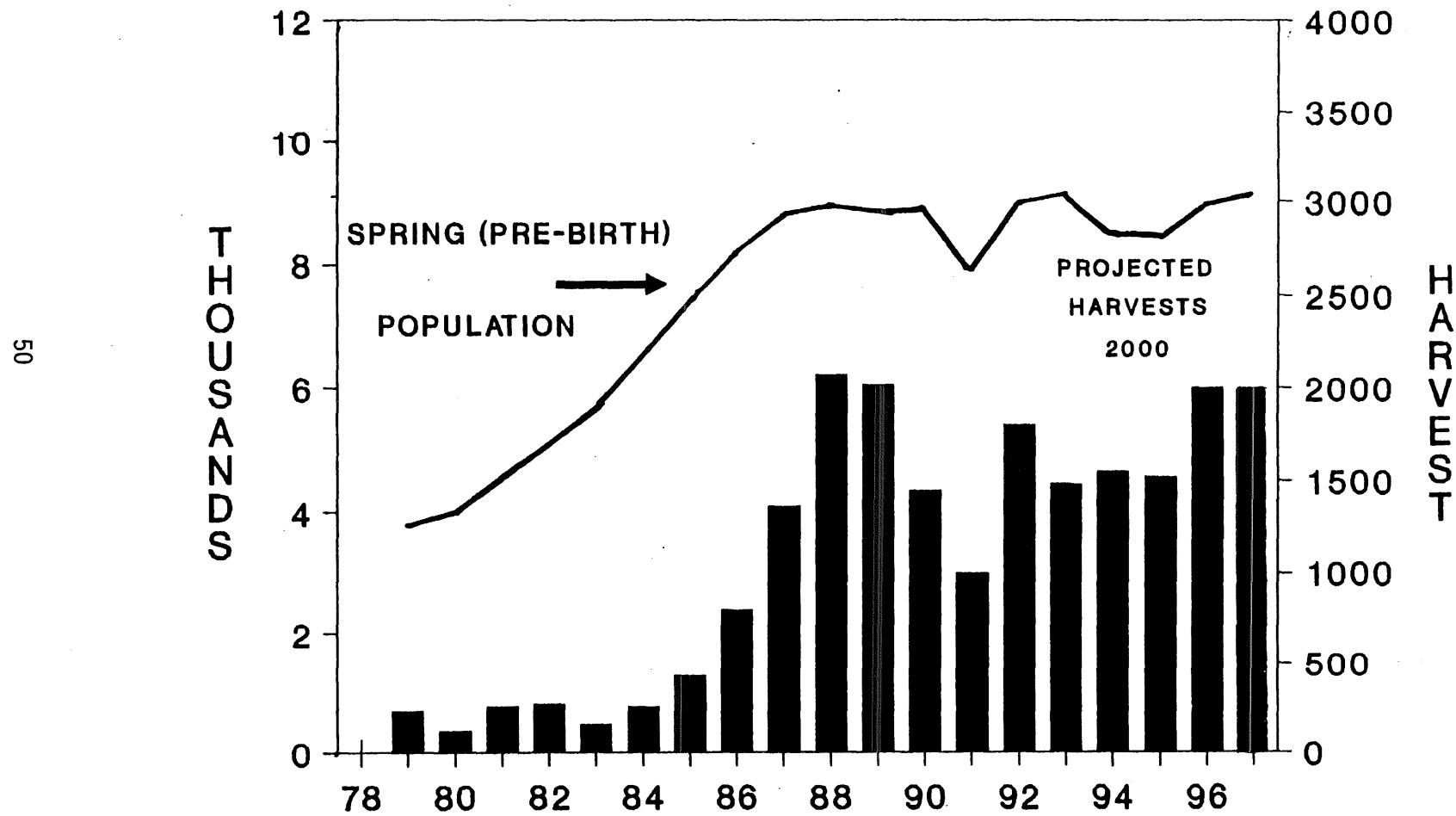


Figure 19. Population modeling summaries for pine marten, 1979-97.

Table 25. Pine marten harvest, carcass collection, and pelt price data, 1985-95.

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Season	11/30-12/15	11/29-12/14	11/28-12/13	11/26-12/11	12/ 2-12/17	12/ 1-12/16	11/30-12/15	11/28-12/13	12/ 4-12/19	12/3-12/18	12/2-12/17
Limit	1	1	1	2	2	2	1	2	2	2	2
Registered take	430	798	1,363	2,072	2,119	1,349	656	1,601	1,436	1,527	1500
% of available fall population harvested ¹	6	9	16	20	20	16	12	17	22	18	18
No. carcasses examined ²	507	884	1,754	1,977	1,014	1,375	716	1,661	1,396	1,452	1,393
% juveniles	73	64	66	66	68	48	74	65	57	58	60
% 1.7 yrs.	18	21	18	11	12	18	9	18	20	15	18
% ≥ 2.7 yrs.	9	15	16	23	20	34	17	17	23	27	22
juv.:adult female ratio	17.0:1	12.3:1	11.2:1	8.6:1	9.7:1	3.6:1	16.1:1	15.1:1	7.5:1	6.4:1	8.2:1
% male juveniles	69	65	65	58	57	59	69	63	61	62	63
% male 1.7 yrs.	68	71	67	50	63	54	71	70	71	76	68
% male ≥ 2.7 yrs.	82	81	75	66	65	61	72	75	67	67	66
% males overall	70	69	67	59	59	59	70	66	64	66	65
Pelt price: male	\$30	\$36	\$43	\$50	\$48	\$44	\$40	\$28	\$36	\$34	\$28
female	\$28	\$27	\$39	\$43	\$47	\$41	\$27	\$25	\$30	\$28	\$21

1 estimated from population model

2 may exceed registration totals due to harvests by Indians, accidental catches, etc.

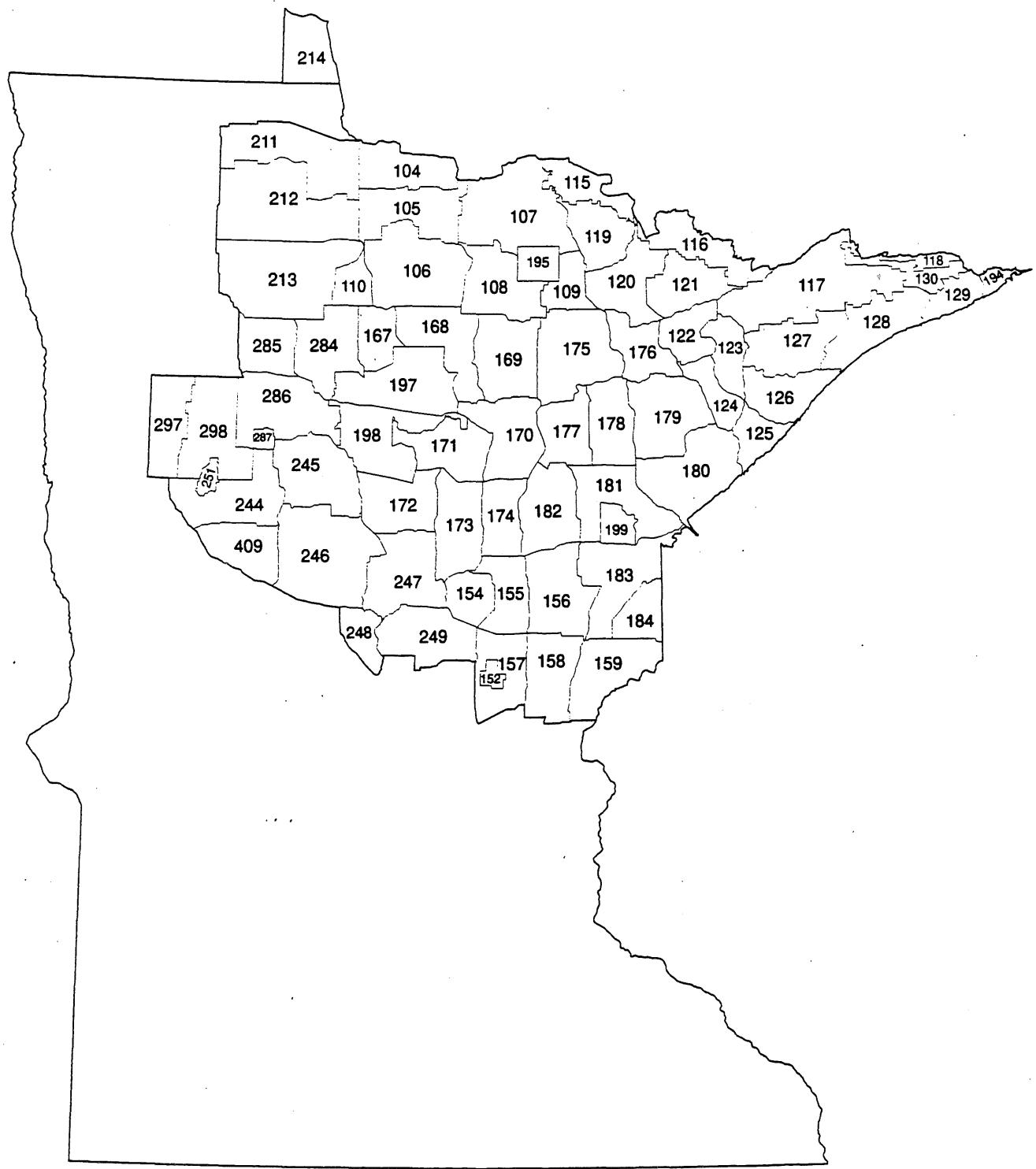


Figure 20. Deer Permit Areas in the Forest zone.

Table 26. Spring white-tailed deer densities estimated from population modeling in Deer Management Units of Minnesota's Forest zone, 1988-96^a

Permit Area DMU	Deer per square mile								
	1988	1989	1990	1991	1992	1993	1994	1995	1996
Permit Area 167-169	21	17	19	20	21	19	17	17	10
Permit Area 170-171	19	16	19	21	17	16	15	16	10
Permit Area 172	24	20	24	26	25	22	20	19	11
Permit Area 173-174	19	16	19	21	17	16	15	16	14
Permit Area 175-179	13	10	11	11	11	11	10	11	7
Permit Area 180-184, 199	13	11	12	12	11	11	10	11	9
Permit Area 197-198	13	11	12	12	12	11	11	11	7
Permit Area 284-286	25	22	24	26	27	25	24	25	17
ITASCA DMU	17	14	16	17	16	15	14	15	10
Permit Area 154-156	14	13	14	15	13	11	10	10	8
Permit Area 157-158	20	22	25	27	25	20	19	20	18
Permit Area 159	20	22	25	26	22	20	22	23	22
Permit Area 244	20	19	23	26	28	25	24	25	19
Permit Area 245	23	21	24	26	26	23	21	22	15
Permit Area 246	18	18	21	24	24	21	19	19	16
Permit Area 247	15	15	17	18	18	17	16	16	14
Permit Area 248	14	14	17	19	18	18	17	18	15
Permit Area 249	11	11	12	14	14	12	11	11	8
Permit Area 297-298	7	6	7	7	7	7	6	6	5
MILLE LACS DMU	16	16	18	19	19	16	15	16	13
Permit Area 104-106	5	4	5	5	5	4	5	4	3
Permit Area 107-109, 195	11	10	11	11	11	11	12	12	7
Permit Area 110	26	23	26	27	28	23	23	24	16
Permit Area 211-213	10	9	10	10	11	9	10	11	8
RAINY RIVER DMU	9	8	9	9	9	9	9	10	6
Permit Area 119-121	14	13	15	16	16	16	15	17	10
Permit Area 122-125	9	7	8	8	7	6	5	6	3
Permit Area 126, 128-129	5	4	4	4	4	3	3	4	2
SUPERIOR DMU	9	8	9	10	9	9	8	9	5

^a Historical density figures may differ from those previously published because of annual recalculation as more accurate modeling data are available.

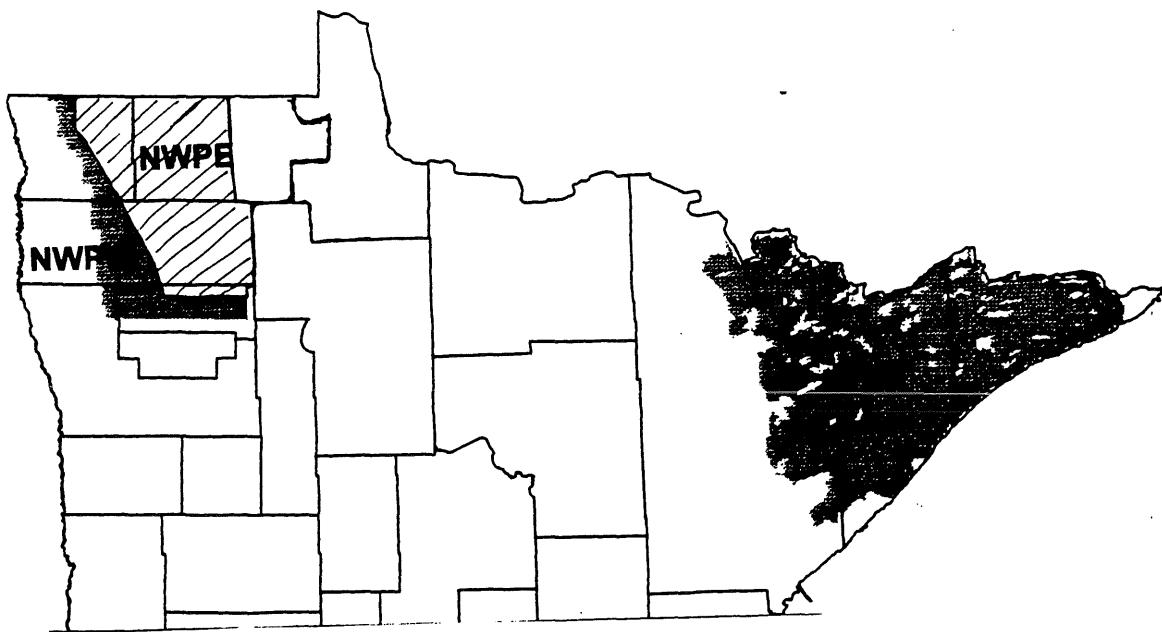


Figure 21. Aerial moose survey area boundaries.

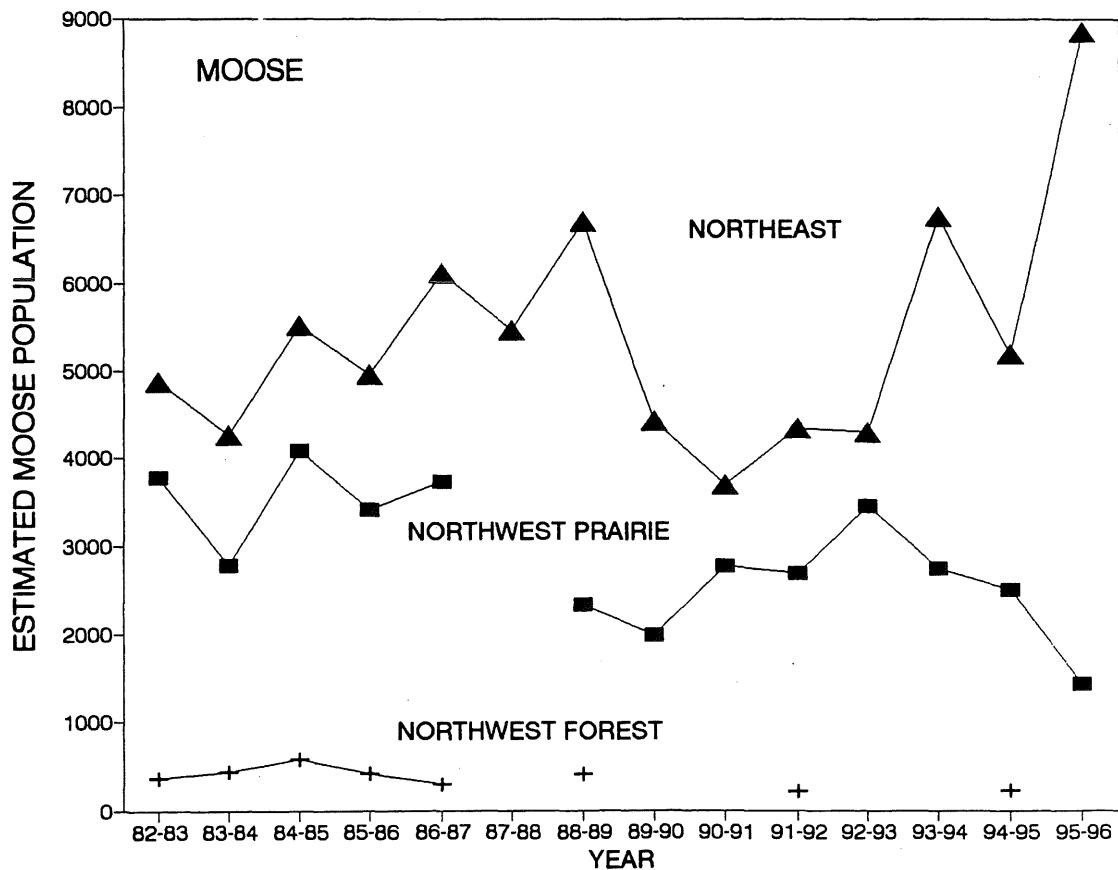


Figure 22. Moose population trends by survey area in northern Minnesota. Trend lines are broken where survey information was not collected.

Table 27. Moose population estimates from aerial moose survey in Minnesota, 1982-96.

Year	<u>Population Estimate by Survey Area (+90% CI)</u>		
	Northwest Prairie	Northwest Forest	Northeast
1982-83	3772 (930)	370 (124)	4877 (999)
1983-84	2784 (567)	446 (139)	4274 (925)
1984-85	4086 (518)	578 (148)	4451 (\pm 774)
1985-86	3415 (412)	433 (100)	4918 (\pm 1029)
1986-87	3740 (747)	307 (83)	5994 (\pm 1438)
1987-88	no survey	no survey	5492 (\pm 1090)
1988-89	2328 (474)	419 (153)	6938 (\pm 2502)
1989-90	1985 (435)	no survey	4492 (\pm 1227)
1990-91	2771 (817)	no survey	3572 (\pm 1670)
1991-92	2678 (\pm 629)	223 (\pm 65)	4362 (\pm 1323)
1992-93	3452 (\pm 640)	no survey	4292 (\pm 1371)
1993-94	2735 (\pm 491)	no survey	6768 (\pm 1807)
1994-95	2500*	229 (\pm 88)	5193 (\pm 1516)
1995-96	1436	no survey	8854 (\pm 9513)
change 1993-94 to 1994-95	- 43%		+ 70%

* The Northwest Prairie (NWP) survey area was re-stratified and split into two separate survey areas, the Northwest Prairie East (NWPE) and the Northwest Prairie West (NWPW). Results from these two areas were combined to give the NWP population estimate.

MIGRATORY BIRD POPULATIONS
Wetland Wildlife Populations and Research
102 23rd Street
Bemidji, MN 56601
(218) 755-2973

Table 28. Estimates of Minnesota mallard breeding populations, 1975-96.

Species	Year	Unadjusted population index	Visibility factor	Adjusted population estimate (thousands)
Mallard	1975	55,093	3.19	176
	1976	69,844	1.69	118
	1977	60,617	2.21	134
	1978	56,152	2.61	147
	1979	61,743	2.57	159
	1980	83,775	2.05	172
	1981	79,562	1.95	155
	1982	51,655	2.33	121
	1983	73,424	2.12	156
	1984	94,514	1.99	188
	1985	96,045	2.26	217
	1986	108,328	2.16	235
	1987	165,881	1.16	192
	1988	155,453	1.75	272
	1989	124,362	2.19	273
	1990	140,879	1.65	232
	1991	128,315	1.75	225
	1992	144,125	2.50	360
	1993	123,771	2.47	306
	1994	138,482	3.08	426
	1995	142,557	2.24	319
	1996	153,473	2.05	315

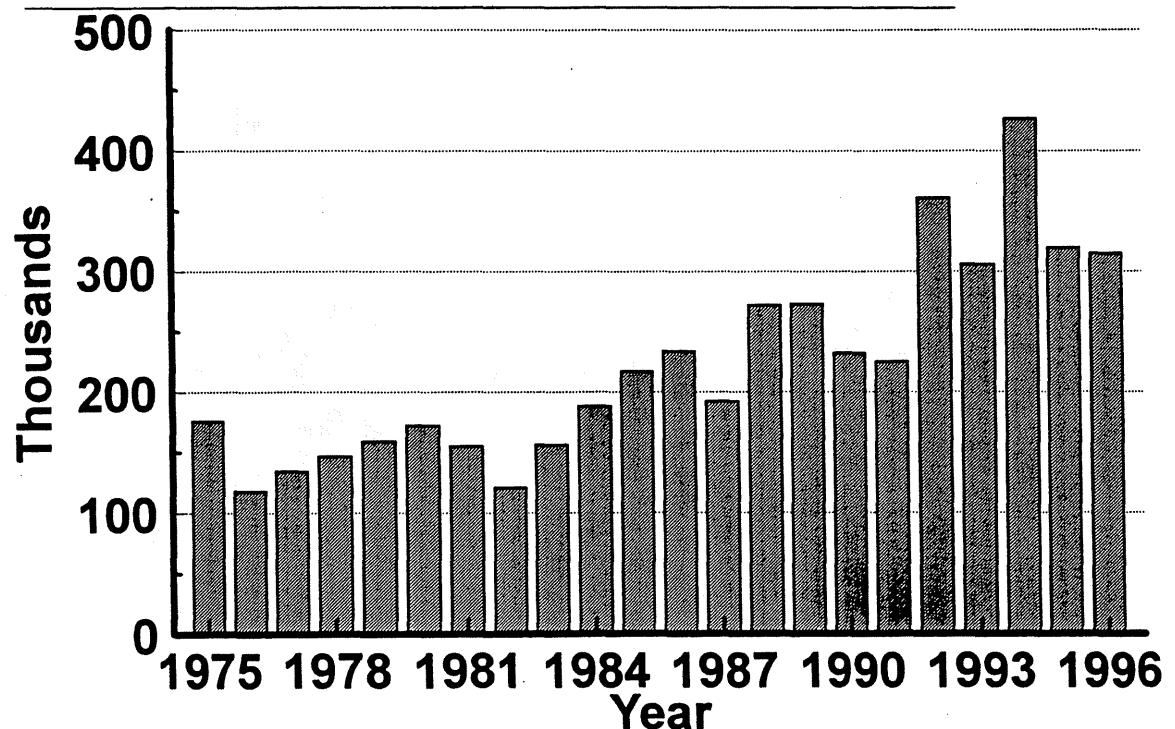


Figure 23. Minnesota Mallard breeding populations, 1975-96

Table 29. Estimates of Minnesota Blue-winged teal breeding populations, 1975-96.

Species	Year	Unadjusted population index	Visibility factor	Adjusted population estimate (thousands)
Blue-winged teal	1975	45,948	3.95	181
	1976	89,370	4.87	436
	1977	37,391	3.86	144
	1978	28,491	8.53	243
	1979	46,708	5.21	243
	1980	50,966	6.49	331
	1981	64,546	2.59	167
	1982	42,772	4.75	203
	1983	42,728	2.81	120
	1984	89,896	2.82	254
	1985	90,453	2.91	264
	1986	68,235	2.69	183
	1987	102,480	1.99	204
	1988	101,135	2.38	240
	1989	90,300	3.16	286
	1990	107,183	3.09	331
	1991	91,495	2.90	265
	1992	93,107	3.83	357
	1993	64,670	4.02	260
	1994	70,324	5.48	385
	1995	47,737	4.40	210
	1996	57,196	5.05	289

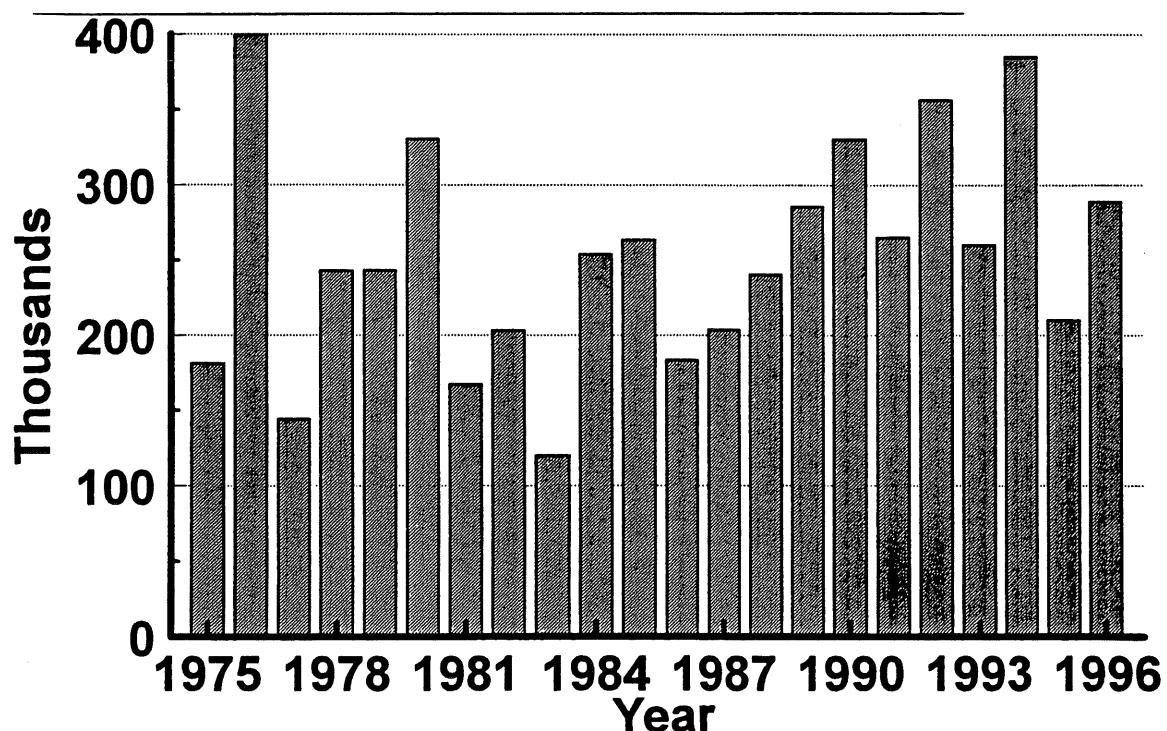


Figure 24. Minnesota Blue-winged teal breeding population, 1975-96.

Table 30. Winter population estimates (post hunting season) of the Canada goose eastern prairie flock, 1963-95 (taken from: U.S. Fish and Wildlife Service/Canadian Wildlife Service. 1996. Waterfowl population status, 1996. July 1996. 39pp).

Year	Population
1963	110,000
1964	103,000
1965	104,000
1966	121,000
1967	145,000
1968	134,000
1969	107,000
1970	121,000
1971	152,000
1972	177,000
1973	187,000
1974	188,000
1975	199,000
1976	254,000
1977	270,000
1978	207,000
1979	172,000
1980	151,000
1981	175,000 ^a
1982	210,000
1983	163,000 ^b
1984	168,000
1985	169,000
1986	183,000
1987	228,000
1988	184,000
1989	325,000
1990	218,000
1991	189,000
1992	146,000
1993	116,000
1994	234,000
1995	256,000

^a In 1983, U.S.F.W.S. revised a previously published estimate (145,000) due to supplemental information.

^b Supplemental information suggests that the 1983 population was 170,000 - 190,000 birds.

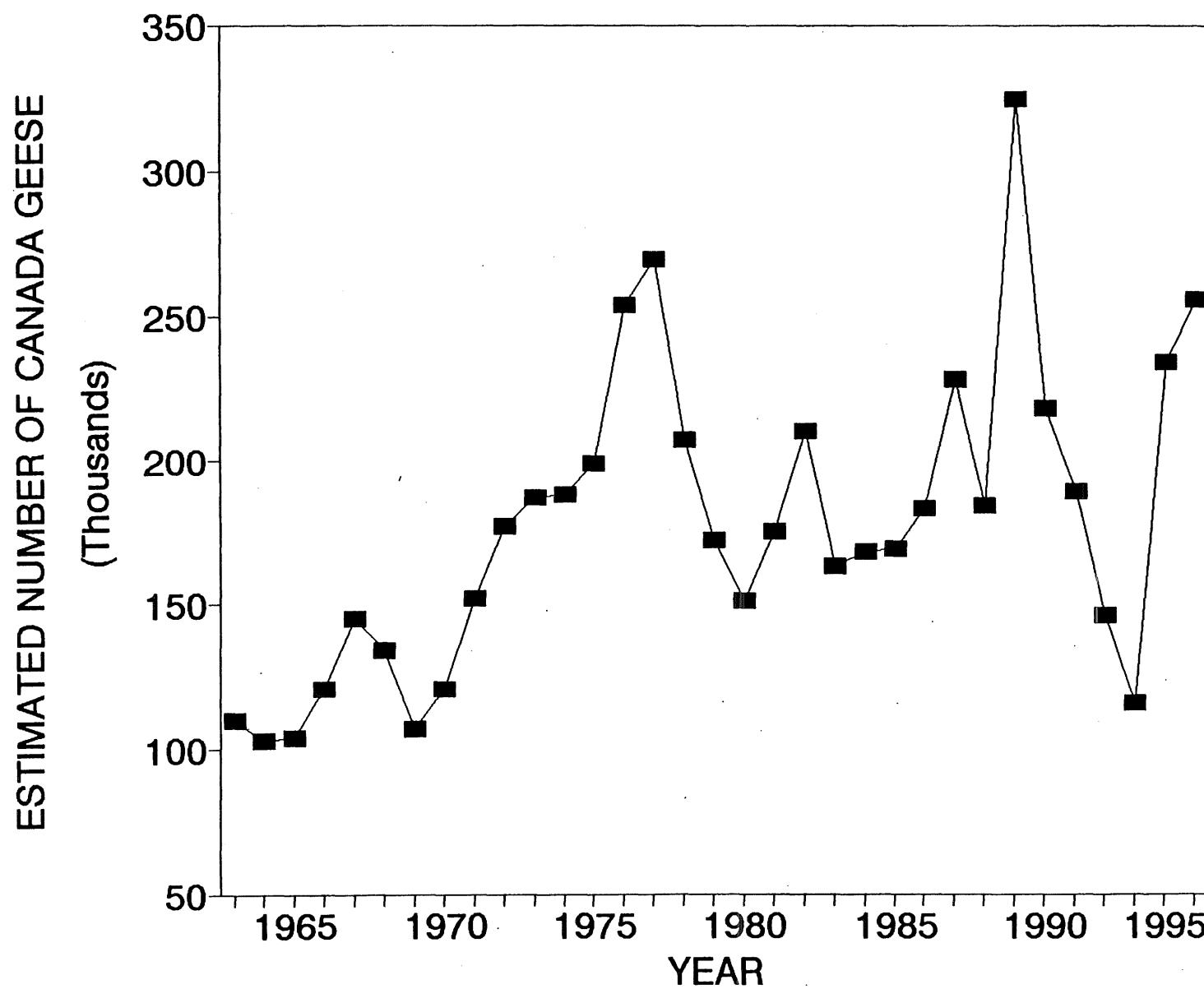


Figure 25. Winter population estimates of the Eastern Population of Canada geese, 1963-96 (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service reports 1996. Waterfowl population status, 1996. July 1996. 39pp).

Table 31. Numbers of Canada geese represented by singles (singles x 2 x 1.4), pairs (pairs x 2 x 1.4) and groups (not corrected for visibility), (from: 1996 EPP Breeding population survey. Humburg, Dale D., Missouri Dept. of Conservation; Paul Telander, Minnesota DNR; and Robert Foster, U.S. Fish and Wildlife Service.)

Year	SINGLES		PAIRS		GROUPS		TOTAL	
	No.	95% CI	No.	95% CI	No.	95% CI	No.	95% CI
1972	51,200	9,800	63,100	11,600	32,800	11,400	147,100	19,000
1973	52,900	9,100	76,800	15,200	22,100	7,400	151,800	19,200
1974	40,900	7,700	66,500	13,600	28,100	8,400	135,500	17,700
1975	71,600	12,700	66,500	11,800	26,300	10,800	164,400	20,400
1976	78,500	17,300	109,200	20,800	49,600	15,300	237,300	31,100
1977	56,300	12,300	78,500	17,200	68,700	21,400	203,500	22,200
1978	35,800	9,100	97,200	15,900	93,000	28,300	226,000	33,700
1979	39,200	8,600	52,900	13,700	47,300	36,400	139,400	39,800
1980	No survey conducted in 1980							
1981	47,800	9,700	49,500	11,500	70,400	40,300	167,700	43,000
1982	61,400	11,700	59,700	11,300	47,700	24,200	168,800	29,200
1983	40,900	8,800	76,800	12,700	109,500	56,600	227,200	58,700
1984	68,200	11,500	69,900	13,100	39,300	20,300	177,400	26,800
1985	51,200	12,900	69,900	12,100	77,700	25,900	198,800	31,400
1986	73,300	13,000	85,300	15,400	92,600	28,400	251,200	34,800
1987	61,400	12,700	121,100	20,300	65,100	17,700	247,600	29,800
1988	78,500	14,000	95,500	15,400	90,600	29,800	264,600	36,400
1989	75,100	12,700	83,600	15,200	121,300	40,600	280,000	45,200
1990	90,100	15,500	124,500	18,600	89,600	21,400	304,200	31,900
1991	95,500	17,200	141,600	22,000	71,000	31,300	308,100	42,000
1992	90,400	15,600	126,200	21,400	53,100	14,400	269,700	30,200
1993	95,500	14,700	88,700	16,500	28,300	13,500	212,500	25,900
1994	92,100	15,700	88,700	16,600	156,400	66,400	337,300	70,200
1995	66,500	12,100	116,000	18,900	108,100	46,600	290,600	51,800
1996	73,300	12,200	112,600	20,800	86,000	40,900	271,900	47,500

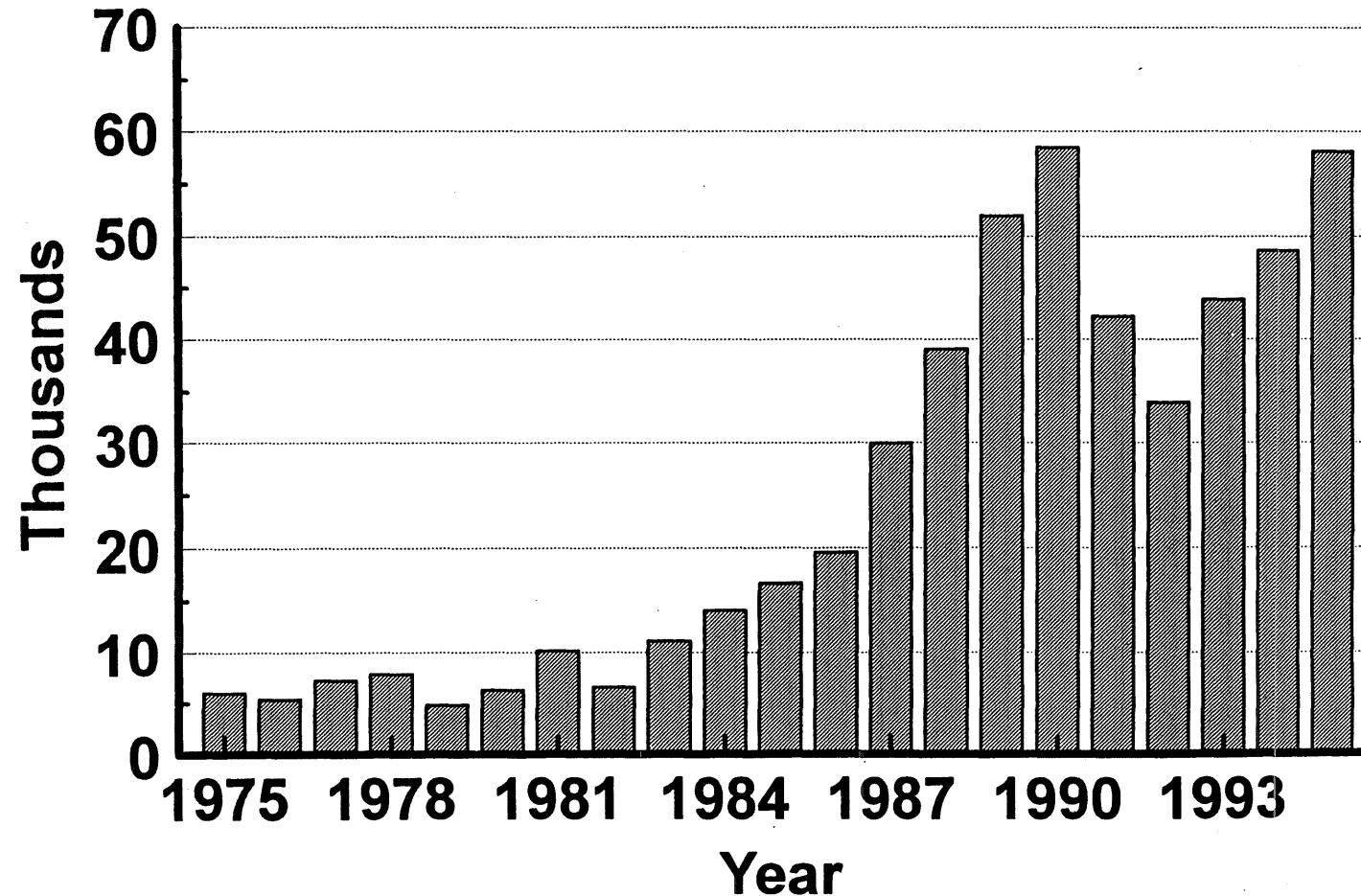


Figure 26. Minnesota Canada goose breeding population, 1975-96 (from: Lawrence, J. S. 1996. 1996 waterfowl breeding population survey for Minnesota. Minnesota Department of Natural Resources and U. S. Fish and Wildlife Service. Unpublished report. 13pp.)

Table 32. Estimated number of May ponds (adjusted for visibility) in Prairie Canada (portions of Alberta, Saskatchewan and Manitoba) 1961-96 and north-central U.S. (North Dakota, South Dakota and Montana) 1974-96. (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service, 1996. Waterfowl population status, 1996. July 1996. 39pp).

Year	<u>Ponds (thousands)</u>	
	Prairie Canada	North Central U.S. ^a
1961	1,977	--
1962	2,369	--
1963	2,482	--
1964	3,371	--
1965	4,379	--
1966	4,555	--
1967	4,691	--
1968	1,986	--
1969	3,548	--
1970	4,875	--
1971	4,053	--
1972	4,009	--
1973	2,950	--
1974	6,390	1,841
1975	5,320	1,911
1976	4,599	1,392
1977	2,278	771
1978	3,622	1,590
1979	4,859	1,522
1980	2,141	761
1981	1,443	683
1982	3,185	1,458
1983	3,906	1,259
1984	2,473	1,766
1985	4,283	1,327
1986	4,025	1,735
1987	2,524	1,348
1988	2,110	791
1989	1,693	1,290
1990	2,817	691
1991	2,494	706
1992	2,784	825
1993	2,261	1,351
1994	3,769	2,216
1995	3,893	2,443
1996	5,003	2,480
Average	3,375	1,349
1996	5,003	2,480
% Change in 1996 from:		
1995	+29	+2
Long term Average	+48	+84

^a No comparable survey data available for the north-central U.S. during 1961-73.

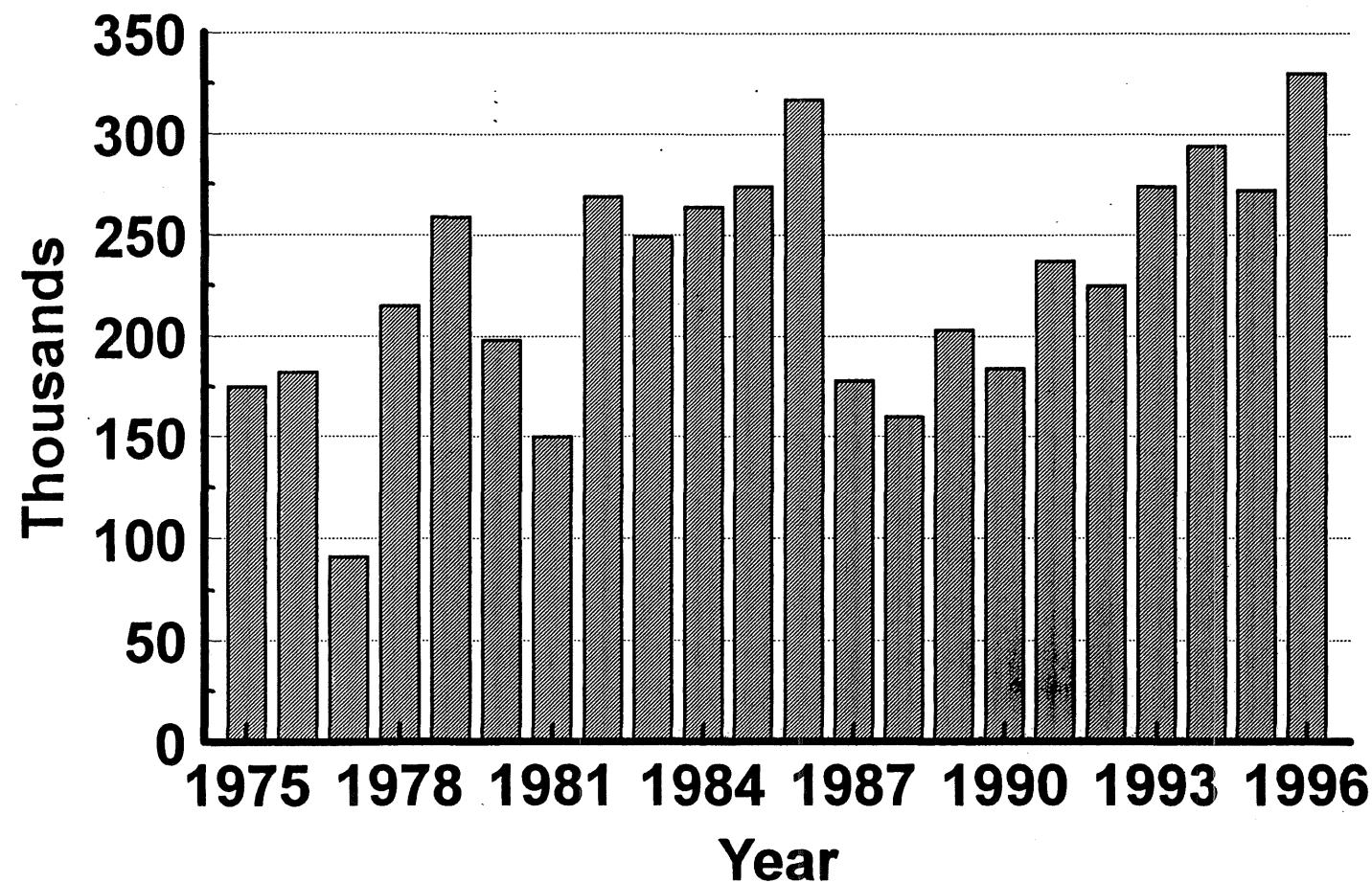


Figure 27. Estimated number of May ponds for Minnesota, 1975-96.

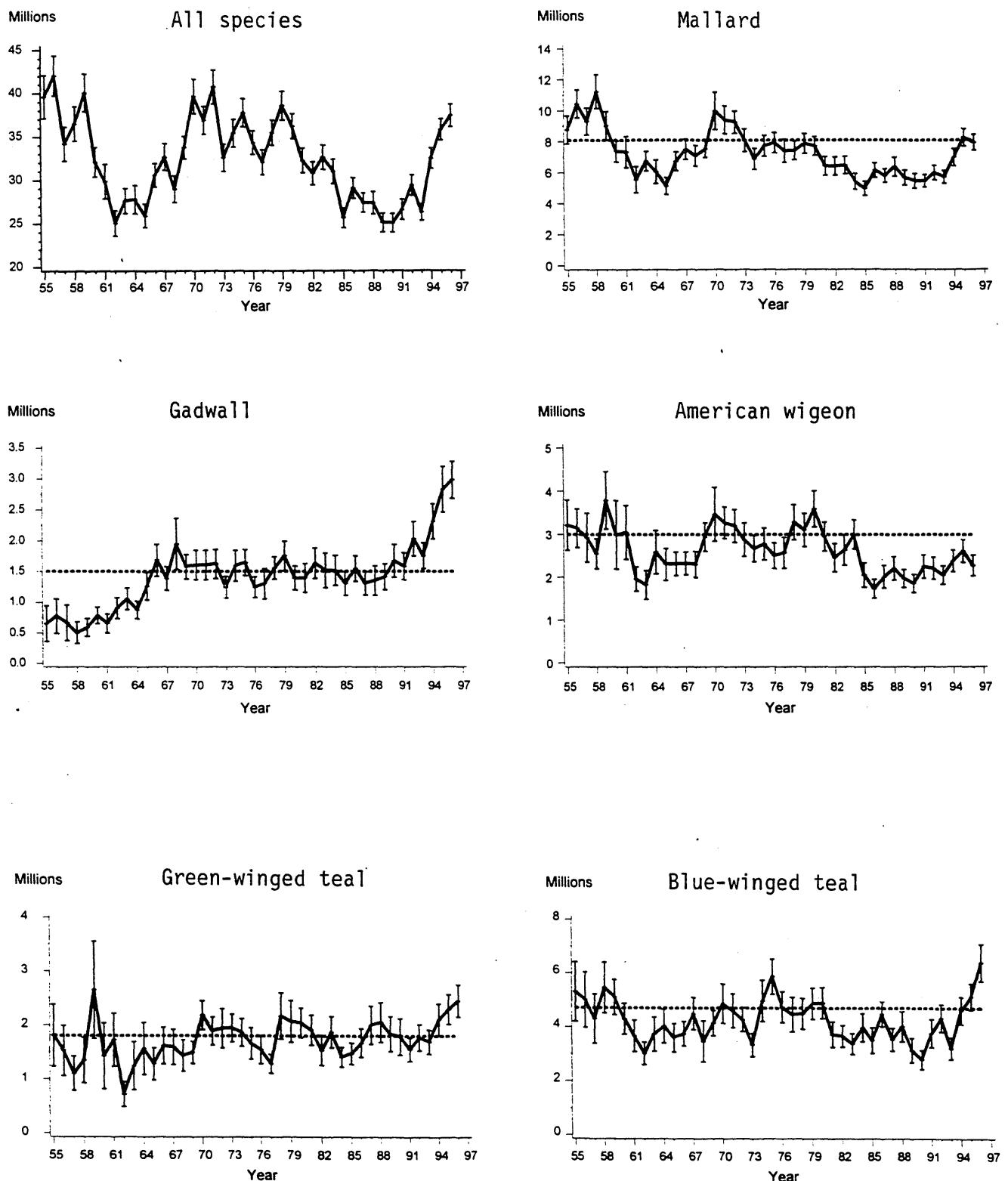


Figure 28. Estimates of North American breeding populations of selected ducks and number of water areas in May in Prairie Canada and Northcentral U.S. (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service 1996. Waterfowl population status, 1996 July 1996. 39 pp).

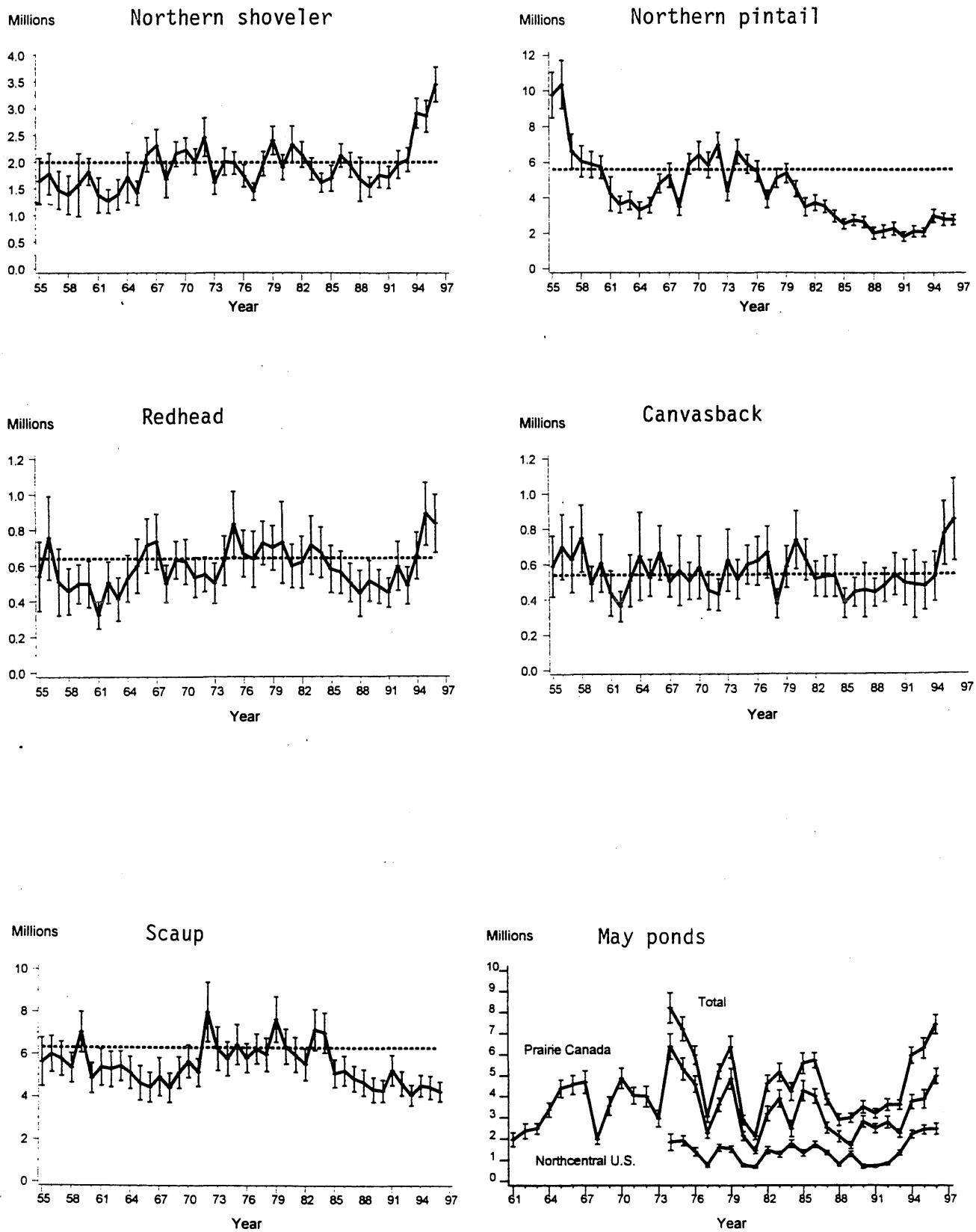


Figure 28. (continued)

Table 33. North American breeding population estimates for 10 species of ducks, 1955-96. (from: U.S. Fish and Wildlife Service/Canadian Wildlife Service, 1996. Waterfowl population status, 1996. July 1996. 39pp). In thousands.*

Year	Mallard		Gadwall		American wigeon		Green-winged teal		Blue-winged teal		Northern shoveler		Northern pintail		Redhead		Canvasback		Scaup	
	N	SE*	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE	N	SE
1955	8355.9	383.5	662.7	56.0	3066.7	269.0	1822.8	265.0	5381.2	368.5	1571.3	108.6	9387.1	554.1	572.1	69.0	599.2	68.3	5608.9	453.3
1956	9841.5	394.6	782.6	51.4	3117.6	321.7	1479.5	153.2	4762.9	308.3	1630.4	86.1	9897.3	605.6	755.1	94.5	695.8	80.5	5733.8	571.9
1957	9151.3	398.9	691.0	75.3	2851.5	296.8	1053.3	143.5	4312.4	263.2	1458.7	110.4	6310.7	421.1	542.2	68.2	614.5	91.8	5745.3	436.9
1958	10993.6	521.8	453.8	36.4	2421.3	244.3	1326.1	223.1	5164.7	386.8	1187.3	143.0	5552.4	363.2	443.1	55.4	742.4	97.0	5285.8	473.0
1959	8746.1	649.3	527.2	59.8	3703.0	386.1	2601.1	505.1	5046.2	483.0	1455.8	288.1	5482.9	383.0	492.8	89.1	480.6	51.4	6961.3	602.3
1960	7164.1	347.5	720.9	54.8	2936.5	411.3	1389.8	349.4	4184.7	296.2	1743.1	124.4	5414.2	288.2	494.7	70.3	599.5	81.2	4825.9	411.8
1961	6912.0	502.3	594.3	66.7	2817.3	240.7	1708.7	272.7	3655.0	322.3	1256.4	127.9	3676.0	265.8	319.1	40.8	427.6	63.7	5335.3	459.6
1962	5139.4	271.7	846.3	77.0	1882.0	142.8	700.3	131.4	2940.2	190.0	1182.5	88.5	3395.4	199.2	503.3	69.1	353.7	41.3	5240.3	404.2
1963	6723.2	418.4	1092.0	91.0	1705.9	142.7	1155.3	199.7	3680.5	307.1	1278.3	120.1	3621.9	205.5	413.0	59.8	499.4	73.1	5396.4	393.2
1964	5740.2	368.6	825.1	61.6	2494.7	311.7	1505.0	256.6	3960.8	306.6	1608.1	233.8	3013.3	184.2	526.5	70.3	649.1	127.1	5057.9	387.4
1965	5101.2	246.1	1269.7	112.7	2312.3	192.6	1237.2	126.6	3569.6	253.7	1372.2	84.8	3549.4	186.8	599.0	76.2	520.2	50.0	4651.5	396.2
1966	6679.7	302.3	1672.3	130.1	2281.9	134.4	1579.6	185.0	3718.3	218.7	2102.8	154.8	4763.7	242.9	712.8	76.5	658.3	76.7	4431.8	320.6
1967	7470.4	334.5	1384.6	97.8	2320.0	139.5	1588.1	164.5	4509.2	310.9	2291.0	155.8	5270.4	327.5	734.2	78.9	500.2	45.0	4931.7	453.8
1968	7018.5	328.0	1947.0	213.7	2281.5	154.4	1405.3	144.3	3459.0	383.2	1645.6	165.7	3469.7	224.7	492.5	51.3	561.3	100.5	4360.3	323.9
1969	7536.0	274.6	1573.0	100.2	2918.6	170.2	1467.5	94.4	4132.7	239.4	2145.2	114.8	5900.2	280.2	632.5	53.5	500.8	53.4	5130.6	360.8
1970	9960.0	616.1	1606.1	123.5	3447.0	317.6	2171.0	133.4	4858.1	372.4	2220.1	116.3	6369.3	395.6	624.2	64.4	577.7	90.3	5633.9	397.4
1971	9305.9	438.2	1602.5	122.9	3281.3	182.3	1881.3	126.6	4606.5	316.9	2005.2	121.4	5873.7	369.3	534.4	56.7	443.8	48.6	5063.1	332.0
1972	9254.9	363.0	1620.5	120.1	3172.4	192.6	1894.9	189.0	4276.5	229.8	2441.4	182.0	7018.1	367.2	550.7	49.4	426.2	46.0	7932.0	721.7
1973	8060.2	372.9	1246.5	90.4	2863.7	200.0	1935.9	132.3	3333.8	220.4	1624.3	111.5	4351.1	266.9	498.2	57.8	617.0	89.3	6221.5	532.6
1974	6681.0	309.5	1591.8	128.1	2665.1	155.9	1839.9	129.8	4968.2	389.8	2006.3	128.6	6583.0	342.8	626.6	70.6	504.2	50.6	5720.4	408.8
1975	7494.0	306.8	1641.0	108.9	2692.0	185.9	1666.5	142.9	5828.8	335.6	1962.1	107.3	5878.1	267.3	828.7	93.3	591.3	49.6	6426.9	481.3
1976	7894.4	306.8	1244.7	85.5	2476.1	145.2	1535.8	131.9	4746.6	288.0	1755.8	106.9	5475.1	299.0	668.4	66.1	609.5	65.0	5778.7	341.0
1977	7395.8	366.4	1311.5	126.8	2559.8	180.9	1290.6	84.9	4589.0	347.9	1475.1	85.9	3935.2	246.7	637.1	79.7	667.0	70.3	6246.8	355.9
1978	7353.4	273.2	1560.5	92.2	3285.5	205.3	2193.9	215.4	4471.0	288.7	1977.6	115.6	5105.5	267.5	737.8	63.4	369.1	32.1	5935.8	399.3
1979	7815.5	295.1	1750.5	121.1	3087.3	193.5	2018.9	198.5	4860.5	291.8	2385.5	134.7	5382.1	274.2	694.7	63.6	572.8	53.5	7540.3	567.5
1980	7570.0	267.9	1390.6	98.7	3557.6	207.6	1993.7	137.5	4884.1	290.8	1901.9	119.3	4513.8	228.5	753.1	118.7	726.7	79.1	6314.2	415.6
1981	6367.1	274.1	1401.5	119.9	2923.5	167.5	1851.4	138.6	3725.9	236.5	2324.7	177.4	3472.3	260.5	595.7	61.8	610.3	52.3	5917.6	410.0
1982	6253.5	262.0	1637.3	126.4	2440.4	160.8	1542.9	143.1	3656.8	193.0	2140.6	121.6	3708.5	226.5	616.8	74.0	510.3	43.6	5468.1	371.8
1983	6312.9	249.8	1517.0	144.2	2605.9	176.9	1835.7	146.2	3366.4	188.1	1870.2	105.2	3506.1	178.0	708.7	83.0	522.7	52.6	7135.6	477.8
1984	5246.6	209.8	1531.6	126.0	2987.0	169.2	1361.0	84.9	3956.2	260.7	1619.5	91.8	2968.7	166.6	673.0	71.7	520.1	51.2	6909.1	477.3
1985	4754.2	184.8	1304.4	98.1	2039.7	137.8	1435.3	95.9	3459.1	231.6	1696.7	125.6	2511.4	142.7	578.6	66.8	373.0	34.0	5038.1	324.0
1986	6835.6	333.6	1539.6	107.5	1731.7	110.4	1681.7	137.1	4463.4	237.8	2117.7	112.4	2736.5	152.1	559.9	60.5	436.8	41.6	5204.3	354.1
1987	5612.8	209.6	1310.8	97.4	1982.3	131.3	2003.1	180.7	3517.6	221.7	1951.1	118.8	2629.2	159.4	502.3	54.9	450.5	77.9	4837.4	305.1
1988	6331.3	311.8	1349.2	120.6	2194.4	140.1	2057.9	189.2	3975.4	292.4	1680.2	210.5	2011.2	163.9	441.1	66.2	436.2	40.6	4683.8	309.1
1989	5649.7	245.8	1415.9	106.9	1973.9	106.1	1842.7	166.5	3128.3	230.7	1539.5	97.0	2112.5	181.3	510.9	58.6	477.9	48.5	4344.3	291.5
1990	5452.1	238.5	1672.0	135.8	1860.2	108.3	1789.7	172.8	2776.4	178.7	1759.4	118.6	2256.7	183.3	480.9	48.2	539.3	60.3	4293.7	265.0
1991	5444.4	206.6	1583.6	111.8	2254.1	139.5	1557.9	111.3	3763.7	270.7	1716.2	104.6	1803.4	131.3	445.6	42.1	491.2	66.4	5255.4	364.7
1992	5976.1	241.0	2032.8	143.4	2208.4	131.9	1773.1	123.7	4333.1	263.2	1954.4	132.1	2098.1	161.0	595.6	69.7	481.5	97.3	4639.2	291.9
1993	5708.3	208.9	1755.2	107.9	2053.0	109.3	1694.5	112.7	3192.9	205.6	2046.5	114.3	2053.4	124.2	485.4	53.1	472.1	67.6	4080.1	249.4
1994	6980.1	282.8	2318.3	145.2	2382.3	130.3	2108.4	152.2	4616.2	259.2	2912.0	141.4	2972.3	188.0	653.5	66.7	525.6	71.1	4529.0	253.6
1995	8269.4	287.5	2835.7	187.5	2614.5	136.3	2300.6	140.3	5140.0	253.3	2854.9	150.3	2757.9	177.6	888.5	90.6	770.6	92.2	4446.4	277.6
1996	7941.3	262.9	2984.0	152.5	2273.3	124.4	2459.2	153.1	6415.9	354.0	3449.0	165.7	2735.9	147.5	834.2	83.1	848.5	118.3	4250.1	235.1

1955-95 Avg	+ 4	- 5	+13	- 7	-25	-21	+ 1	+ 6	-10	+ 4
1955-95 Avg	-11	-109	+12	-44	-52	-83	+37	-40	-55	+22

* All duck indexes adjusted for visibility bias

* 95% CI = N ± 1.96 * SE Example for 1992, the Mallard breeding population is estimated to be in a range between 5503.7 - 6448.5, or 5976.1 ± 1.96 x 241.0.
 90% CI = N ± 1.645 * SE

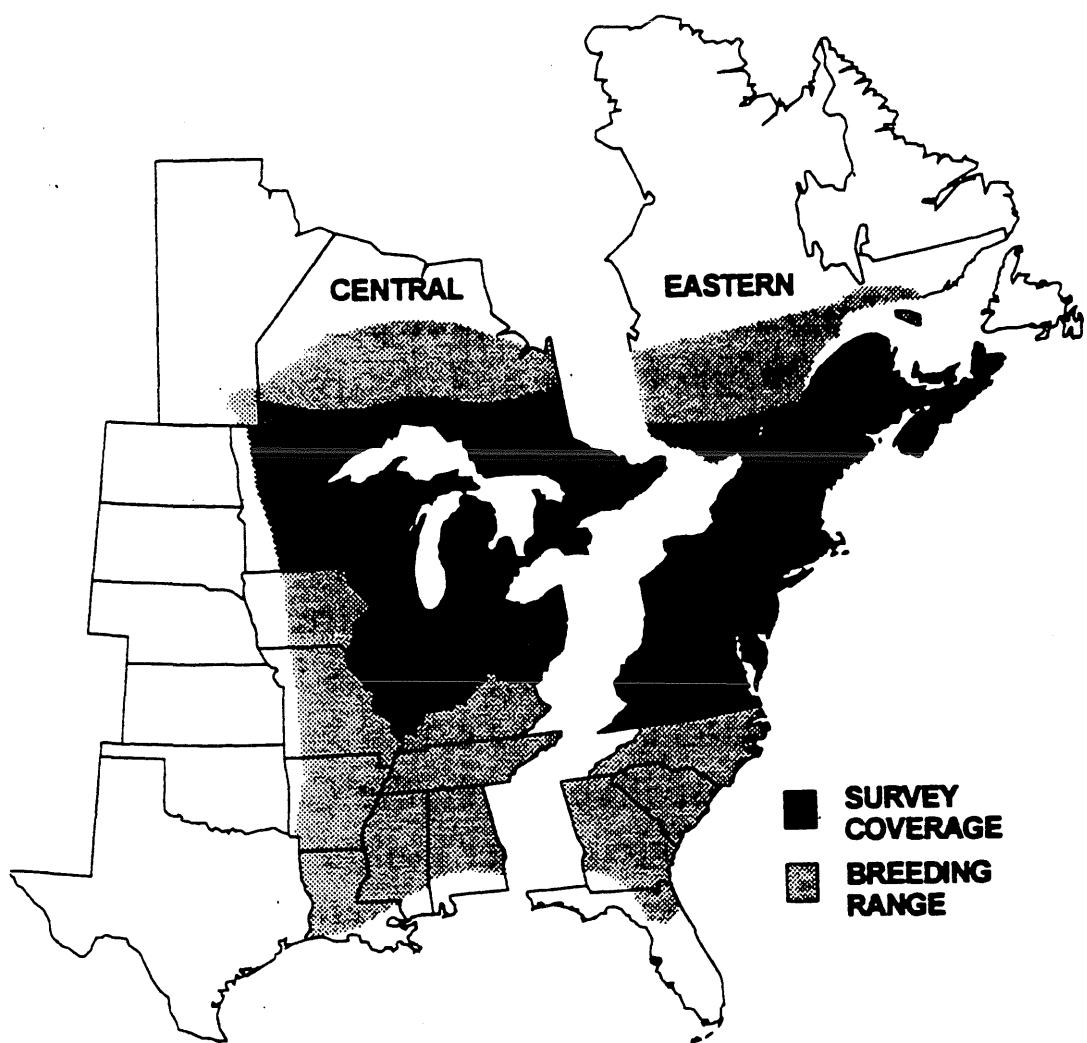


Figure 29. Woodcock breeding range, singing ground survey coverage, and woodcock management regions (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp.)

Table 34. Trends (% change per year^a) in number of American woodcock heard in singing-ground survey as determined by the estimating equations technique (Link and Sauer, 1994) (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp).

Management Unit/State	2 year N ^b	(1994-95) % Change	Routes Run ^c	11 year N	(1985-95) % Change	28 year N	(1968-95) % Change
CENTRAL	192	-11.5*** ^d	389	457	- 3.7***	586	- 1.6***
IL	2	66.8***	6	13	- 5.3	23	3.4
IN	3	-50.3***	14	10	- 3.8	38	- 4.6
MB	4	-13.8	18	8	4.8		
MI	61	-10.0	106	128	- 2.7***	140	- 1.3**
MN	35	- 8.7	67	75	- 3.0***	94	- 1.0*
OH	10	2.7	32	29	- 3.1	51	- 6.1**
ON	36	-20.5***	68	114	- 4.0	135	- 1.3***
WI	41	- 8.2	78	80	- 6.3	97	- 2.0***

^a Mean of weighted route trends within each State, Province, or Region. To estimate the total percent change over several years, use: $100(\% \text{ change}/100+1)^y - 100$ where y is the number of years.

^b Total number of routes surveyed in 1996 for which data were received prior to 1 June.

^c Number of routes comparable in ≥ 2 years with two or more counts \geq zero.

^d Indicates slope is significantly different from zero: * $P \leq 0.10$; ** $P \leq 0.05$; *** $P \leq 0.01$; significance levels are approximate for states where $N < 10$.

^e Manitoba began participating in the Singing-ground survey in 1990.

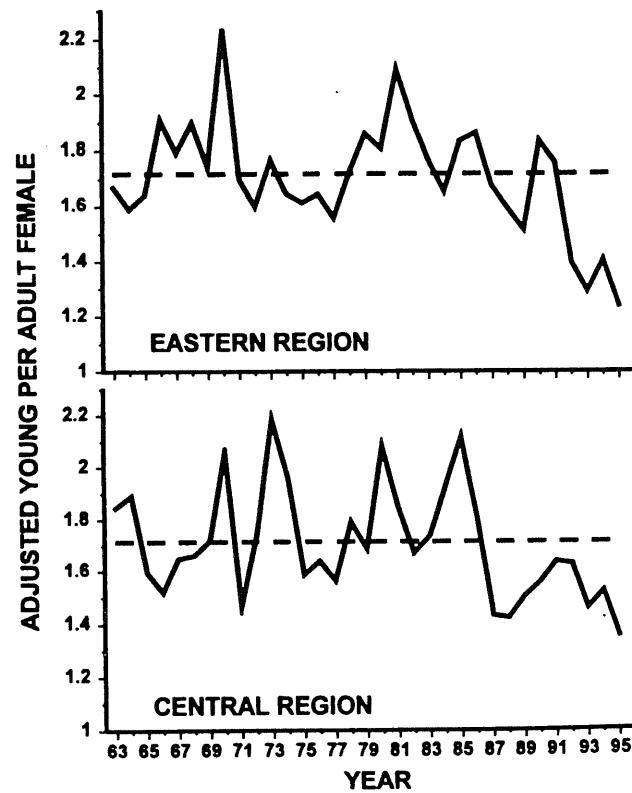


Figure 30. Adjusted index of American woodcock recruitment, 1963-95. Dashed line is the index based on all 1963-95 average. (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp).

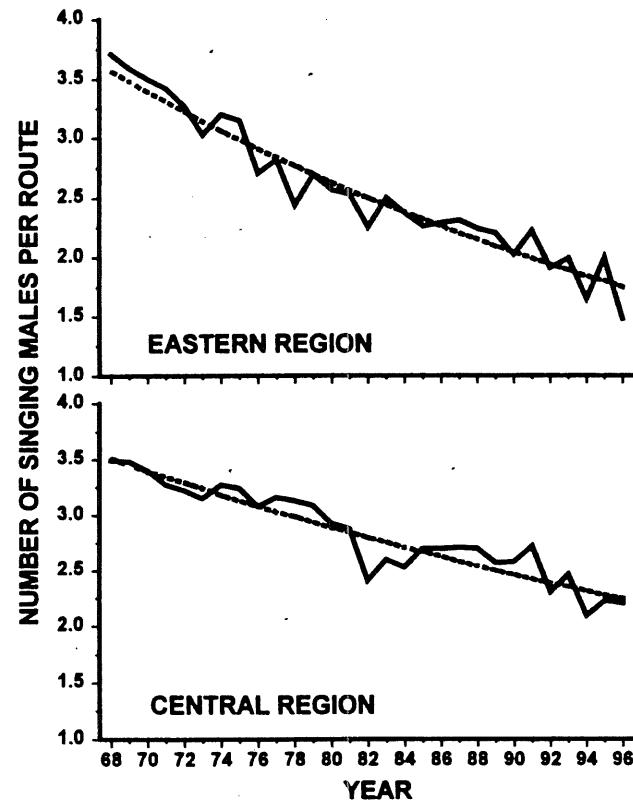


Figure 31. American woodcock singing ground survey long term trends and annual indices, 1968-96. (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp)

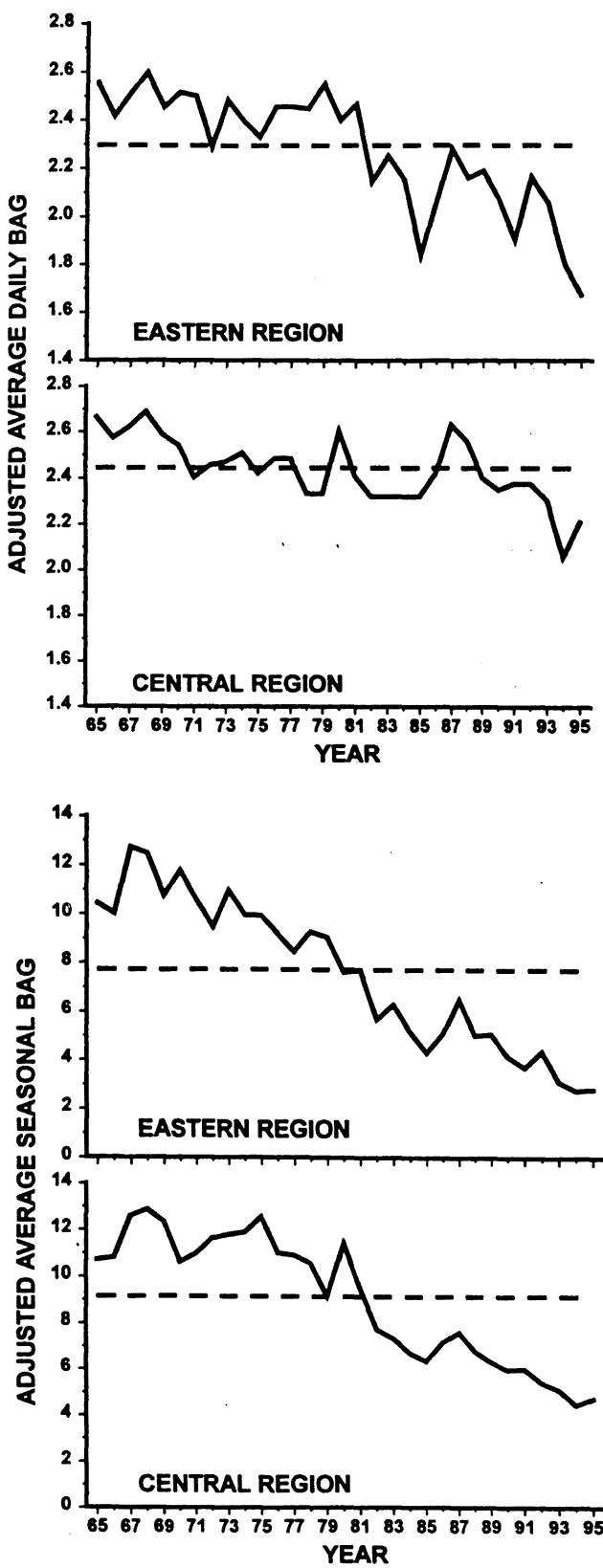


Figure 32.

Adjusted indices of daily and seasonal hunting success of American woodcock, 1965-95, Base year is 1969. Dashed line is 1965-94 average. (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp).

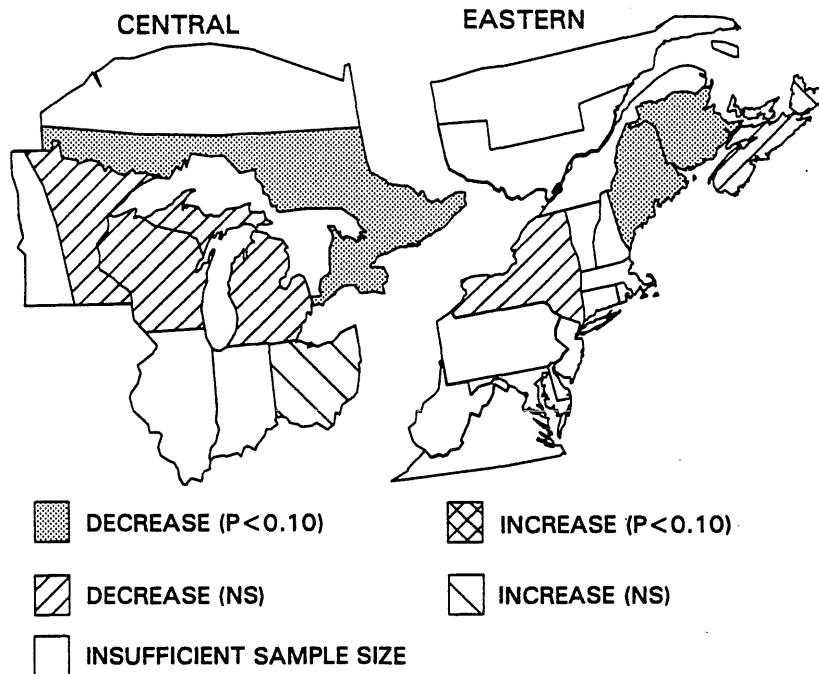


Figure 33. Short-term trends in number of American woodcock heard on the Singing-ground Survey; 1995-96.
 (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp.)

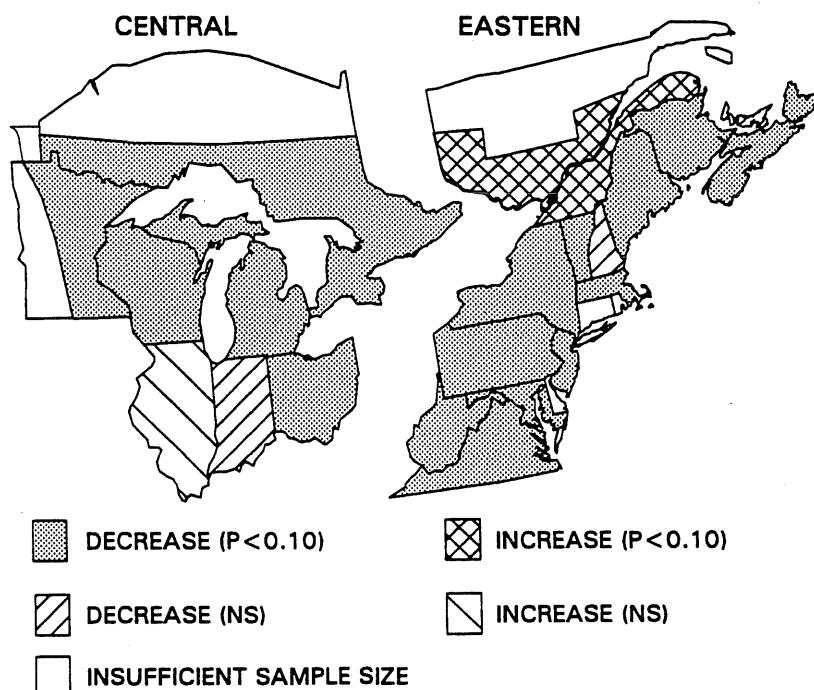


Figure 34. Long-term trends in number of American woodcock heard on the Singing-ground Survey; 1968-96.
 (from: Bruggink, John G., 1996. American woodcock harvest and breeding population status, 1996. U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Laurel, MD. 14pp.)

NONGAME WILDLIFE
500 Lafayette Road, Box 7
St. Paul, MN 55155
(612) 297-4966

Table 35. Minnesota Bald Eagle Nesting Activity in Four Survey Areas, 1995.

Survey Area	Occupied Breeding Areas	Successful Breeding Areas	Percent Successful	Number of Young	Young/Occupied Breeding Area	Average Brood Size
Chippewa NF	174	---	---	---	---	---
Superior NF	84	---	---	---	---	---
Voyageurs NP	22	14	63.6	19	0.86	1.36
"Other Areas"	338	---	---	---	---	---
Minnesota Total	618	---	---	---	---	---

¹ In 1995, occupancy flights were conducted statewide in early spring. However, due to budget constraints in both federal and state agencies, productivity flights were incomplete in both of the national forests and most of the DNR regions. As a result, statewide reproductive success is unknown for 1995. Limited productivity information is available from ground counts and those areas in the state where productivity flights were conducted. Given the continued recovery of the bald eagle in Minnesota, a new sampling strategy may be implemented for monitoring this species beginning in 1997.

Table 36. Minnesota Bald Eagle Nesting Data, 1973-1995.

Year	Breeding Areas			Young	
	Occupied ^a	Number	Percent	Per Occupied Breeding Area	Average Brood size
		Successful	Successful		
1973	115	71	62	1.03	1.59
1974	127	77	61	0.76	1.25
1975	120	87	73	1.21	1.67
1976	122	93	76	1.34	1.75
1977	156	114	73	1.15	1.57
1978	168	115	68	1.12	1.63
1979	159	111	70	1.23	1.77
1980	181	133	73	1.32	1.80
1981	190	132	69	1.27	1.83
1982	207	145	70	1.18	1.69
1983	229	170	74	1.40	1.89
1984	245	165	67	1.12	1.66
1985	250	161 ^b	71 ^b	1.21 ^b	1.71 ^b
1986	266	187 ^c	72 ^c	1.21 ^c	1.67 ^c
1987	350	227	65	1.03	1.59
1988	372	250	67	1.11	1.65
1989	390	261	67	1.10	1.65
1990	437	300	69	1.07	1.56
1991	449	322	65	1.00	1.54
1992 ^d	523				
1993 ^{de}	568				
1994 ^d	615				
1995 ^d	618				

^a Number of occupied breeding areas regardless of outcome.

^b These figures do not include data from 23 occupied nesting areas of unknown outcome in the Boundary Waters Canoe Area.

^c These figures do not include data from 9 occupied nesting areas of unknown outcome in the Boundary Waters Canoe Area.

^d Data incomplete for 1992, 1993, 1994, and 1995. See Table 33 for explanation.

^e This figure does not include data from DNR Region 4.

Bald Eagles 1995

Number of Occupied Breeding Areas by County

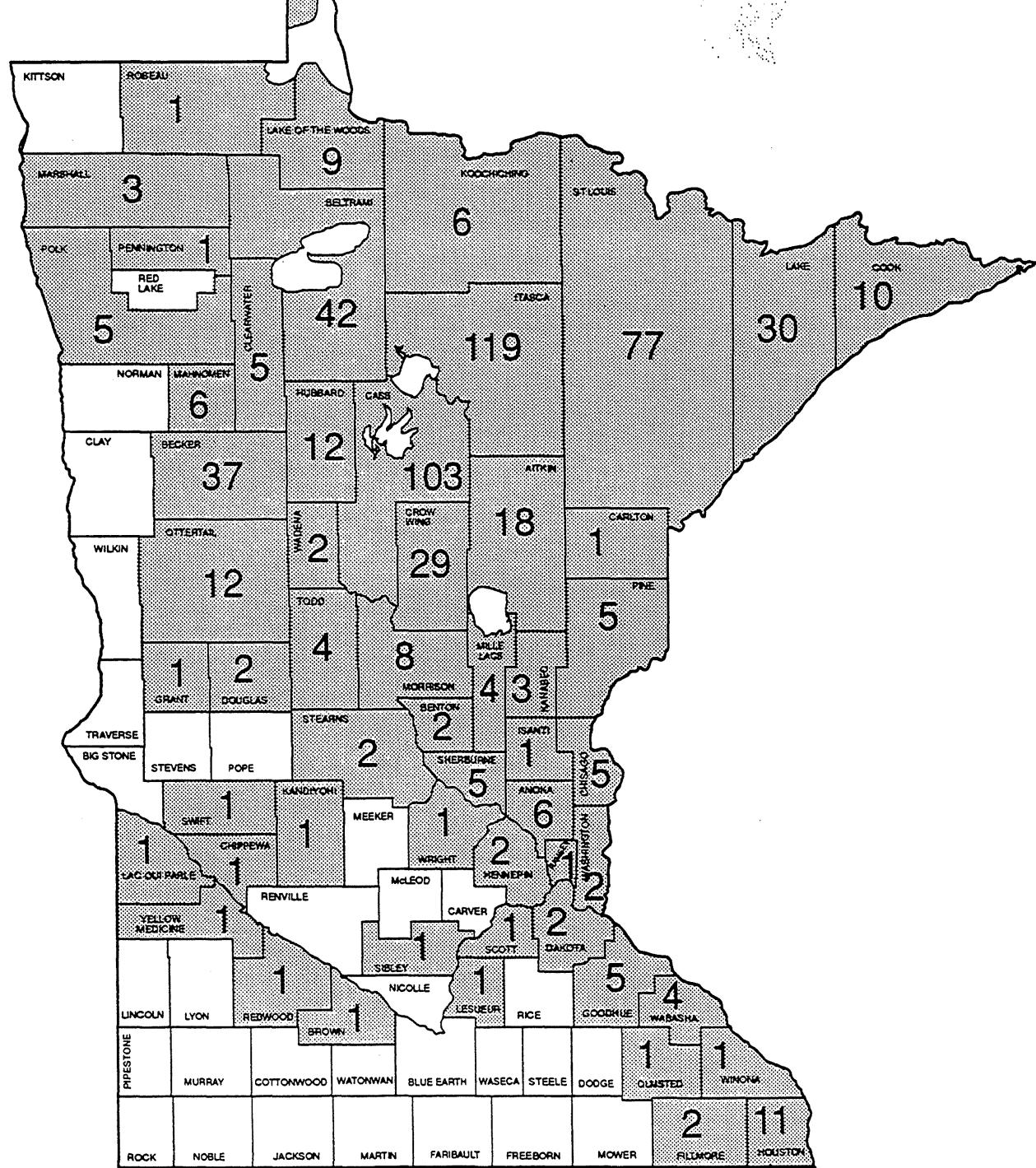


Figure 35. Number of bald eagle occupied breeding areas by county, 1995.

**A HISTORY OF MINNESOTA WATERFOWL REGULATIONS,
1915-1996**

**Wetland Wildlife Populations and Research
102 23rd Street
Bemidji, MN 56601
(218) 755-2973**

Table 37. Minnesota Waterfowl Hunting Regulations 1915-1995

Duck Season								Shooting Hours								Bag Limits										
Year	Dates				Opener	Start	End	Last Day 4 P.M.	Aqua. Fowl	Overall			Species Restrictions													
	Open	Close	Day	Length						Daily	Poss.	Bonus	Merg	Coot	MAL	Mal #	BLK	PIN	WDK	CAN	RED	RUD	BUF	HME		
1915	07-Sep	01-Dec	Tues	86		sunrise	sunset		10+15duck	15	45									closed						
1916	07-Sep	01-Dec	Thur	86		sunrise	sunset		10+15duck	15	45									closed						
1917	16-Sep	01-Dec	Sun	77		sunrise	sunset		10+15duck	15	45									closed						
1918	07-Sep	01-Dec	Sat	86		sunrise	sunset		10+15duck	15	45									closed						
1919	16-Sep	31-Dec	Tues	107		sunrise	sunset			15	15	45							15		closed					
1920	16-Sep	31-Dec	Thur	107		sunrise	sunset			15	15	45							15		closed					
1921	16-Sep	31-Dec	Fri	107		sunrise	sunset			15	15	45							15		closed					
1922	16-Sep	31-Dec	Sat	107		sunrise	sunset			15	15	45							15		closed					
1923	16-Sep	31-Dec	Sun	107		1/2 hr before	sunset			15	15	45							15		closed					
1924	16-Sep	31-Dec	Tues	107		1/2 hr before	sunset			15	15	45							15		closed					
1925	16-Sep	31-Dec	Wed	107		1/2 hr before	sunset				12	36							12		closed					
1926	16-Sep	31-Dec	Thur	107		1/2 hr before	sunset				12	36							12		closed					
1927	16-Sep	31-Dec	Fri	107		1/2 hr before	sunset				12	36							12		closed					
1928	16-Sep	31-Dec	Sun	107		1/2 hr before	sunset				12	36							12		closed					
1929	16-Sep	31-Dec	Mon	107		1/2 hr before	sunset				12	36							12		closed					
1930	16-Sep	31-Dec	Tues	107		1/2 hr before	sunset				12	30							12		closed					
1931	01-Oct	31-Dec	Thur	92	noon	1/2 hr before	sunset				12	30							12		closed					
1932	01-Oct	30-Nov	Sat	61	noon	1/2 hr before	sunset				12	30							12		closed	10	10	closed	closed	
1933	01-Oct	30-Nov	Sun	61	noon	1/2 hr before	sunset				12	24							12		closed	8	8	closed	closed	
1934	03-Oct	11-Nov	Wed	40	noon	sunrise	sunset				12	24							12		closed	5	5	closed	closed	
1935	21-Oct	19-Nov	Mon	30	noon	7 am	4 pm				10	10							10		closed			closed	closed	
1936	10-Oct	08-Nov	Sat	30	noon	7 am	4 pm				10	10							10		closed	closed	closed	closed	closed	
1937	09-Oct	07-Nov	Sat	30		7 am	4 pm				10	10							12		closed	closed	closed	closed	closed	
1938	01-Oct	14-Nov	Sat	45		7 am	4 pm				10	20							12		closed	3	3			
1939	01-Oct	14-Nov	Sun	45		7 am	4 pm				10	20							15		closed	3	3			
1940	01-Oct	29-Nov	Tues	60		sunrise	4 pm				10	20							15		closed	3	3			
1941	01-Oct	29-Nov	Wed	60		sunrise	4 pm				10	20							25		closed			3		
1942	26-Sep	04-Dec	Sat	70		sunrise	sunset				10	20							25			1	3			
1943	25-Sep	03-Dec	Sat	70		1/2 hr before	sunset				10	20							25			1	3			
1944	20-Sep	08-Dec	Wed	80		1/2 hr before	sunset				10	20							25			1				
1945	20-Sep	08-Dec	Thur	80		sunrise	sunset				10	20							25			1				
1946	05-Oct	18-Nov	Sat	45		1/2 hr before	1/2 hr before					7	14						25			1				
1947	07-Oct	05-Nov	Tues	30	noon	sunrise	1 hr before				4	8							25			1				
1948	08-Oct	06-Nov	Fri	30	noon	1/2 hr before	1 hr before				4	8							25			1				
1949	07-Oct	15-Nov	Fri	40	noon	1/2 hr before	1 hr before				4	8							25			1				
1950	06-Oct	09-Nov	Fri	35	noon	1/2 hr before	1 hr before				4	8							25			1				
1951	05-Oct	18-Nov	Fri	45	noon	1/2 hr before	1 hr before				4	8							25			1				
1952	01-Oct	24-Nov	Wed	55	noon	1/2 hr before	1 hr before				4	8							25			1				
1953	03-Oct	26-Nov	Sat	55	noon	1/2 hr before	sunset				4	8							10		closed			1		
1954	02-Oct	25-Nov	Sat	55	noon	1/2 hr before	sunset				4	8							10		closed			1		
1955	08-Oct	16-Dec	Sat	70	noon	1/2 hr before	1/2 hr before				4	8							10		closed			1		
1956	06-Oct	29-Nov	Sat	55	noon	1/2 hr before	1/2 hr before				5	10							10		closed			1		
1957	05-Oct	13-Dec	Sat	70	noon	1/2 hr before	sunset				4	8							5		closed			1		
1958	04-Oct	12-Dec	Sat	70	noon	1/2 hr before	sunset				4	8							10		closed	2	2		1	
1959	07-Oct	25-Nov	Wed	50	noon	sunrise	sunset				3	6							5		1 or 1	or 1	or 1	1		

Table 37. (Continued)

Duck Season										Bag Limits															
Dates				Shooting Hours				Overall						Species Restrictions											
Year	Open	Close	Day	Length	Opener	Start	End	Last Day	Aqua	Fowl	Daily	Poss.	Bonus	Merg.	Coot	MAL	Marl	BLK	PIN	WDK	CAN	RED	RUD	BUF	HME
1960	08-Oct	16-Nov	Sat	40	noon	1/2 hr before	sunset				4	8		5	6				1	closed	closed			1	
1961	14-Oct	12-Nov	Sat	30	noon	sunrise	sunset				2	4		5	6				1	closed	closed			1	
1962	13-Oct	06-Nov	Sat	25	noon	sunrise	sunset				2	4	2/4 ls	5	6/6	1		or 1	2	closed	closed			1	
1963	05-Oct	08-Nov	Sat	35	noon	sunrise	sunset				3	6		5	8/16	2		or 2	2	closed	closed			2	
1964	03-Oct	11-Nov	Sat	40	noon	sunrise	sunset				4	8		5/10	10/20	2/4				2/2	2/2	or 2/2		1/2	
1965	09-Oct	17-Nov	Sat	40	noon	sunrise	sunset				4	8	early teal	5/10	10/20	1/2				1/2	2/2	2/2	or 2/2	1/2	
1966	08-Oct	21-Nov	Sat	45	noon	1/2 hr before	sunset				4	8	2/4 mls	5/10	10/20	2/4				2/4	2/2				1/2
1967	07-Oct	15-Nov	Sat	40	noon	1/2 hr before	sunset				4	8		5/10	10/20	2/4				1/2	1/1				1/2
1968	05-Oct	13-Oct	Sat	9	noon	1/2 hr before	sunset				3	6		5/10	10/20	1/2		2/2		2/4	1/1	or 1/1		1/2	
		26-Oct	Sat	18																					
1969	04-Oct	12-Nov	Sat	40	noon	sunrise	sunset				4	8	2/4 bl,ls	5/10	10/20	1/2				2/4	1/1	or 1/1			1/2
1970	03-Oct	16-Nov	Sat	45	noon	1/2 hr before	sunset				4	8	2/4 bl,ls	5/10	15/30					2/4	1/1	or 1/1			1/2
1971	02-Oct	20-Nov	Sat	50	noon	1/2 hr before	sunset				4	8	2/4 bl,ls	5/10	15/30				2/4	1/1	or 1/1			1/2	
1972	01-Oct	19-Nov	Sat	50	noon	1/2 hr before	sunset				4	8	2/4 bl,ls	5/10	15/30				2/4	closed	closed			1/2	
1973	01-Oct	10-Oct	Mon	10	noon	1/2 hr before	4 pm				4	8		5/10	15/30	1/2			2/4	closed	closed			1/2	
		20-Oct	18-Nov	Sat	30																				
1974	02-Oct	15-Nov	Wed	45	noon	1/2 hr before	4 pm				4	8		5/10	15/30	2/4		or 2/2	2/4	1/1	or 1/1			1/2	
1975	01-Oct	19-Nov	Wed	50	noon	1/2 hr before	4 pm				4	8		4/8	15/30	2/4		or 2/2	2/4	1/1	or 1/1			1/2	
1976	02-Oct	20-Nov	Sat	50	noon	1/2 hr before	4 pm				5	10		5/10	15/30	3/6	1/2	Inc 2/4	2/4	1/1	or 1/1			1/2	
		23-Oct	11-Dec	Sat	50	NORTHERN 40 COUNTIES DELAYED DUE TO FIRE DANGER																			
1977	01-Oct	14-Nov	Sat	45	noon	1/2 hr before	sunset	29-Oct			5	10		5/10	15/30	2/4		or 2/4	2/4	1/1	or 1/1			1/2	
1978	01-Oct	19-Nov	Sun	50	9 am	1/2 hr before	sunset	20-Oct			5	10		5/10	15/30	2/4		or 2/4	2/4	1/1	or 1/1			1/2	
1979	29-Sep	17-Nov	Sat	50	noon	1/2 hr before	sunset	19-Oct			5	10		5/10	15/30	3/6	2/2	1/2	2/4	1/1	or 1/1			1/2	
1980	04-Oct	22-Nov	Sat	50	noon	1/2 hr before	sunset	17-Oct			5	10		5/10	15/30	3/6	2/2	1/2	2/4	1/2	1/2			1/2	
1981	03-Oct	21-Nov	Sat	50	noon	1/2 hr before	sunset	16-Oct			5	10		5/10	15/30	3/6	2/2	1/2	2/4	1/2	1/2			1/2	
1982	02-Oct	20-Nov	Sat	50	noon	1/2 hr before	sunset	22-Oct			5	10		5/10	15/30	3/6	2/2	1/2	2/4	1/2	1/2			1/2	
1983	01-Oct	19-Nov	Sat	50	noon	1/2 hr before	sunset	21-Oct			5	10		5/10	15/30	3/6	2/2	1/2	2/4	1/2	1/2			1/2	
1984	29-Sep	17-Nov	Sat	50	noon	1/2 hr before	sunset	19-Oct			5	10		5/10	15/30	3/6	2/2	1/2	2/4	1/2	1/2			1/2	
1985	05-Oct	13-Nov	Sat	40	noon	1/2 hr before	sunset	18-Oct			4	8		5/10	15/30	2/4	1/2	2/4	2/4	1/2	1/2			1/2	
1986	04-Oct	12-Nov	Sat	40	noon	1/2 hr before	sunset	17-Oct			4	8		5/10	15/30	2/4	1/2	2/4	2/4	closed	1/2			1/2	
1987	03-Oct	11-Nov	Sat	40	noon	1/2 hr before	sunset	16-Oct			4	8		5/10	15/30	2/4	1/2	2/4	2/4	closed	1/2			1/2	
1988	08-Oct	06-Nov	Sat	30	noon	sunrise	sunset	21-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	closed	1/2			1/2	
1989	07-Oct	05-Nov	Sat	30	noon	sunrise	sunset	20-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	closed	1/2			1/2	
1990	06-Oct	04-Nov	Sat	30	noon	sunrise	sunset	19-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	closed	1/2			1/2	
1991	05-Oct	13-Oct	Sat	30	noon	1/2 hr before	sunset	18-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	closed	1/2			1/2	
		17-Oct	03-Nov	Thur																					
		08-Nov	10-Nov	Fri																					
1992	03-Oct	11-Oct	Sat	30	noon	1/2 hr before	sunset	16-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	closed	1/2			1/2	
		15-Oct	01-Nov	Thur																					
		06-Nov	08-Nov	Fri																					
1993	02-Oct	10-Oct	Sat	30	noon	1/2 hr before	sunset	22-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	closed	1/2			1/2	
		14-Oct	31-Oct	Thur																					
		05-Nov	07-Nov	Fri																					
1994	01-Oct	09-Nov	Sat	40	noon	1/2 hr before	sunset	21-Oct			3	6		5/10	15/30	2/4	1/2	1/2	2/4	1/2	1/2			1/2	
1995	30-Sep	18-Nov	Sat	50	noon	1/2 hr before	sunset	20-Oct			5	10		5/10	15/30	4/8	1/2	1/2	2/4	1/2	1/2			1/2	
1996	28-Sep	16-Nov	Sat	50	noon	1/2 hr before	sunset	18-Oct			5	10		5/10	15/30	4/8	1/2	1/2	2/4	1/2	2/4			1/2	

Table 37. (Continued)

Goose Season																			
Statewide Regulations (excluding special zones)																			
Year	Overall		Snow & Blue Goose		Bag Limit / Poss.			Southeast Zone			West Zone & Northwest Zone			WC or LQP Zone			Lac qui Parle		
	Open	Close	Days	Open	Close	Aggr.	Canada	W.F.	Open	Close	Days	Cago	Bag	Open	Close	Days	Cago	Bag	Quota
1915	07-Sep	01-Dec	86						10/30										Harvest Index
1916	07-Sep	01-Dec	86						10/30										Date Quota Reached Days
1917	16-Sep	01-Dec	77						5/30										
1918	07-Sep	01-Dec	86						5/5										
1919	16-Sep	31-Dec	107						5/5										
1920	16-Sep	31-Dec	107						5/5										
1921	16-Sep	31-Dec	107						5/5										
1922	16-Sep	31-Dec	107						5/5										
1923	16-Sep	31-Dec	107						5/5										
1924	16-Sep	31-Dec	107						5/5										
1925	16-Sep	31-Dec	107						5/5										
1926	16-Sep	31-Dec	107						5/5										
1927	16-Sep	31-Dec	107						5/5										
1928	16-Sep	31-Dec	107						5/5										
1929	16-Sep	31-Dec	107						5/5										
1930	16-Sep	31-Dec	107						4/5										
1931	01-Oct	31-Dec	92						4/5										
1932	01-Oct	30-Nov	61						4/5										
1933	01-Oct	30-Nov	61						4/5										
1934	03-Oct	11-Nov	40						4/5										
1935	21-Oct	19-Nov	30						4/4										
1936	10-Oct	08-Nov	30						4/4										
1937	05-Oct	07-Nov	34						4/5										
1938	01-Oct	14-Nov	45						4/5										
1939	01-Oct	14-Nov	45						4/8										
1940	01-Oct	29-Nov	60						3/6										
1941	01-Oct	29-Nov	60						3/6										
1942	26-Sep	04-Dec	70			6/6	2	2											
1943	25-Sep	03-Dec	70			6/6	2	2											
1944	20-Sep	08-Dec	80			6/12	2	2											
1945	20-Sep	08-Dec	80			6/12	2	2											
1946	05-Oct	18-Nov	45			4/4	2	2											
1947	07-Oct	05-Nov	30			4/4	1	or 1											
1948	08-Oct	06-Nov	30			4/4	2	or 2											
1949	07-Oct	06-Nov	31			4/4	2	or 2											
1950	06-Oct	09-Nov	35			4/4	2	or 2											
1951	05-Oct	18-Nov	45			5/5	2	or 2											
1952	01-Oct	24-Nov	55			5/5	2	or 2											
1953	03-Oct	26-Nov	55			5/5	2	or 2											
1954	02-Oct	25-Nov	55			5/5	2	or 2											
1955	08-Oct	16-Dec	70			5/5	2	or 2											
1956	06-Oct	29-Nov	55			5/5	2	or 2											
1957	05-Oct	13-Dec	70			5/5	2	or 2											

Table 37. (Continued)

Goose Season

Year	Statewide Regulations (excluding special zones)												Southeast Zone				West Zone & Northwest Zone				WC or LOP Zone				Lac qui Parle								
	Overall			Snow & Blue Goose			Bag Limit / Poss.			Open	Close	Days	Cargo Bag	Open	Close	Days	Cargo Bag	Open	Close	Days	Cargo Bag	Quota	Harvest Index	Date Quota Reached	Days								
	Open	Close	Days	Open	Close	Aggr.	Canada	W.F.																									
1958	04-Oct	12-Dec	70				5/5	2	or 2																								
1959	07-Oct	15-Dec	70				5/5	2	or 2																								
1960	08-Oct	16-Dec	70				5/5	2	or 2																								
1961	01-Oct	29-Nov	60				5/5	2	or 2																								
1962	06-Oct	04-Dec	60				5/5	2	or 2																								
1963	05-Oct	13-Dec	70				5/5	2	or 2																								
1964	03-Oct	11-Dec	70				5/5	2	or 2																								
1965	02-Oct	10-Dec	70				5/5	2	or 2																								
1966	01-Oct	09-Dec	70				5/5	2	or 2																								
1967	30-Sep	08-Dec	70				5/5	2	or 2																								
1968	28-Sep	06-Dec	70				5/5	2	or 2																								
1969	04-Oct	12-Dec	70				5/5	2	or 2																								
1970	03-Oct	16-Nov	45				5/5	1	or 2																								
1971	02-Oct	10-Oct	9				5/5	1	or 2	02-Oct	10-Dec	70	1																				
1972	01-Oct	12-Oct	12	01-Oct	09-Dec	5/5	1/1	or 2/2	01-Oct	09-Dec	70	1																					
1973	01-Oct	21-Oct	21	01-Oct	18-Nov	5/5	1/1	or 2/2	01-Oct	09-Dec	70	1																					
1974	02-Oct	31-Oct	30	02-Oct	15-Nov	5/5	1/2	or 2/2	02-Oct	10-Dec	70	1																					
1975	01-Oct	14-Nov	45				5/5	1/2	or 2/2	01-Oct	04-Dec	65	1													4000							
1976	02-Oct	15-Nov	45				5/5	1/2	or 2/2	02-Oct	10-Dec	70	1													8000							
																									7813	not reached	45						
1977	01-Oct	14-Nov	45				5/5	1/2	or 2/2	01-Oct	09-Dec	70	1													5000	5799	02-Nov	33				
1978	01-Oct	14-Nov	45				5/5	2/4	or 2/2	01-Oct	09-Dec	70	2/4													1/4	7000	6238	not reached	45			
1979	29-Sep	17-Nov	50				5/5	2/4	or 2/2	29-Sep	07-Dec	70	2/4													1/4	7000	4988	not reached	50			
1980	04-Oct	22-Nov	50				5/10	2/4	2/4	04-Oct	12-Dec	70	2/4													1/4	5500	5700	22-Nov	50			
1981	03-Oct	21-Nov	50				5/10	2/4	2/4	03-Oct	11-Dec	70	2/4													1/4	5500	5560	09-Nov	37			
1982	02-Oct	20-Nov	50				5/10	2/4	2/4	02-Oct	10-Dec	70	2/4													1/4	5500	5479	not reached	50			
1983	01-Oct	19-Nov	50				5/10	1/2	2/4	01-Oct	09-Dec	70	2/4													01-Oct	19-Nov	50	1/2	4500	2392	not reached	50
1984	29-Sep	17-Nov	50				5/10	1/2	2/4	29-Sep	07-Dec	70	2/4													29-Sep	17-Nov	50	1/2	4500	4628	06-Nov	39
1985	28-Sep	16-Nov	50				5/10	1/2	2/4	28-Sep	06-Dec	70	2/4													28-Sep	16-Nov	50	1/2	4500	4592	07-Nov	41
1986	04-Oct	22-Nov	50				5/10	1/2	2/4	04-Oct	12-Dec	70	2/4													04-Oct	22-Nov	50	1/2	4500	4598	09-Nov	37
1987	03-Oct	11-Nov	40				5/10	1/2	2/4	03-Oct	11-Dec	70	2/4													03-Oct	01-Nov	30	1/2	4000	3910	not reached	30
1988	01-Oct	09-Nov	40				5/10	1/2	2/4	01-Oct	09-Dec	70	2/4													08-Oct	06-Nov	30	1/2	4000	4959	23-Oct	16
1989	30-Sep	08-Nov	40	30-Sep	16-Dec	7/14	1/2	2/4	30-Sep	08-Dec	70	2/4													30-Sep	29-Oct	30	1/2	4000	4303	19-Oct	20	
1990	29-Sep	17-Nov	50	29-Sep	17-Dec	7/14	2/4	2/4	29-Sep	07-Dec	70	2/4													29-Sep	07-Nov	40	1/2	6000	4832	not reached	40	
1991	28-Sep	16-Nov	50	28-Sep	16-Dec	7/14	2/4	2/4	28-Sep	06-Dec	70	2/4													28-Sep	06-Nov	40	1/2	6000	4799	not reached	40	
1992	03-Oct	21-Nov	50	03-Oct	21-Dec	7/14	2/4	2/4	03-Oct	11-Dec	70	2/4													03-Oct	11-Nov	40	1/2	6000	3558	not reached	40	
1993	02-Oct	20-Nov	50	02-Oct	20-Dec	7/14	2/4	2/4	02-Oct	10-Dec	70	2/4	02-Oct	10-Nov	40	1/2	02-Oct	10-Oct	9	1/2	1750				16-Oct	05-Nov	21	4000	3832	not reached	30		
1994	01-Oct	19-Nov	50	01-Oct	19-Dec	7/14	2/4	2/4	01-Oct	09-Dec	70	2/4	01-Oct	09-Nov	40	1/2	01-Oct	09-Oct	9	1/2	1750				15-Oct	04-Nov	21	4000	2876	not reached	30		
1995	30-Sep	18-Nov	50	30-Sep	18-Dec	7/14	2/4	2/4	30-Sep	08-Dec	70	2/4	30-Sep	08-Nov	40	1/2	30-Sep	08-Oct	9	1/2	7000				14-Oct	03-Nov	21	16000	12513	not reached	30		
1996	28-Sep	06-Dec	70	28-Sep	16-Dec	7/14	2/4	2/4	same as overall season				28-Sep	06-Nov	40	1/2	05-Oct	13-Oct	9	1/2	7000				17-Oct	06-Nov	21	16000					

Table 37. (Continued)

Year	Other Points of interest
pre-1915	No possession past 5 days after close of season.
1915	Ducks separated from other aquatic fowl limits, only use shotgun discharged from shoulder, law prohibited hunting aquatic fowl on open water. No possession past 5 days after season. Only geese could be taken by rifle. Poss = 50.
1916	No change from 1915.
1917	The 1915 law was amended so that wounded aquatic fowl could be pursued and killed on open water.
1918	Migratory Bird Treaty Act became law July 3, giving primary responsibility for the management of waterfowl to the fed. government. In Nov. the fed. government issued first annual pamphlet on waterfowl regulations for the country.
1919	Dates set by fed. reg. Gun limit to ten gauge to take waterfowl. Aid of a dog and decoys allowed. Limit inc. ducks, coots, rails, gallinules, snipe, yellowlegs.
1920	No change.
1921	No change.
1922	No change.
1923	Season limit of 135 ducks.
1924	No change.
1925	Not over 12 game birds (inc. waterfowl) were allowed in one day. Possession limit: 36 aquatic fowl. Season limit: 120 ducks. State law limited to 6 the number of decoys which could be used at any one blind.
1926	No change.
1927	No change.
1928	No change.
1929	Congress passed the Migratory Bird Conservation Act.
1930	Season limit for ducks 120.
1931	No change.
1932	Daily limit not >12 in aggregate of MAL, PIN, WIG, MERG, COOT, and >10 of in aggregate of SCP, GWT, BWT, Cin. Teal, CAN, RED, RNK, SHOV and GAD. Season limit of 120 ducks.
1933	Daily limit 15 mig. game birds of which not more than 12 can be a mixed bag of ducks and coots, and not > 8 in aggregate of SCP, GWT, BWT, Cin. Teal, CAN, RED, RNK, SHOV, OR GAD. season limit 120 ducks.
1934	No hunting on Mon. and Thur. of each week. Fed. duck stamp required. Not >5 CAN, RHD, SCP, RED, BWT, Cin. teal, SHOV, GAD.
1935	Daily and possession limit of 10 is for all migratory game birds and includes 4 geese. Baiting and the use of live decoys were outlawed in 1935. Not over 15 game birds of all kinds may be taken by in any one day.
1936	Daily and possession limit not over 10 migratory birds in aggregate of all kinds, of which not more than 4 can be geese. Not over 15 birds of all kinds may be taken in any one day.
1937	Daily limit of mig. birds 15 in aggregate of all kinds of which not more than 10 shall be ducks; 4 geese; 12 Coots; 12 Jacksnipe; 12 Rails and Gallinutes.
1938	Season limit of 120 ducks. Daily limit-15 mig. game birds.
1939	Daily limit-15 mig. game birds.
1940	Daily limit-15 mig. game birds.
1941	Same as 1940 except no retrictions on Ruddy Duck and Canvasback.
1942	Only 3 of any one or 3 combined of RED and BUF. Four Blue Geese allowed in addition to the 2 geese of regular daily bag. Daily and possession limit of Blue Geese only is 6.
1943	Only 3 of any one or 3 combined of RED and BUF. Four Blue Geese allowed in addition to the 2 geese of regular daily bag. Daily and possession limit of Blue Geese only is 6.
1944	Daily duck limit 15 provided 5 are MAL, PIN, WIG (poss. limit 30). Daily snow/blue goose limit of 4 is in addition to 2 other goose limit.
1945	Daily snow/blue goose limit of 4 in addition to 2 other goose limit. 1st year Merg limit different than duck.
1946	Two snow/blue geese in addition to 2 of some other kind.
1947	White-Fronted goose bags combined with Canada Goose bag.
1948	Management by Flyways was commenced in 1948.
1949	No change.
1950	No change.
1951	No change.
1952	No change.
1953	No change.
1954	Mergs included in duck bag.
1955	No change.

Table 37. (Continued)

Year	Other Points of interest
1956	No change.
1957	Red-breasted and Common Merganser, 5 daily and, 10 possession which must be included in limit with other ducks. Goose limit may include 2 Canada, 2 W-F, or 1 of each.
1958	Mergs no longer included in duck bag.
1959	No change.
1960	No change.
1961	Shooting hours noon for both duck (14 Oct) and goose (1 Oct) openers.
1962	Shooting hours begin at noon on both duck (13 Oct) and goose (6 Oct) openers. Bonus scaup from Oct. 20 to Nov. 6, inclusive.
1963	No change.
1964	Shooting hours for geese sunrise to noon in Olmstead, Nobles, Cottonwood, Jackson and Murray counties. No goose hunting permitted in these areas Oct. 3. 2 Redheads or Canvasbacks or 1 of each.
1965	Teal: 11-13 SEP. Geese hours: sunrise to noon (noon to sunset on opening) in above mentioned counties and portions of Big Stone, Murray, and Nobles. 1st time Home included in mer limit. Coot season 9-Oct-17 Nov.
1966	Geese hours 1/2 hour before to noon (closed Oct. 8) in counties noted in 1965 comment. Bonus Rndu & Scaup from 1-21 Nov.
1967	Shooting hours 1/2 hour before sunrise to noon for geese in Cottonwood, Jackson, Traverse and portions of Murray and Nobles counties. Coots combined with Moorhens (gallinules).
1968	Shooting hours 1/2 hour before sunrise to noon for geese in Cottonwood, Jackson, and Traverse counties and portions of Murray and Nobles counties. Coot season 26-Oct to 12-Nov.
1969	Shooting hours 1/2 hour before sunrise to noon for geese in Jackson, Traverse, and portions of Cottonwood, Murray and Nobles counties. BONUS DUCKS: 2 BWT (4-12 Oct), 2 SCP (1-12 Nov).
1970	Shooting hours 1/2 hour before sunrise to noon for geese in Jackson and Traverse counties. BONUS DUCKS: 2 BWT (3-11 Oct), 2 SCP (31 Oct-16 Nov).
1971	Shooting hours 1/2 hour before sunrise to noon for geese in Jackson and Traverse counties. BONUS DUCKS: 2 BWT (2-10 Oct), 2 SCP (1-20 Nov).
1972	BONUS DUCKS: 2 BWT (1-19 Oct), 2 SCP (1-19 Nov).
1973	First hen MAL restriction, Season for all geese in SE Zone extends until 9 Dec.
1974	Closed areas for CAN and RED in effect.
1975	Closed areas for CAN and RED in effect.
1976	Closed areas for CAN and RED in effect.
	NORTHERN SEASON CHANGED DUE TO FIRE DANGER: In northern 2/3 of state (40 cos.) began 23 Oct, duck end 11 Dec, goose end 6 Dec., LQP quota inc. to 8,000.
1977	Closed areas for CAN and RED in effect. Steel shot required on WPA, NWR, & WMA.
1978	Closed areas for CAN and RED in effect.
1979	Closed areas for CAN and RED in effect.
1980	Closed areas for CAN and RED in effect. White-fronted goose bag separated from Canada goose bag.
1981	Closed areas for CAN and RED in effect.
1982	Closed areas for CAN and RED in effect.
1983	Closed SE area for CANV in effect.
1984	Closed SE area for CANV in effect.
1985	Closed SE area for CANV in effect. Noon shooting hours on both goose and duck opener. Pintail restrictions initiated.
1986	CANV season closed statewide
1987	STEEL SHOT REQUIRED STATEWIDE. Special Canada goose hunts: 1-10 Sep in TCGZ; 18-27 Dec in TCGZ and OCGZ.
1988	WCGZ established. Special Canada goose hunts: 1-10 Sep in TCGZ, 16-25 Dec in TCGZ and OCGZ.
1989	Special Canada Goose Hunts: 1-10 Sep in TCGZ, FFGZ, and SWBGZ; 15-24 Dec in TCGZ and OCGZ.
1990	Special Canada Goose Hunts: 1-10 Sep in TCGZ, FFGZ, and SWBGZ; 15-24 Dec in TCGZ and OCGZ.
1991	Special Canada Goose Hunts: 1-10 Sep in TCGZ, FFGZ, and SWBGZ; 14-23 Dec in TCGZ and OCGZ.
1992	Special Canada Goose Hunts: 1-10 Sep in TCGZ, FFGZ, and SWBGZ; 15-24 Dec in TCGZ and OCGZ.
1993	Waterfowl must be transported with wing and head; orange requirement dropped for waterfowl hunters; NW & W Goose Zones added; SCGH: 4-13 Sep in TC, FF, & SW; 15-24 Dec in TC & OC, 11-20 Dec in FFGZ.
1994	Canvasback season opened except for Heron Lk complex & Lk Christina. SCGH: 3-12 Sep in TC, FF, & SW; 15-24 Dec in TC & OC, 10-19 Dec in FFGZ.
1995	Lake Christina open to Canv hunting; Bismuth-Tin shot approved; WC goose permit dropped. SCGH: 2-11 Sep in TC, FF, & SW; 15-24 Dec in TC & OC, 9-18 Dec in FFGZ. LQP harvest index adjusted.
1996	Snow/Blue and Ross geese limits separate from other goose limits. West zone boundary changed. Youth waterfowl hunting day 21 Sep. Special canada goose hunt 7-15 Sep. statewide except N.W. Dec 14-23 in TCGZ, FFGZ, OCGZ.

HUNTING HARVEST STATISTICS
Section of Wildlife
500 Lafayette Road, Box 7
St. Paul, MN 55155
(612) 296-3344

MINNESOTA HUNTING

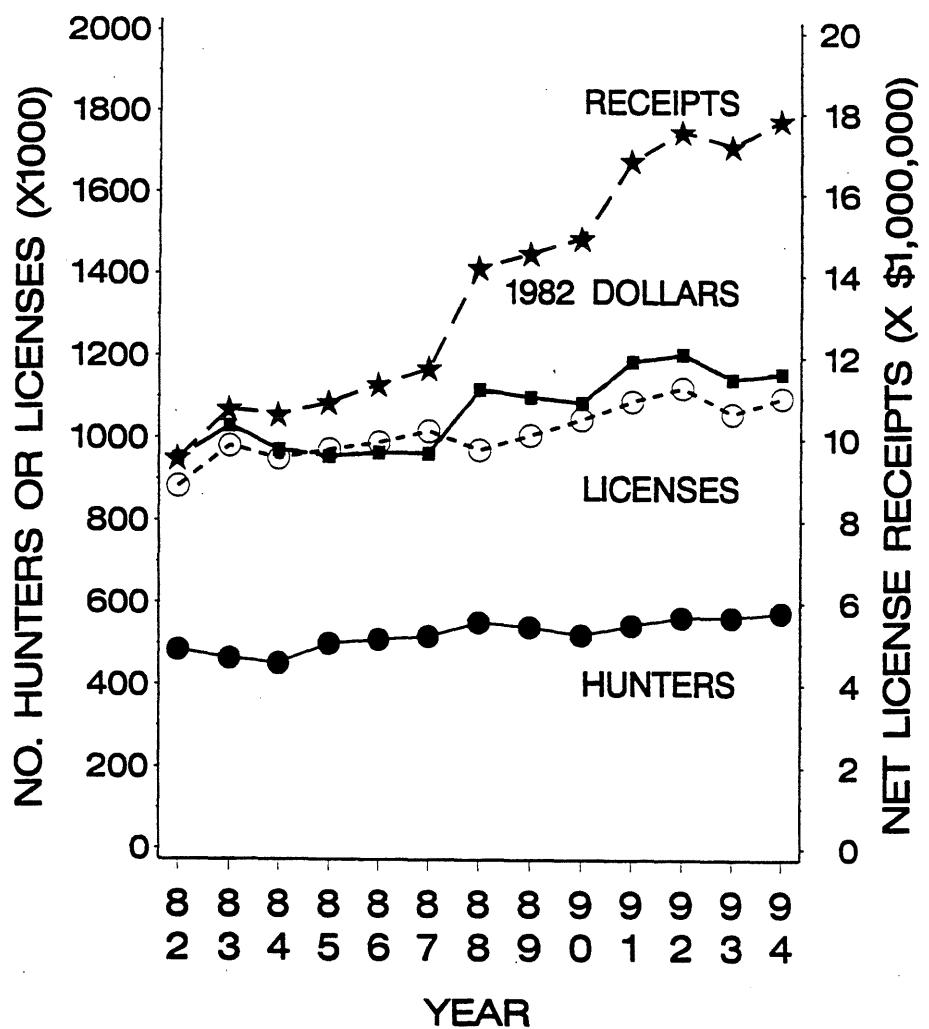


Figure 36. Minnesota hunting trends, 1982-94.

YEAR = license year (March -February)

● HUNTERS are paid license holders. A hunter is one individual regardless of the number of licenses purchased. Source: USFWS Division of Federal Aid.

○ LICENSES are the totals of hunting licenses, stamps and permits sold through the License Bureau, including duplicates but excluding trapping licenses and special goose hunt permits. Source: License Bureau.

★ RECEIPTS to the Game and Fish Fund are for all LICENSES except that bear, moose and turkey lottery licenses are also excluded because there is no good financial record for them over the entire period starting in 1982. Portion of receipts considered hunting licenses is 52.6% for individual sportsmen and 41.1% for combination sportsmen. Source: License Bureau.

■ 1982 DOLLARS are RECEIPTS expressed in constant 1982 dollars, which were calculated with Gross Domestic Product fixed-weighted price indexes of state and local government purchases. Sources: *Business Statistics 1963-91*, and *Survey of Current Business, December 1993*, and *July 1995*, U.S. Dept. of Commerce.

Note: The number of archers included in 1992 thru 1994 HUNTERS was calculated by a method also used in the 1980's. Calculations for 1991, 1990 and possibly 1989, were by a different method which gave lower values. The difference is important for federal aid certification, but does not affect the impression one gets from the graph. Plotted values are the same as federal aid certifications submitted to, and on file with, the USFWS Division of Federal Aid.

Table 38. Small game hunter response to mail surveys, 1979-80 through 1995-96.

Year	Number mailed	Number not delivered	<u>Delivered questionnaires completed and returned</u>	
			Number	Percent
1979-80	5,696	443	4,504	85.7
1980-81	6,434	385	4,963	82.0
1981-82	6,656	399	5,419	86.6
1982-83	5,963	266	4,792	84.1
1983-84	4,551	269	3,325	77.7
1984-85	4,096	127	3,280	82.6
1985-86	3,370	157	2,574	80.1
1986-87	4,668	208	3,623	81.2
1987-88	5,513	248	4,191	79.6
1988-89	15,388	857	11,431	78.7
1989-90 ^a	10,893	735	7,790	76.7
1990-91 ^a	5,000	394	3,467	75.3
1991-92 ^a	5,050	387	3,541	75.9
1992-93 ^a	5,000	288	3,625	76.9
1993-94 ^a	5,011	282	3,320	70.2
1994-95 ^a	5,000	387	3,353	72.7
1995-96 ^a	5,000	321	3,293	70.4

^a Includes resident and non-resident licensees, and excludes duplicate licenses.

Table 39. Use of small game hunter licenses, 1985-86 through 1995-96.

	Returns from mail survey	Projections from license sales
1985-86 Hunted	2,132 (82.8%)	213,883
Did not hunt	<u>442</u> (17.2%)	<u>44,342</u>
	2,574 (100.0%)	258,225
1986-87 Hunted	3,006 (83.0%)	217,504
Did not hunt	<u>617</u> (17.0%)	<u>44,549</u>
	3,623 (100.0%)	262,053
1987-88 Hunted	3,554 (84.8%)	242,875
Did not hunt	<u>635</u> (15.2%)	<u>43,395</u>
	4,189 (100.0%)	286,270
1988-89 Hunted	9,391 (82.2%)	234,833
Did not hunt	<u>2,040</u> (17.8%)	<u>50,852</u>
	11,431 (100.0%)	285,685
*1989-90 Hunted	6,924 (88.9%)	272,307
Did not hunt	<u>866</u> (11.1%)	<u>34,000</u>
	7,790 (100.0%)	306,307
1990-91 Hunted	2,798 (88.5%)	275,327
Did not hunt	<u>363</u> (11.5%)	<u>35,777</u>
	3,161 (100.0%)	311,104
1991-92 Hunted	3,004 (85.3%)	270,972
Did not hunt	<u>519</u> (14.7%)	<u>46,697</u>
	3,523 (100.0%)	317,669
1992-93 Hunted	3,008 (83.9%)	249,973
Did not hunt	<u>576</u> (16.1%)	<u>47,968</u>
	3,584 (100.0%)	297,941
1993-94 Hunted	2,787 (84.0%)	232,365
Did not hunt	<u>533</u> (16.0%)	<u>44,260</u>
	3,320 (100.0%)	276,625
1994-95 Hunted	2,826 (84.6%)	244,654
Did not hunt	<u>516</u> (15.4%)	<u>44,535</u>
	3,342 (100.0%)	289,189
1995-96 Hunted	2,714 (84.6%)	252,775
Did not hunt	<u>494</u> (15.4%)	<u>46,014</u>
	3,208 (100.0%)	298,789

* Previous years included only resident small game hunter information. For 1989 and on includes resident and non-resident information.

Excludes duplicates.

Table 40. Estimated number of hunters (thousands) for various species, 1982-83 through 1995-96.

	Estimated number of hunters (thousands)													
	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Ducks	134	117	134	122	132	114	77	84	88	100	107	109	118	119
Canada goose	52	41	51	55	58	56	47	50	56	56	61	62	70	73
Other geese	11	10	9	9	7	9	5	7	6	6	6	9	7	10
American coot	11	12	9	11	11	8	3	4	5	5	5	6	7	9
Common snipe	4	6	5	5	5	6	4	5	5	4	3	2	2	2
Rails/gallinules	1	2	1	1	1	1	1	1	<1	<1	<1	1	1	1
Crow*								9	13	12	11	10	12	15
American woodcock	20	16	17	19	21	27	26	30	30	27	21	17	21	21
Ring-necked pheasant	125	86	65	72	62	86	84	90	105	122	105	88	92	96
Ruffed grouse	115	78	87	94	107	132	139	163	163	146	124	102	107	116
Spruce grouse	13	9	12	12	12	16	15	20	19	16	13	11	12	14
Sharp-tailed grouse	14	9	9	10	9	10	12	14	14	14	10	8	7	8
Gray partridge	21	15	20	17	23	25	23	24	31	27	17	15	14	12
Gray squirrel	53	38	39	38	41	40	37	36	41	36	32	32	35	35
Fox squirrel	39	28	26	29	29	26	26	23	29	23	22	23	24	23
Eastern cottontail	36	29	22	22	24	26	27	24	32	31	24	21	21	23
White-tailed jackrabbit	11	7	6	6	4	5	5	6	7	6	5	4	4	5
Snowshoe hare	15	9	7	7	8	10	9	10	15	12	8	5	6	5
Raccoon (Sept 95-Feb96)	13	11	12	10	11	13	9	7	10	10	9	9	10	10
Raccoon [†] (May95- Aug95)													3	5
Red fox (Sept95-Feb96)	12	11	11	12	11	13	13	9	16	22	19	16	15	15
Red fox [†] (May95- Aug95)													3	4
Gray fox	3	2	3	2	2	3	3	2	3	4	3	3	2	3
Coyote	3	3	3	5	4	5	6	4	9	13	14	14	11	15
Badger	1	1	1	1	1	1	1	<1	1	<1	1	1	1	<1

* Crow season added in 1989.

[†] Raccoon and red fox season changed to year round beginning May 1994.

Table 41. Estimated take per hunter, for respondents reporting that they hunted a particular species, 1982-83 through 1995-96.

	Estimated take per hunter													
	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Ducks	8.1	10.6	10.8	9.1	9.0	8.2	6.9	6.5	7.0	8.0	8.1	7.6	8.1	9.7
Canada goose	1.6	1.6	1.6	1.9	1.8	1.9	2.4	2.1	2.3	2.6	2.5	2.5	2.4	2.5
Other geese	0.7	0.7	0.8	1.2	0.5	1.1	0.9	1.2	1.2	1.0	0.9	1.1	0.8	0.9
American coot	4.3	4.7	4.9	4.4	5.3	3.6	2.6	2.5	3.6	2.7	4.7	2.7	3.2	3.1
Common snipe	3.2	2.8	4.0	3.2	3.9	3.4	3.3	2.5	3.0	3.7	2.9	1.9	1.3	1.6
Rails/gallinules	3.1	1.2	1.4	2.3	1.1	3.6	1.8	4.2	1.0	7.6	1.7	1.5	1.3	2.3
Crow*								5.9	5.5	7.6	6.2	5.0	9.4	8.5
American woodcock	2.7	3.9	4.3	4.3	4.3	4.5	4.0	3.9	3.9	3.5	4.7	4.0	3.5	3.9
Ring-necked pheasant	2.1	3.5	2.3	3.0	2.6	3.2	3.9	3.6	4.6	4.6	3.9	3.8	3.5	4.2
Ruffed grouse	2.6	2.4	3.7	3.8	4.2	6.3	6.6	7.5	7.1	6.6	4.4	2.8	3.5	3.9
Spruce grouse	1.1	1.1	1.7	2.1	1.7	2.3	2.6	2.7	2.4	2.0	1.7	1.2	1.9	1.8
Sharp-tailed grouse	1.2	1.1	0.8	1.9	1.5	2.4	2.5	2.5	2.4	2.4	2.0	1.4	1.2	1.3
Gray partridge	3.6	2.1	4.3	3.3	3.1	3.8	4.6	3.7	3.7	3.8	2.9	2.4	1.8	2.2
Gray squirrel	5.1	5.3	5.3	5.2	5.7	5.6	5.8	5.5	5.8	4.9	4.6	5.5	5.4	4.9
Fox squirrel	4.2	4.5	4.1	5.0	5.1	4.7	5.2	5.0	5.1	4.6	4.2	4.5	4.2	4.6
Eastern cottontail	3.8	3.4	2.8	3.8	4.2	4.0	4.3	3.8	4.3	4.1	3.1	3.6	3.6	4.3
White-tailed jackrabbit	2.6	1.9	1.9	3.0	3.4	2.2	1.8	2.2	1.3	1.7	2.1	2.4	1.5	1.5
Snowshoe hare	4.2	2.3	2.3	2.3	3.2	2.6	3.7	4.8	4.6	5.9	3.2	3.2	3.2	2.0
Raccoon (Sept 95-Feb 96)	6.3	8.0	9.4	9.4	10.9	13.1	11.4	7.6	9.6	7.5	8.6	8.9	15.9	14.7
Raccoon [†] (May 95-Aug 95)													8.0	11.3
Red fox (Sept 95-Feb 96)	1.5	2.0	2.3	4.2	1.5	2.5	3.3	2.1	3.4	3.6	3.3	3.6	2.8	3.1
Red fox [†] (May 95-Aug 95)													1.4	1.5
Gray fox	0.9	0.9	1.4	2.0	0.8	1.3	0.9	1.2	1.4	1.0	1.3	0.8	0.6	1.0
Coyote	0.8	0.8	1.8	3.1	1.6	1.1	1.2	1.7	1.6	2.1	1.5	1.3	1.1	1.8
Badger	1.9	0.3	3.9	1.8	1.0	1.6	1.5	1.3	1.4	2.2	0.9	0.7	1.4	1.4

* Crow season added in 1989.

† Raccoon and red fox season changed to year round beginning May, 1994.

Table 42. Mean Harvest for successful hunters and hunter success rates (%), 1989-90 through 1995-96.

	Mean harvest for successful hunters and (hunter success rate (%))						
	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Ducks	7.6 (85.8)	7.9 (88.8)	8.7 (89.7)	9.1 (89.0)	8.7 (87.3)	9.2 (88.5)	11.0 (88.2)
Canada geese	2.8 (75.0)	3.2 (71.6)	3.6 (72.2)	3.4 (72.7)	3.4 (74.3)	3.3 (71.9)	3.4 (72.2)
Other geese	2.2 (53.7)	3.1 (37.9)	2.2 (47.8)	2.5 (33.3)	2.1 (50.0)	2.3 (32.1)	2.4 (39.0)
American coot	3.6 (69.3)	4.9 (73.1)	3.8 (70.9)	6.0 (77.6)	3.8 (71.6)	4.1 (77.5)	4.4 (69.4)
Common snipe	2.9 (85.0)	3.3 (90.7)	3.9 (93.8)	3.5 (83.3)	2.9 (65.2)	2.2 (61.9)	2.5 (65.2)
Rails/gallinules	7.2 (58.8)	2.5 (40.0)	7.6 (100.0)	2.5 (66.7)	2.4 (62.5)	2.2 (60.0)	4.7 (50.0)
Crow*	6.8 (87.1)	6.3 (87.3)	9.1 (83.3)	7.0 (88.8)	5.7 (87.1)	10.5 (89.4)	9.0 (93.9)
American woodcock	4.3 (90.6)	4.4 (87.9)	4.1 (85.0)	5.8 (80.5)	5.4 (73.9)	4.7 (74.5)	5.0 (76.8)
Ring-necked pheasant	4.7 (76.6)	5.9 (78.6)	5.8 (79.2)	5.4 (73.1)	5.3 (70.6)	5.0 (68.9)	5.7 (73.6)
Ruffed grouse	8.5 (87.4)	8.3 (85.1)	8.2 (80.3)	6.0 (72.8)	4.3 (64.7)	4.9 (70.9)	5.3 (74.0)
Spruce grouse	3.4 (78.7)	3.6 (66.2)	3.0 (68.3)	2.8 (59.1)	2.4 (48.4)	3.3 (56.6)	3.2 (57.0)
Sharp-tailed grouse	3.6 (69.4)	3.8 (62.6)	3.7 (64.5)	3.3 (60.2)	3.0 (46.7)	3.5 (34.5)	2.7 (47.1)
Gray partridge	4.6 (80.0)	4.7 (78.2)	4.9 (78.0)	4.0 (71.5)	4.0 (59.7)	3.2 (54.8)	3.4 (62.9)
Gray squirrel	6.1 (89.8)	6.3 (91.6)	5.7 (86.1)	5.5 (83.8)	6.4 (86.9)	6.2 (87.1)	5.6 (87.9)
Fox squirrel	5.6 (90.2)	5.7 (89.6)	5.5 (84.7)	4.9 (85.3)	5.1 (88.5)	5.1 (82.6)	5.5 (83.8)
Eastern cottontail	4.5 (84.6)	5.0 (87.1)	4.9 (83.7)	3.9 (78.0)	4.5 (79.9)	4.5 (79.1)	5.2 (83.5)
White-tailed jackrabbit	3.0 (72.7)	2.0 (65.8)	2.4 (70.3)	3.0 (71.0)	3.9 (62.8)	2.4 (61.5)	2.5 (59.3)
Snowshoe hare	5.6 (86.3)	5.2 (88.6)	6.9 (85.7)	4.8 (65.6)	4.4 (73.8)	5.4 (59.7)	3.4 (59.3)
Raccoon (Sept 95 - Feb 96)	8.2 (93.6)	10.4 (92.6)	8.4 (89.2)	9.3 (91.7)	9.3 (95.3)	16.3 (97.5)	16.0 (92.0)
Raccoon† (May 95-Aug 95)						9.1 (88.6)	12.2 (92.5)
Red fox (Sept 95 - Feb 96)	3.0 (71.9)	5.0 (68.0)	4.9 (73.6)	5.6 (58.9)	5.4 (67.5)	4.4 (64.7)	4.8 (64.5)
Red fox † (May 95-Aug 95)						3.0 (46.9)	2.3 (65.1)
Gray fox	2.3 (68.2)	3.3 (44.4)	2.4 (40.0)	3.1 (41.5)	3.1 (26.7)	2.5 (23.1)	1.8 (58.1)
Coyote	2.4 (69.5)	2.6 (62.1)	3.7 (56.6)	3.1 (50.0)	2.3 (57.1)	2.4 (48.1)	2.9 (61.1)
Badger	1.6 (83.3)	1.9 (77.8)	2.2 (100.0)	1.2 (71.4)	1.0 (71.4)	1.7 (85.7)	1.8 (80.0)

* Crow season added in 1989.

† Raccoon and red fox season changed to year round beginning May, 1994.

Table 43. Statewide small game hunting license sales and estimated hunter harvest, 1984-85 through 1995-96.

	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Small game license sales ^a	260,764	258,225	262,053	286,270	285,685	306,307	311,104	317,669	297,941	276,625	289,189	298,425
Federal duck stamp sales	138,820	134,594	139,391	125,831	92,772	97,939	103,971	110,197	108,332	110,738	149,428	124,820
State duck stamp sales	131,394	125,559	146,747	120,235	89,228	97,659	102,151	104,051	104,064	104,839	116,346	122,092
Pheasant stamp sales	81,587	85,252	81,027	102,944	100,478	108,124	122,260	133,384	117,934	94,443	104,621	105,093
Estimated harvest ^b (thousands)												
Ducks ^c	1,443	1,029	1,172	928	531	544	619	784	864	824	955	1,162
Canada goose ^c	82	86	101	106	114	103	128	144	150	156	166	180
Other geese ^c	8	9	3	11	5	9	7	6	5	9	6	9
American coot ^c	48	41	59	29	9	10	17	13	23	15	22	28
Common snipe	20	16	21	19	13	12	14	16	9	4	2	3
Rails/gallinules	1	2	1	5	1	3	<1	3	<1	1	1	1
Crow					54	70	94	69	51	114	130	
American woodcock	70	70	87	113	104	118	116	94	100	68	74	82
Ring-necked pheasant	148	179	159	277	332	325	483	565	411	332	319	398
Ruffed grouse	320	315	442	817	917	1,218	1,153	963	543	288	371	457
Spruce grouse	21	21	20	36	39	55	46	34	21	12	23	25
Sharp-tailed grouse	7	14	13	24	29	36	33	33	20	11	9	10
Gray partridge	31	77	54	69	95	86	115	102	49	35	26	26
Gray squirrel	208	186	235	222	217	194	234	174	147	178	187	169
Fox squirrel	107	140	145	122	134	113	115	109	92	105	99	105
Eastern cottontail	61	75	102	102	118	92	139	128	73	75	77	100
White-tailed jack rabbit	11	17	14	12	10	12	9	10	11	9	7	7
Snowshoe hare	16	12	25	26	32	48	69	70	24	16	19	11
Raccoon (Sept 95-Feb 96)	114	85	122	170	102	52	93	74	77	79	163	155
Raccoon ^d (May 95- Aug 95)											24	55
Red fox (Sept 95- Feb 96)	26	44	15	33	43	19	54	78	63	63	42	48
Red fox ^d (May 95- Aug 95)											4	6
Gray fox	4	4	2	4	2	3	5	4	4	2	1	3
Coyote	5	11	7	6	7	6	14	27	21	18	13	26
Badger	<1	2	2	<1	2	<1	1	1	<1	<1	1	1

Harvest estimates in this table, and the number of hunters and mean take per hunter in Table 37, are calculated from different questions on the survey form. The sample used in calculations differs from one estimator to the next. This is because some respondents give specific answers to one question but not to a related one. A formula is used to calculate the total estimated take for each species which appears in this table. In most years the formula produces results rather close to those obtained by multiplying the average take per hunter times the number of hunters. However, in other years (e.g., 1985) results of the two methods are quite divergent, perhaps as a result of an unusual sample. This is being investigated further, and as a result, numbers may change somewhat in future reports. The most current report of survey findings will have the best data available at that time. Beginning in 1989-90 this table was changed from Resident harvest estimates to Statewide harvest estimates, which includes non-resident harvest estimates.

^a Duplicate licenses not included.

^b Estimates based upon response of hunters to questionnaires.

^c U.S. Fish and Wildlife Service harvest estimates for 1994 are:

Ducks	696,228	Other geese	198
Canada geese	116,050	American coot	10,630

^d Raccoon and red fox seasons changed to year round beginning May, 1994.

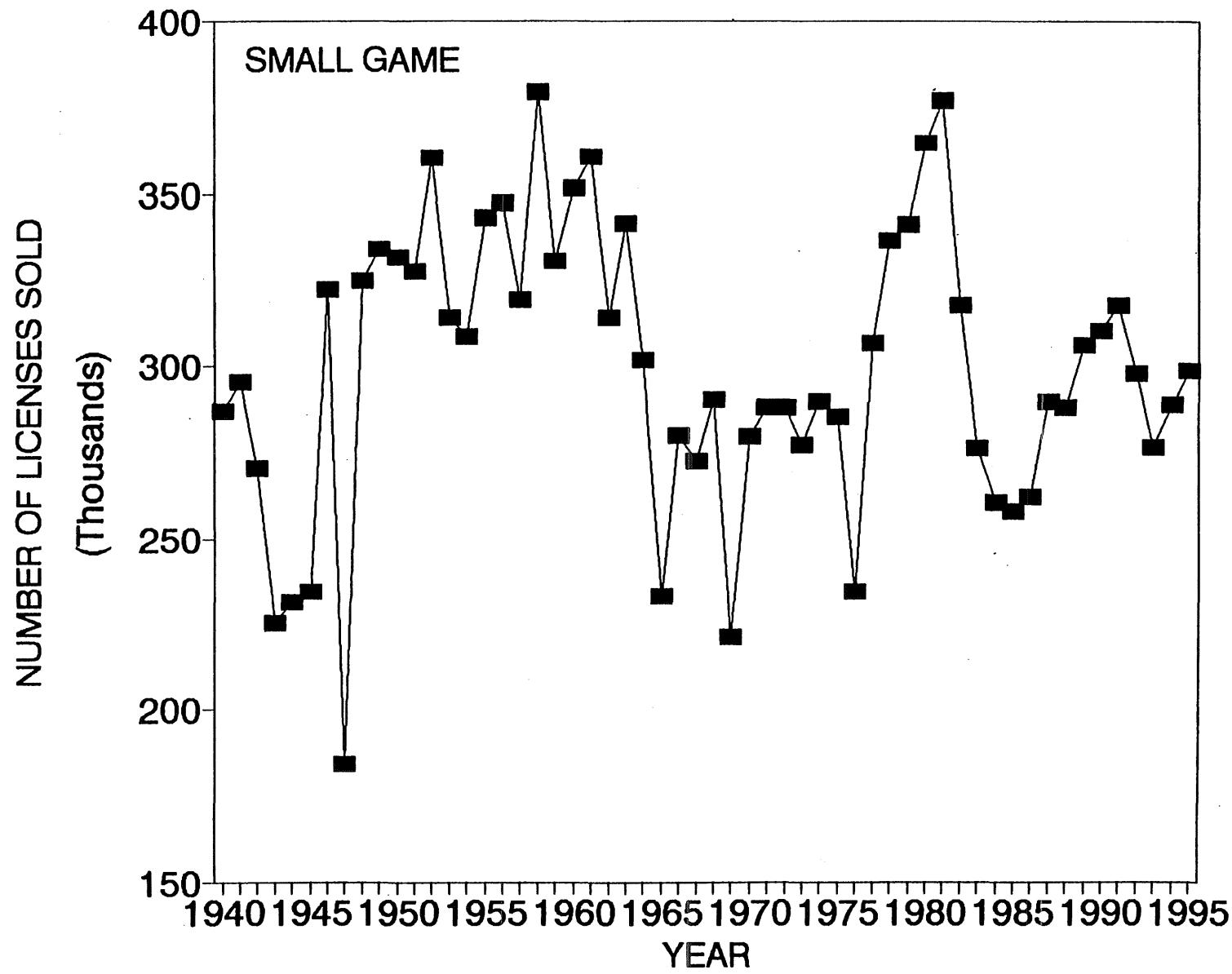


Figure 37. Numbers of Minnesota small game licenses sold, 1940-95.

Table 44. Mail survey results of nonresident small game hunters, 1983-84 through 1994-95.

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Nonresident licenses issued ^a	2,911	3,060	3,271	3,078	3,596	3,462	4,624	4,932	4,852	4,718	3,809	4,435
Questionnaires:												
Number mailed	384	237	338	406	429	436	553	82	114	170	229	182
Number not delivered	25	13	25	42	19	33	52	7	8	8	21	7
Number (percent) returned	280 (78.0)	192 (86.0)	246 (78.6)	290 (79.7)	328 (80.0)	327 (81.1)	396 (79.0)	54 (72.0)	89 (83.2)	32 (81.5)	149 (71.6)	128 (73.1)
Estimated nonresidents and (percent) of all nonresidents hunting:												
Ducks	1,500 (52)	2,090 (68)	1,900 (58)	1,810 (59)	990 (28)	1,130 (33)	1,521 (33)	1,342 (27)	1,308 (27)	1,751 (37)	1,789 (47)	1,975 (45)
Canada goose	580 (20)	820 (27)	800 (24)	850 (28)	515 (14)	700 (20)	866 (19)	1,074 (22)	491 (10)	1,001 (21)	792 (21)	1,005 (23)
Ruffed grouse	620 (21)	1,000 (33)	1,090 (33)	1,000 (32)	1,000 (28)	1,960 (57)	2,610 (56)	1,789 (36)	2,017 (42)	1,465 (31)	895 (24)	1,421 (32)
Ring-necked pheasant	500 (17)	390 (13)	720 (22)	510 (17)	400 (11)	690 (20)	1,042 (23)	895 (18)	1,743 (36)	894 (19)	741 (20)	832 (19)
Raccoon ^b	170 (6)	130 (4)	70 (2)	85 (3)	80 (2)	42 (1)	59 (1)	0 (0) ^c	55 (1)	0 (0) ^c	26 (1)	0 (0)
Estimated nonresident take:												
Ducks	17,500	24,000	14,400	14,600	6,300	8,000	9,901	5,816	11,340	17,442	13,574	15,696
Canada goose	1,300	1,300	1,400	1,400	900	1,500	1,744	4,205	1,363	3,610	2,122	2,287
Ruffed grouse	1,700	4,200	3,500	3,800	6,100	12,300	20,739	14,852	18,100	10,758	4,985	7,242
Ring-necked pheasant	2,200	1,500	1,900	1,100	1,100	2,600	4,424	3,221	6,324	4,110	3,042	4,366
Raccoon	1,400	1,100	1,400	600	1,200	700	667	0	327	0	26	0

^a Excludes duplicate licenses and nonresident shooting preserve licenses.

^b Nonresident raccoon hunters were required to purchase a nonresident raccoon hunting license for the first time in 1979 in addition to the nonresident small game license. The initial season bag limit of 8 was increased to 12 in 1983 and to 20 in 1985.

^c In 1990, 1992 and 1994 small game hunter survey no non-residents reported hunting/harvesting raccoons. * Non-resident raccoon hunting license was not required for 1994 and 1995.

Raccoon take per hunter

	Resident	Nonresident	Number of nonresident raccoon licenses
1978	6	14	0
1979	6	6	404
1980	4	5	93
1981	7	7	121
1982	6	7	95
1983	8	8	102
1984	9	8	111
1985	9	20	108
1986	11	7	86
1987	13	15	145
1988	11	17	73
1989	8	11	41
1990	11	0	20
1991	8	6	21
1992	9	0	20
1993	9	1	24
1994	16	0	*

Table 45. Species composition of the Minnesota waterfowl harvest, 1994 and 1995 (from: Martin, E.M. and P.I. Padding. 1996. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1995 hunting season. U.S. Fish and Wildlife Service Adm. Rep., Office of Migratory Bird Management, Laurel, Maryland. July 1996. 34pp.). Note: All 1994 estimates are based on final duck stamp sales figures, whereas 1995 estimated are based on reports of duck stamp sales through March 1996. Unaudited duck stamp sales figures (and therefore hunter activity estimates) received prior to publication suggest duck stamp sales may be adjusted higher by an average of 2 to 3 percent overall.

Species	1994		1995		Percent change
	Harvest	Pct of harvest	Harvest	Pct of harvest	
Mallard	160,500	26.59	184,800	26.54	+ 15
Domestic mallard	100	0.02	600	0.08	+ 500
American black duck	800	0.13	500	0.07	- 38
Black x mallard	200	0.04	300	0.04	+ 50
Gadwall	9,100	1.51	6,700	0.96	- 26
American wigeon	20,100	3.33	15,900	2.29	- 68
Green-winged teal	36,700	6.08	30,400	4.36	- 17
Blue-winged/cinnamon teal	38,800	6.43	86,500	12.43	+ 123
Northern shoveler	10,400	1.73	11,100	1.59	- 7
Northern pintail	8,200	1.35	7,000	1.01	- 17
Wood duck	129,800	21.51	144,300	20.72	+ 11
Redhead	18,700	3.10	18,200	2.61	- 3
Canvasback	11,100	1.84	16,800	2.42	+ 51
Greater scaup	2,100	0.34	3,600	0.52	- 71
Lesser scaup	39,700	6.57	48,400	6.95	+ 22
Ring-necked duck	88,600	14.68	80,100	11.51	- 10
Goldeneyes	5,600	0.92	17,100	2.46	+ 205
Bufflehead	14,200	2.35	15,300	2.20	+ 8
Ruddy duck	2,800	0.46	2,100	0.30	- 25
Scoters	200	0.03	300	0.04	+ 50
Hooded merganser	5,100	0.84	5,600	0.81	+ 10
Other mergansers	700	0.11	700	0.10	0 ^b
Total	603,778	100.00 ^a	696,228	100.00 ^a	+15

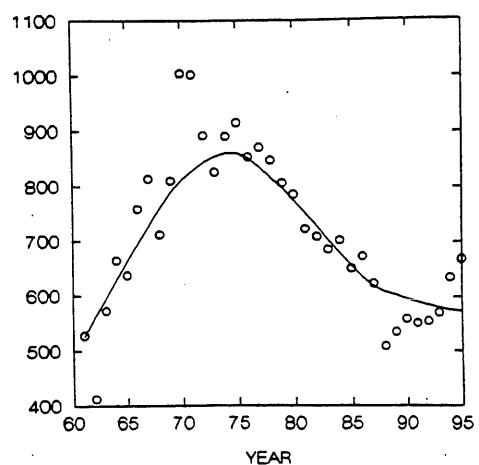
^a Sum of all species does not equal total because of rounding error.

^b No percentage change

Table 46. Top 10 states in number of adult waterfowl hunters, 1995, and number of hunter-days and retrieved duck kill, in each (from: Martin, E.M., and P. I. Padding. 1996. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1995 hunting season. U.S. Fish and Wildlife Service Adm. Rep. Office of Migratory Bird Management, Laurel, Maryland. July 1996. 34pp.). Note: All 1995 estimated are based on reports of duck stamp sales through March 1996. Unaudited duck stamp sales figures (and therefore hunter activity estimates) received prior to publication suggest duck stamp sales may be adjusted higher by an average of 2 to 3 percent overall.

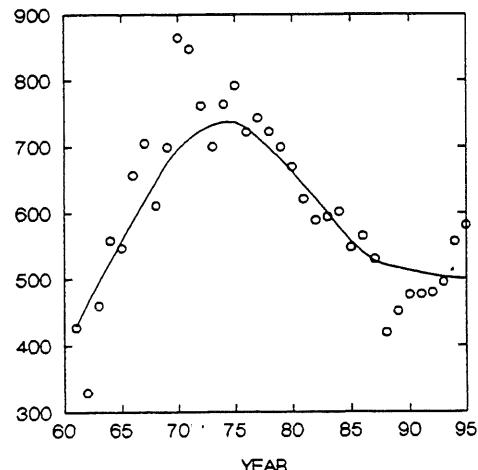
State	Number of active adult waterfowl hunters	Number of hunter-days	Retrieved duck kill	Ducks retrieved per hunter-day
Minnesota	112,857	946,695	696,228	0.74
Wisconsin	87,151	708,935	399,252	0.56
Texas	78,781	653,899	825,585	1.26
Louisiana	76,121	1,037,546	2,154,135	2.08
Michigan	65,691	615,195	379,737	0.62
California	63,308	744,239	1,104,049	1.48
South Dakota	46,802	483,855	311,553	0.64
Illinois	46,615	559,207	277,979	0.50
Arkansas	44,263	573,780	1,013,204	1.77
Washington	38,379	402,517	467,991	1.16
Mississippi Flyway	551,927	5,426,924	4,014,122	0.74
United States	1,138,888	10,653,843	8,369,928	0.74

Duck Stamp Sales (1,000's)



Mississippi Flyway

Active Adult Hunters (1,000's)



Adult Hunter Days (1,000's)

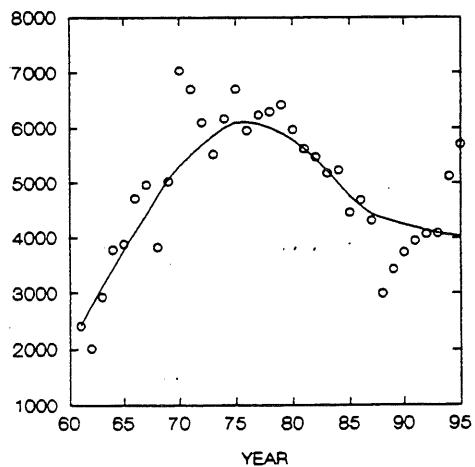
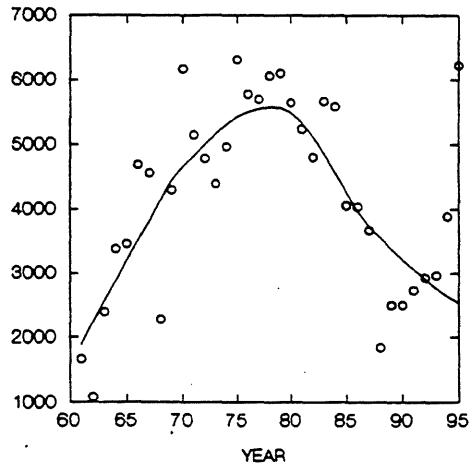


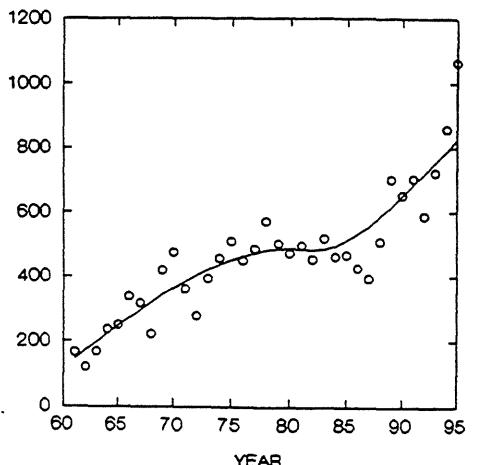
Figure 38. Federal duck stamp sales; Active adult hunters; Adult hunter days, (in 1,000's) for the Mississippi flyway. The 1961 through 1994 data are final, but the 1995 numbers are preliminary pending final duck stamp sales. The curves (locally weighted regression [lowess] lines; Cleveland and Devlin 1988, J. Am. Stat. Assoc.) fit a pattern to the majority of the estimates and identify estimates that deviate from that pattern (from Martin, E. M., and P.I. Padding. 1996. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1995 hunting season. U.S. Fish and Wildlife Service Adm. Rep. Office of Migratory Bird Management, Laurel, MD. July 1996. 34pp.).

Mississippi Flyway

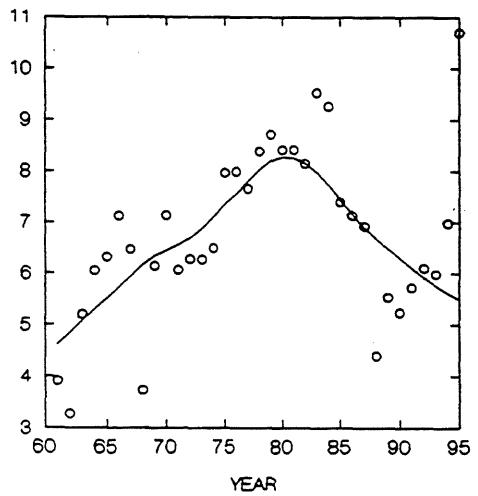
**All Duck Harvest (1,000's)
by Adult Hunters**



**All Goose Harvest (1,000's)
by Adult Hunters**



**Seasonal Duck Bag
Per Adult Hunter**



**Seasonal Goose Bag
Per Adult Hunter**

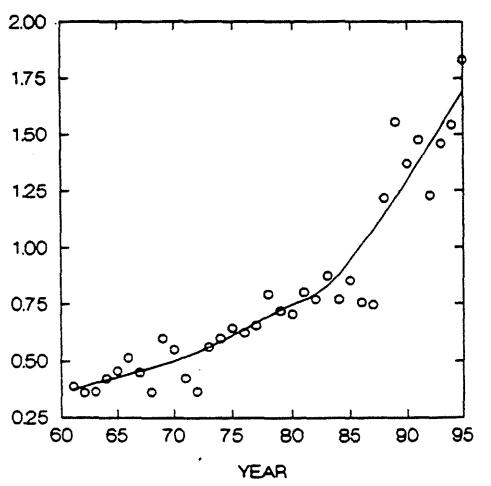


Figure 39. All duck harvest (1,000's) by adult hunters; all goose harvest (1,000's) by adult hunters; seasonal duck bag; and seasonal goose bag per adult hunters in the Mississippi flyway. The 1961 through 1994 data are final, but the 1995 numbers are preliminary pending final duck stamp sales. The curves (locally weighted regression [lowess] lines; Cleveland and Devlin 1988, *J. Am. Stat. Assoc.*) fit a pattern to the majority of the estimates and identify estimates that deviate from that pattern (from Martin, E. M., and P.I. Padding. 1996. Preliminary estimates of waterfowl harvest and hunter activity in the United States during the 1995 hunting season. U.S. Fish and Wildlife Service Adm. Rep. Office of Migratory Bird Management, Laurel, MD. July 1996. 34pp.).

Table 47. Ranking of the Six Most Numerically Important Species in Minnesota regular-season duck harvests, 1961-1995.

Year	Rank Position / % of Harvest						Combined % of Total Harvest						
	1	%	2	%	3	%	4	%	5	%	6	%	
1961	Mallard	46.31	L. Scaup	13.57	GW Teal	11.16	Ringneck	7.55	Wigeon	5.56	Wood Duck	4.40	88.55
1962	Mallard	39.50	Ringneck	18.23	L. Scaup	8.03	BW Teal	7.90	Wood Dk	6.61	GW Teal	5.91	86.18
1963	Mallard	39.87	BW Teal	13.59	Wood Dk	12.58	Ringneck	10.72	GW Teal	6.43	Wigeon	4.66	87.85
1964	Mallard	30.53	Ringneck	18.48	BW Teal	9.50	GW Teal	7.91	Wood Dk	7.79	Wigeon	6.62	80.83
1965	Mallard	25.30	Ringneck	23.95	L. Scaup	11.99	Wood Dk	8.16	BW Teal	5.64	Wigeon	5.29	80.33
1966	Mallard	30.25	Ringneck	16.68	Wood Dk	9.44	BW Teal	7.79	L. Scaup	7.73	GW Teal	7.23	79.12
1967	Mallard	33.69	BW Teal	11.82	GW Teal	10.95	Ringneck	10.18	Wood Dk	7.89	L. Scaup	5.82	80.35
1968	Mallard	27.42	Ringneck	14.68	Wood Dk	11.94	GW Teal	11.53	BW Teal	8.13	Wigeon	6.32	80.02
1969	Mallard	20.71	L. Scaup	15.76	Ringneck	12.82	BW Teal	12.40	Wood Dk	10.36	GW Teal	7.18	79.23
1970	Mallard	31.43	Ringneck	11.39	BW Teal	10.63	Wood Dk	10.54	L. Scaup	9.86	GW Teal	7.50	81.35
1971	Mallard	26.32	BW Teal	16.93	Ringneck	13.92	L. Scaup	11.49	Wood Dk	7.19	GW Teal	6.15	82.00
1972	Mallard	36.92	L. Scaup	16.82	Ringneck	9.56	Wood Dk	8.94	BW Teal	7.41	GW Teal	5.69	85.34
1973	Mallard	27.75	BW Teal	15.18	Ringneck	14.63	Wood Dk	10.55	L. Scaup	9.26	GW Teal	7.85	85.22
1974	Mallard	33.12	Wood Dk	14.99	Ringneck	13.26	BW Teal	9.89	L. Scaup	7.72	GW Teal	7.53	86.51
1975	Mallard	28.13	Ringneck	16.07	BW Teal	15.76	Wood Dk	15.46	GW Teal	6.80	L. Scaup	5.37	87.59
1976	Mallard	27.73	Wood Dk	13.78	GW Teal	11.32	Ringneck	10.51	L. Scaup	10.48	BW Teal	8.20	82.02
1977	Mallard	29.04	Ringneck	12.91	Wood Dk	12.87	BW Teal	11.93	GW Teal	10.45	Wigeon	6.77	83.97
1978	Mallard	30.04	Ringneck	13.57	Wood Dk	12.23	BW Teal	11.25	GW Teal	6.86	Wigeon	5.61	79.56
1979	Mallard	31.35	Wood Dk	15.12	BW Teal	14.93	Ringneck	11.25	Wigeon	4.80	GW Teal	4.70	82.15
1980	Mallard	31.79	Ringneck	15.65	Wood Dk	15.49	GW Teal	6.02	L. Scaup	5.84	Wigeon	5.67	80.46
1981	Mallard	31.37	Wood Dk	13.34	L. Scaup	10.67	Ringneck	9.99	BW Teal	8.00	GW Teal	7.14	80.51
1982	Mallard	30.54	Wood Dk	14.76	BW Teal	14.36	Ringneck	8.83	L. Scaup	6.38	GW Teal	5.94	80.81
1983	Mallard	29.22	Wood Dk	17.06	BW Teal	13.28	Ringneck	11.60	GW Teal	6.74	L. Scaup	5.12	83.02
1984	Mallard	29.44	Wood Dk	18.00	BW Teal	11.90	Ringneck	9.95	GW Teal	8.23	L. Scaup	7.34	84.86
1985	Mallard	27.98	Ringneck	18.90	Wood Dk	12.78	L. Scaup	10.94	GW Teal	6.78	BW Teal	4.12	81.50
1986	Mallard	29.73	Wood Dk	17.18	Ringneck	16.52	L. Scaup	9.57	BW Teal	7.67	GW Teal	5.50	86.17
1987	Mallard	31.71	Wood Dk	18.73	Ringneck	14.47	GW Teal	10.28	L. Scaup	4.95	BW Teal	4.34	84.48
1988	Mallard	31.76	Wood Dk	14.56	L. Scaup	14.03	GW Teal	11.55	Ringneck	8.23	BW Teal	3.95	84.08
1989	Mallard	38.62	Wood Dk	15.72	GW Teal	11.48	Ringneck	8.67	L. Scaup	6.08	BW Teal	4.63	85.20
1990	Mallard	29.91	Wood Dk	17.16	Ringneck	11.51	GW Teal	11.23	BW Teal	7.16	L. Scaup	6.79	83.76
1991	Mallard	35.73	Wood Dk	19.47	Ringneck	9.75	GW Teal	6.73	L. Scaup	6.13	Wigeon	4.38	82.19
1992	Mallard	35.30	Wood Dk	17.28	Ringneck	12.95	L. Scaup	7.93	GW Teal	5.92	Wigeon	4.48	83.86
1993	Mallard	30.94	Ringneck	22.18	Wood Dk	18.77	L. Scaup	5.56	GW Teal	3.88	BW Teal	3.10	84.43
1994	Mallard	26.59	Wood Dk	21.51	Ringneck	14.68	L. Scaup	6.57	BW Teal	6.43	GW Teal	6.08	81.86
1995	Mallard	26.54	Wood Dk	20.72	BW Teal	12.43	Ringneck	11.51	L. Scaup	6.95	GW Teal	4.36	82.51
Avg. % of Harve	31.22		16.4		12.6		9.8		7.21		5.76		83.1
Range	20.71-46.31		11.39-23.95		8.03-18.77		5.56-15.46		3.88-10.48		3.10-8.20		

Among the various rank positions, the species shown below under each position occurred in that position the indicated number of years during the 35-year period.

1	2	3	4	5	6
Mallard-35	Wood Dk-16	Ringneck-12	Ringneck-11	L. Scaup-11	GW Teal-14
	Ringneck-12	Wood Dk- 8	GW Teal- 7	GW Teal- 9	Wigeon - 9
	BW Teal- 4	BW Teal- 8	BW Teal- 6	BW Teal- 7	BW Teal- 6
	L. Scaup- 3	GW Teal- 4	L. Scaup- 6	Wood Dk- 5	L. Scaup- 5
		L. Scaup- 4	Wood Dk- 5	Wigeon - 2	Wood Dk- 1
				Ringneck- 1	

Table 48. Estimates of regular-season duck harvests in Minnesota, 1961-1995.

YEAR	MALL		WODU		BWTL		GWTL		GADW		AMWI		NOPI		AMBD		RNDU		LESC		CANV		REDH		COGO		BUFF		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1961	175,000	46	16,600	4	10,600	3	42,200	11	4,800	1	21,000	6	12,900	3	1,700	0	28,500	8	51,300	14	0	0	0	0	2,100	1	4,400	1	378,000	
1962	113,600	39	19,000	7	22,700	8	17,000	6	3,100	1	9,500	3	6,100	2	2,800	1	52,400	18	23,100	8	0	0	700	0	4,200	1	5,300	2	287,600	
1963	228,300	40	72,000	13	77,800	14	36,800	6	6,100	1	26,700	5	19,400	3	3,900	1	61,400	11	14,500	3	0	0	1,400	0	2,900	1	3,100	1	572,500	
1964	271,000	31	69,100	8	84,300	9	70,200	8	20,900	2	58,700	7	24,000	3	4,800	1	164,000	18	48,400	5	8,500	1	23,900	3	6,000	1	9,200	1	887,600	
1965	162,300	25	52,300	8	176,800	28	35,600	6	8,500	1	34,000	5	8,600	1	6,300	1	153,700	24	76,900	12	9,600	1	25,400	4	7,800	1	12,900	2	641,600	
1966	284,600	30	88,800	9	73,300	8	68,000	7	19,000	2	52,900	6	20,200	2	6,500	1	156,900	17	72,800	8	14,600	2	32,900	3	9,200	1	12,800	1	940,800	
1967	329,600	34	77,100	8	115,600	12	107,100	11	22,700	2	53,300	5	21,700	2	3,300	0	99,600	10	57,000	6	6,200	1	37,500	4	8,300	1	11,300	1	978,200	
1968	152,100	27	66,200	12	45,100	8	64,000	12	9,900	2	35,000	6	16,300	3	3,500	1	81,400	15	32,600	6	7,200	1	10,100	2	6,700	1	9,600	2	554,700	
1969	223,800	21	112,000	10	134,000	12	77,600	7	20,400	2	52,600	5	17,600	2	2,500	0	138,600	13	170,300	16	7,800	1	50,000	5	19,600	2	24,300	2	1,080,600	
1970	298,900	31	100,200	11	101,100	11	71,300	7	11,100	1	44,100	5	29,200	3	4,900	1	108,300	11	93,700	10	6,300	1	29,200	3	7,600	1	19,000	2	950,800	
1971	278,800	26	76,200	7	179,400	17	65,100	6	21,100	2	38,700	4	18,100	2	5,500	1	147,500	14	121,700	11	9,700	1	38,600	4	12,100	1	14,500	1	1,059,300	
1972	354,900	37	85,900	9	71,300	7	54,700	6	16,400	2	35,700	4	11,200	1	7,400	1	91,900	10	161,700	17	500	0	1,000	0	13,600	1	19,000	2	961,400	
1973	165,000	28	62,700	11	90,300	15	46,700	8	8,100	1	30,200	5	13,900	2	2,800	0	87,000	15	55,100	9	200	0	400	0	6,300	1	9,100	2	594,400	
1974	254,800	33	115,300	15	76,100	10	57,900	8	8,300	1	34,400	4	11,300	1	2,300	0	102,000	13	59,400	8	3,000	0	5,700	1	8,800	1	13,300	2	769,400	
1975	285,300	28	156,900	15	159,900	16	69,000	7	11,800	1	37,000	4	13,800	1	1,100	0	163,000	16	54,500	5	4,500	0	13,600	1	12,300	1	16,400	2	1,014,400	
1976	157,800	28	78,500	14	46,700	8	64,400	11	17,200	3	22,900	4	4,500	1	400	0	59,800	11	59,600	10	10,000	2	13,100	2	6,500	1	9,800	2	569,100	
1977	193,100	29	85,600	13	79,300	12	69,500	10	19,100	3	45,000	7	7,900	1	2,500	0	85,800	13	34,500	5	5,200	1	10,900	2	2,100	0	9,700	1	664,900	
1978	304,100	30	123,800	12	113,900	11	69,500	7	28,100	3	56,800	6	18,700	2	1,000	0	137,400	14	48,300	5	5,300	1	35,000	3	8,600	1	20,700	2	1,012,300	
1979	346,100	31	167,000	15	164,900	15	51,900	5	23,100	2	53,000	5	18,900	2	1,000	0	124,200	11	48,300	4	11,400	1	38,600	3	8,400	1	13,300	1	1,104,100	
1980	258,000	32	125,700	15	43,300	5	48,800	6	23,700	3	46,100	6	18,700	2	2,800	0	127,000	16	47,400	6	6,700	1	24,800	3	9,700	1	10,600	1	811,500	
1981	253,000	31	107,600	13	64,500	8	57,600	7	23,400	3	42,500	5	19,500	2	1,900	0	80,600	10	86,100	11	5,400	1	20,100	2	7,100	1	9,700	1	806,500	
1982	249,500	31	120,600	15	117,300	14	48,500	6	23,700	3	35,900	4	13,600	2	4,100	1	72,100	9	52,100	6	6,800	1	28,300	3	7,600	1	15,500	2	817,000	
1983	259,700	29	151,600	17	118,000	13	59,900	7	15,900	2	37,400	4	19,200	2	1,900	0	103,100	12	45,500	5	9,700	1	28,500	3	2,400	0	6,800	1	888,600	
1984	303,400	29	185,400	18	122,600	12	84,800	8	21,800	2	30,100	3	23,900	2	1,800	0	102,500	10	75,600	7	7,200	1	26,300	3	8,600	1	11,200	1	1,030,500	
1985	184,900	28	84,400	13	27,200	4	44,800	7	13,100	2	20,000	3	8,600	1	2,000	0	124,900	19	72,300	11	10,200	2	16,900	3	6,000	1	23,500	4	660,900	
1986	230,300	30	133,100	17	59,400	8	42,600	5	11,000	1	30,100	4	4,400	1	500	0	128,000	17	74,100	10	0	0	19,900	3	5,400	1	14,800	2	774,600	
1987	181,000	32	106,900	19	24,800	4	58,700	10	8,900	2	22,600	4	4,200	1	600	0	82,600	14	28,300	5	0	0	18,300	3	5,800	1	13,600	2	570,900	
1988	76,900	32	35,300	15	9,600	4	28,000	12	2,600	1	7,500	3	6,600	3	700	0	19,900	8	34,000	14	0	0	3,100	1	3,800	2	8500	4	242,000	
1989	122,100	39	49,700	16	14,600	5	36,300	11	4,100	1	12,500	4	7,300	2	300	0	27,400	9	19,200	6	300	0	3,500	1	4,300	1	8,800	3	316,300	
1990	109,500	30	62,800	17	26,200	7	41,100	11	10,200	3	13,200	4	6,100	2	500	0	42,200	12	24,900	7	0	0	5,000	1	5,600	2	8,700	2	366,200	
1991	173,200	36	94,400	19	20,400	4	32,600	7	17,000	4	21,300	4	5,200	1	700	0	47,300	10	29,700	6	0	0	11,300	2	4,300	1	10,900	2	484,800	
1992	184,200	35	90,200	17	20,000	4	30,900	6	16,000	3	23,400	4	8,100	2	700	0	67,600	13	41,400	8	100	0	7,500	1	5,900	1	14,400	3	522,000	
1993	150,100	31	91,000	19	15,000	3	18,800	4	6,600	1	13,300	3	5,600	1	1,100	0	107,600	22	27,000	6	100	0	11,600	2	10,500	2	14,000	3	485,100	
1994	160,600	27	129,900	22	38,800	6	36,700	6	9,100	2	20,100	3	8,100	1	800	0	88,600	15	39,700	7	11,100	2	18,700	3	5,600	1	15,300	3	603,800	
1995*	184,700	27	144,200	21	86,500	12	30,300	4	6,700	1	15,900	2	7,000	1	500	0	80,200	12	48,400	7	16,900	2	18,200	3	17,100	2	15,300	2	696,200	
% chang	15		11		123		-17		-26		-21		-14		-38		-9		22		52		-3		205		0		15	

AVERAGES:

61-65	190,040	34	45,800	8	74,440	13	40,360	7	8,680	2	29,980	5	14,200	3	3,900	1	92,000	17	42,840	8	3,620	1	10,280	2	4,600	1	6,980	1	553,460
66-70	257,800	29	88,860	10	93,820	10																							

Table 49. Estimates of regular season all-duck harvests in the Mississippi flyway, 1961-1995.

YEAR	MN	WI	MI	IA	IL	IN	OH	MO	KY	AR	TN	LA	MS	AL	MFTOTAL	URTOTAL	LRTOTAL	
1961	378,000	22	310,600	124,900	139,400	204,600	25,200	50,700	124,600	23,400	68,700	47,700	211,000	22,700	15,000	1,746,522	1,358,022	388,500
1962	287,600	25	210,600	102,000	45,100	82,100	13,800	40,700	26,100	6,700	53,200	14,900	194,600	29,200	22,600	1,129,225	808,025	321,200
1963	572,500	23	294,100	134,500	139,200	183,500	16,700	65,700	60,400	13,300	138,400	69,900	665,400	86,500	65,400	2,505,523	1,466,623	1,038,900
1964	887,600	25	417,100	205,100	182,100	193,200	36,800	62,700	105,700	27,400	306,400	96,300	893,600	69,200	53,700	3,536,925	2,090,325	1,446,600
1965	641,600	19	472,800	217,600	174,600	189,000	29,300	90,700	110,700	21,500	213,500	57,400	958,200	70,100	64,600	3,311,619	1,926,319	1,385,300
1966	940,800	20	582,100	306,700	270,200	345,900	42,500	103,000	149,400	27,800	373,600	113,600	1,279,700	106,200	79,700	4,721,220	2,740,620	1,980,600
1967	978,200	22	545,200	363,100	229,400	353,200	45,900	125,700	228,400	35,500	371,100	98,900	959,400	112,300	60,200	4,506,522	2,869,122	1,637,400
1968	554,700	23	302,300	199,400	96,300	145,800	40,300	80,900	106,000	15,800	153,400	55,900	520,600	76,200	36,000	2,383,623	1,525,723	857,900
1969	1,080,600	25	557,300	345,900	183,700	243,300	63,800	111,100	200,400	15,300	232,000	55,400	969,900	155,500	63,900	4,278,125	2,786,125	1,492,000
1970	950,800	15	575,100	378,300	368,700	412,500	80,600	140,200	281,600	57,200	651,400	157,100	1,823,000	222,300	76,700	6,175,515	3,187,815	2,987,700
1971	1,059,300	20	654,200	313,800	376,200	280,400	111,200	106,400	246,300	40,200	613,400	173,300	1,024,700	155,600	52,000	5,207,020	3,147,820	2,059,200
1972	961,400	20	558,500	400,900	344,500	356,600	73,600	125,700	197,800	56,900	366,600	138,800	1,044,000	150,400	60,600	4,836,320	3,019,020	1,817,300
1973	594,400	13	518,400	356,900	211,900	311,600	68,200	112,800	161,200	36,100	492,700	194,000	1,138,200	152,300	72,600	4,421,313	2,335,413	2,085,900
1974	769,400	15	663,100	425,100	238,000	293,600	85,300	106,600	237,000	46,500	682,200	138,300	1,073,100	239,700	60,600	5,058,515	2,818,115	2,240,400
1975	1,014,400	16	727,800	373,000	313,600	392,300	100,600	119,700	311,600	75,600	781,000	143,500	1,616,300	313,800	104,500	6,387,716	3,353,016	3,034,700
1976	569,100	10	656,400	466,000	242,200	309,700	69,600	144,600	203,300	59,400	710,200	97,700	1,789,600	392,900	132,700	5,843,410	2,660,910	3,182,500
1977	664,900	11	488,500	255,700	280,000	330,500	68,100	101,800	257,900	74,200	839,400	133,100	1,836,400	327,000	136,800	5,794,311	2,447,411	3,346,900
1978	1,012,300	17	541,800	290,000	351,400	417,300	68,000	95,800	239,800	63,600	689,900	150,000	1,855,600	224,600	115,000	6,115,117	3,016,417	3,098,700
1979	1,104,100	18	569,000	314,800	441,000	404,400	83,700	110,500	254,000	72,100	631,400	179,100	1,666,500	261,200	105,400	6,197,218	3,281,518	2,915,700
1980	811,500	14	558,200	292,100	299,900	323,300	82,900	108,000	202,500	43,600	775,000	139,300	1,656,900	299,100	119,800	5,712,114	2,678,414	3,033,700
1981	806,500	15	438,900	238,800	301,100	374,100	54,500	118,500	232,000	48,000	591,500	114,800	1,508,700	356,400	102,400	5,286,215	2,564,415	2,721,800
1982	817,000	17	394,300	277,200	348,800	301,900	54,500	97,400	209,900	31,900	438,400	101,200	1,364,700	204,700	73,200	4,715,117	2,501,017	2,214,100
1983	888,600	16	459,300	288,900	324,200	342,700	80,600	116,100	243,500	36,100	422,400	130,900	1,873,800	274,700	99,000	5,580,816	2,743,916	2,836,900
1984	1,030,500	16	485,000	354,400	299,500	301,400	69,800	103,800	245,200	33,900	489,900	97,500	1,717,600	227,500	70,100	5,526,119	2,889,619	2,636,500
1985	660,900	17	353,600	250,300	199,800	255,700	64,900	90,000	190,800	28,600	511,900	71,500	1,076,700	149,100	62,000	3,965,817	2,066,017	1,899,800
1986	774,600	19	360,100	224,800	217,000	259,900	45,900	85,900	175,900	22,500	428,700	78,300	1,089,900	152,800	66,000	3,982,319	2,144,119	1,838,200
1987	570,900	16	334,400	216,600	161,100	208,200	50,600	69,400	158,100	32,400	430,100	98,100	1,062,700	137,000	75,500	3,605,116	1,769,316	1,835,800
1988	242,000	13	176,900	140,300	78,300	136,900	39,900	56,400	76,200	23,000	242,500	81,500	485,700	80,100	58,700	1,918,413	946,913	971,500
1989	316,300	12	230,900	198,100	87,800	176,300	45,100	74,900	119,200	32,300	275,400	92,900	737,100	112,400	98,500	2,597,212	1,248,612	1,348,600
1990	366,200	14	259,300	187,700	105,800	186,200	43,700	76,400	107,500	45,900	333,700	130,900	645,600	78,800	41,900	2,609,614	1,332,814	1,276,800
1991	484,800	17	299,700	207,800	154,200	229,700	54,500	70,700	116,600	36,400	372,400	98,300	567,700	91,100	51,500	2,835,417	1,618,017	1,217,400
1992	522,000	18	282,000	204,700	122,800	215,400	43,400	84,900	103,800	28,000	347,800	90,900	666,600	112,600	57,400	2,882,318	1,579,018	1,303,300
1993	485,100	16	276,900	234,800	100,900	182,400	56,600	88,200	101,600	33,500	460,400	122,700	625,400	131,800	57,200	2,957,516	1,526,516	1,431,000
1994	603,800	16	330,600	272,800	151,800	220,600	60,400	81,500	137,900	46,000	726,100	111,500	821,700	175,100	61,200	3,801,016	1,859,416	1,941,600
1995*	696,200	12	399,300	379,700	212,900	267,300	87,600	97,300	222,500	73,500	1,008,600	252,200	1,868,100	369,300	112,600	6,047,100	2,362,812	3,684,300
% change	15	-28	21	39	40	21	45	19	61	60	39	126	127	111	84	59	27	90
AVERAGES:																		
61-65	553,460	23	341,040	156,820	136,080	170,480	24,360	62,100	85,500	18,460	156,040	57,240	584,560	55,540	44,260	2,445,963	1,529,863	916,100
66-70	901,020	20	512,400	318,680	229,660	300,140	54,620	112,180	193,160	30,320	356,300	96,180	1,110,520	134,500	63,300	4,413,001	2,621,881	1,791,120
71-75	879,780	17	624,400	373,940	296,840	326,900	87,780	114,240	230,780	51,060	587,180	157,580	1,179,260	202,360	70,060	5,182,177	2,934,677	2,247,500
76-80	832,380	14	562,780	323,720	322,900	357,040	74,460	112,140	231,500	62,580	729,180	139,840	1,761,000	300,960	121,940	5,932,434	2,816,934	3,115,500
81-85	840,700	17	426,220	281,920	294,680	315,160	64,860	105,160	224,280	35,700	490,820	103,180	1,508,300	242,480	81,340	5,014,817	2,552,997	2,461,820
86-90	454,000	15	272,320	193,500	130,000	193,500	45,040	72,600	127,380	31,220	342,080	96,340	804,200	112,220	68,120	2,942,535	1,488,355	1,454,180
91-95	558,380	22	317,700	259,960	148,520	223,080	60,500	84,520	136,480	43,480	583,060	135,120	909,900	175,980	67,980	2,568,595	1,345,075	1,223,520
* - PRELIMINARY																		
79-84	909,700	17	484,117	294,367	335,750	341,300	71,000	109,050	231,183	44,267	558,100	127,133	1,631,367	270,600	94,983	5,502,933	2,776,483	2,726,450
85-87	668,800	17	349,367	230,567	192,633	241,267	53,800	81,767	174,933	27,833	456,900	82,633	1,076,433	146,300	67,833	3,851,084	1,993,151	1,857,933
88-93	402,733	15	254,283	195,567	108,300	187,817	47,200	75,250	104,150	33,183	338,700	102,867	621,350	101,133	60,867	2,633,415	1,375,315	1,258,100
94-95	650,000	13	364,950	326,250	182,350	243,950	74,000	89,400	180,200	59,750	867,350	181,850	1,344,900	272,200	86,900	4,924,058	2,111,114	2,812,950
% change compared to 79-84																		
85-87	-26	-28	-22	-43														

Table 50. Estimates of regular-season Mallard harvests in the Mississippi Flyway, 1961-1995.

YEAR	MN	WI	MI	IA	IL	IN	OH	MO	KY	AR	TN	LA	MS	AL	MFTOTAL	URTOTAL	LRTOTAL
1961	175,000	151,700	46,500	88,500	128,800	13,200	17,700	81,700	17,500	62,600	32,700	35,500	11,600	3,800	866,800	703,100	163,700
1962	113,600	77,500	32,600	21,300	40,200	5,100	9,000	13,800	3,600	41,200	7,300	54,100	13,400	4,800	437,500	313,100	124,400
1963	228,300	97,800	40,500	43,000	101,500	8,100	18,800	29,400	8,300	93,900	30,300	177,100	36,400	13,000	926,400	567,400	359,000
1964	271,000	150,800	48,500	76,600	113,900	15,600	17,300	59,400	18,800	234,100	61,500	209,400	32,800	11,100	1,320,800	753,100	567,700
1965	162,300	106,000	43,400	79,800	89,600	11,300	20,700	49,600	14,200	137,700	27,700	146,400	18,600	11,800	919,100	562,700	356,400
1966	284,600	186,600	72,900	121,300	179,700	19,000	30,500	82,000	17,600	257,400	61,700	272,900	45,400	18,400	1,650,000	976,600	673,400
1967	329,600	175,900	99,700	124,900	208,600	20,800	40,500	124,500	22,400	270,800	50,100	205,100	44,800	14,700	1,732,400	1,124,500	607,900
1968	152,100	94,200	64,500	40,400	83,000	13,600	18,500	55,000	8,300	121,400	31,300	101,900	38,800	7,900	830,900	521,300	309,600
1969	223,800	157,100	99,500	89,900	140,200	21,700	33,800	124,700	9,600	183,200	31,900	230,900	67,000	18,300	1,431,600	890,700	540,900
1970	298,900	190,200	111,400	139,200	239,800	33,200	42,200	149,300	35,100	541,100	91,600	498,100	139,400	20,000	2,529,500	1,204,200	1,325,300
1971	278,800	225,200	84,500	160,900	166,700	58,700	34,200	161,900	27,800	514,400	105,400	240,000	90,300	14,900	2,163,700	1,170,900	992,800
1972	354,900	190,400	122,400	171,800	219,300	32,100	38,200	130,100	39,500	283,100	82,100	191,600	79,700	14,900	1,950,100	1,259,200	690,900
1973	165,000	187,000	154,900	99,900	168,600	35,600	46,500	108,100	21,200	349,900	127,100	125,900	82,100	16,100	1,687,900	965,600	722,300
1974	254,800	300,300	171,000	106,100	172,200	37,400	37,300	164,800	30,000	530,600	85,000	194,100	146,800	14,600	2,245,000	1,243,900	1,001,100
1975	285,300	244,200	154,000	117,400	199,900	40,300	47,000	170,400	38,400	588,700	93,300	294,300	224,400	20,500	2,518,100	1,258,500	1,259,600
1976	157,800	222,500	192,300	87,500	166,000	34,500	56,600	127,900	37,200	529,300	57,900	469,500	230,100	40,300	2,409,400	1,045,100	1,364,300
1977	193,100	177,000	107,000	138,700	175,700	37,900	43,800	143,500	46,100	582,800	80,100	321,700	186,500	36,300	2,270,200	1,016,700	1,253,500
1978	304,100	185,000	139,000	125,600	207,600	28,200	36,900	120,700	34,500	480,000	89,300	360,000	116,200	29,900	2,257,000	1,147,100	1,109,900
1979	346,100	199,600	138,600	183,300	192,000	34,800	42,100	146,800	44,300	435,500	113,200	301,800	135,600	32,400	2,346,100	1,283,300	1,062,800
1980	258,000	197,200	126,300	118,100	168,400	36,800	44,900	123,500	20,000	588,200	68,400	392,500	170,100	35,100	2,347,500	1,073,200	1,274,300
1981	253,000	168,400	112,300	130,200	174,600	28,900	44,200	119,500	26,600	386,600	66,700	332,800	186,500	31,700	2,062,000	1,031,100	1,030,900
1982	249,500	135,200	145,200	164,900	139,900	32,900	41,300	112,900	20,300	285,700	60,500	252,700	118,900	21,700	1,781,600	1,021,800	759,800
1983	259,700	136,500	131,000	115,200	176,900	38,100	44,500	151,500	23,800	294,600	86,300	352,000	175,100	32,700	2,017,900	1,053,400	964,500
1984	303,400	144,300	153,500	96,300	151,300	28,500	42,900	113,900	19,000	322,000	45,900	256,500	102,700	15,900	1,796,100	1,034,100	762,000
1985	184,900	113,500	102,200	62,000	136,000	26,900	33,800	91,600	17,600	397,800	45,300	227,900	79,100	14,300	1,532,900	750,900	782,000
1986	230,300	141,500	93,300	88,900	140,600	23,400	31,800	97,400	16,800	331,300	54,000	208,700	74,900	17,200	1,550,100	847,200	702,900
1987	181,000	124,200	112,100	64,800	111,600	22,400	31,500	90,500	20,300	309,800	59,000	236,900	70,000	24,700	1,458,800	738,100	720,700
1988	76,900	77,700	78,600	41,600	96,000	20,300	25,900	48,800	15,600	181,700	48,500	98,800	40,500	17,200	868,100	465,800	402,300
1989	122,100	98,600	96,000	32,200	114,900	23,700	34,200	68,700	19,400	173,900	55,800	168,100	55,900	31,000	1,094,500	590,400	504,100
1990	109,500	110,400	98,200	41,300	106,400	22,700	36,100	62,600	29,300	224,100	73,900	127,200	37,900	11,400	1,091,000	587,200	503,800
1991	173,200	117,400	101,000	63,100	107,000	27,700	31,600	56,800	22,100	270,000	61,800	99,800	44,900	13,200	1,189,600	677,800	511,800
1992	184,200	131,400	103,700	64,900	129,300	23,200	42,600	55,600	17,000	240,800	52,200	126,300	64,400	14,800	1,250,400	734,900	515,500
1993	150,100	128,600	113,200	52,700	108,500	34,700	44,100	72,700	21,900	329,500	73,900	121,000	71,800	15,500	1,338,200	704,600	633,600
1994	160,600	131,900	110,200	49,100	112,000	42,800	38,700	73,700	32,300	472,200	59,900	123,100	101,400	16,900	1,524,800	719,000	805,800
1995*	184,700	140,700	163,100	76,500	159,700	47,800	43,000	122,100	46,600	584,200	152,600	334,400	228,000	24,900	2,308,300	937,600	1,370,700
% change	15	7	48	56	43	12	11	66	44	24	155	172	125	47	51	30	70

AVERAGES:

61-65	190,040	116,760	42,300	61,840	94,800	10,660	16,700	46,780	12,480	113,900	31,900	124,500	22,560	8,900	894,120	579,880	314,240
66-70	257,800	160,800	89,600	103,140	170,260	21,660	33,100	107,100	18,600	274,780	53,320	261,780	67,080	15,860	1,634,880	943,460	691,420
71-75	267,760	229,420	137,360	131,220	185,340	40,820	40,640	147,060	31,380	453,340	98,580	209,180	124,660	16,200	2,112,960	1,179,620	933,340
76-80	251,820	196,260	140,640	130,640	181,940	34,440	44,860	132,480	36,420	523,160	81,780	369,100	167,700	34,800	2,326,040	1,113,080	1,212,960
81-85	250,100	139,580	128,840	113,720	155,740	31,060	41,340	117,880	21,460	337,340	60,940	284,380	132,460	23,260	1,838,100	978,260	859,840
86-90	143,960	110,480	95,640	53,760	113,900	22,500	31,900	73,600	20,280	244,160	58,240	167,940	55,840	20,300	1,212,500	645,740	566,760
91-95	170,560	130,000	118,240	61,260	123,300	35,240	40,000	76,180	27,980	379,340	80,080	160,920	102,100	17,060	1,522,260	705,767	553,633

* - PRELIMINARY

79-84	278,283	163,533	134,483	134,667	167,183	33,333	43,317	128,017	25,667	385,433	73,500	314,717	148,150	28,250	2,058,533	1,082,817	975,717
85-87	198,733	126,400	102,533	71,900	129,400	24,233	32,367	93,167	18,233	346,300	52,767	224,500	74,667	18,733	1,513,933	778,733	735,200
88-93	136,000	110,683	98,450	49,300	110,350	25,383	35,750	60,867	20,883	236,667	61,017	123,533	52,567	17,183	1,138,633	626,783	511,850
94-95	172,650	136,300	136,650	62,800	135,850	45,300	40,850	97,900	39,450	528,200	106,250	228,750	164,700	20,900	1,916,550	828,300	1,088,

Table 51. Estimates of all-season lesser scaup harvests in the Mississippi flyway, 1961-1995.

YEAR	MN	WI	MI	IA	IL	IN	OH	MO	KY	AR	TN	LA	MS	AL	MF TOTAL	URTOTAL	LRTOTAL
1961	51,300	12,000	8,400	5,500	10,500	600	1,500	5,400	400	100	600	59,400	3,900	1,900	161,500	95,200	66,300
1962	23,100	6,100	6,900	800	500	100	1,000	300	TR	0	100	10,000	0	400	49,300	38,800	10,500
1963	14,500	5,300	6,600	2,600	3,100	200	1,500	3,100	400	700	100	127,600	1,400	2,800	169,900	36,900	133,000
1964	48,400	23,400	23,500	3,200	6,800	500	3,300	8,400	700	1,500	800	100,600	2,700	3,000	226,800	117,500	109,300
1965	76,900	27,200	15,600	10,200	13,200	1,100	4,700	11,500	600	1,700	900	178,600	6,200	4,600	353,000	160,400	192,600
1966	72,800	49,900	31,500	10,600	11,800	1,100	7,400	9,700	1,000	2,900	1,400	80,200	3,300	3,400	287,000	194,800	92,200
1967	57,000	48,000	41,000	4,700	14,500	2,000	8,500	17,100	300	800	1,200	47,900	10,100	2,900	256,000	192,800	63,200
1968	32,600	16,600	16,700	2,000	6,500	500	2,900	10,100	TR	0	100	6,800	1,200	100	98,100	87,900	8,200
1969	170,300	30,100	47,200	7,600	7,500	5,200	5,600	4,800	0	900	400	14,500	3,400	2,600	300,100	278,300	21,800
1970	93,700	32,200	33,400	7,800	11,400	1,500	7,300	7,300	1,000	1,100	1,900	49,200	2,300	1,100	251,200	194,600	56,600
1971	121,700	28,600	29,300	17,300	11,800	1,200	3,400	11,600	500	0	3,800	61,100	3,400	3,900	297,600	224,900	72,700
1972	161,700	37,100	39,600	16,100	11,400	800	3,600	8,000	1,000	7,500	1,900	36,400	1,200	800	327,100	278,300	48,800
1973	55,100	17,900	36,000	5,000	7,900	800	4,200	4,700	500	10,900	2,900	265,100	11,000	12,100	434,100	131,600	302,500
1974	59,400	26,000	46,000	5,000	15,100	900	5,100	8,700	400	9,800	3,500	137,700	8,400	4,800	330,800	166,200	164,600
1975	54,500	27,100	30,300	7,700	17,900	1,800	4,600	20,000	1,100	4,300	800	74,900	3,500	2,100	250,400	163,700	86,700
1976	59,600	33,200	33,300	8,000	24,100	2,800	6,300	12,000	600	13,900	100	119,400	4,200	9,200	326,700	179,300	147,400
1977	34,500	19,800	16,200	4,200	17,000	2,500	3,900	11,700	2,500	28,700	2,900	187,700	20,400	12,400	364,400	109,800	254,600
1978	48,300	10,400	9,600	5,700	19,700	1,000	2,100	12,600	100	5,400	1,000	55,400	2,700	3,300	177,300	109,400	67,900
1979	48,300	17,500	12,500	7,300	17,900	4,700	3,600	6,900	800	3,600	800	19,100	1,200	400	144,600	118,700	25,900
1980	47,400	32,000	11,700	7,900	10,800	5,000	3,300	6,000	1,300	2,700	1,200	23,500	0	1,500	154,300	124,100	30,200
1981	86,100	55,000	14,900	6,000	21,200	1,900	4,400	7,800	900	2,300	1,400	101,000	9,500	12,800	325,200	197,300	127,900
1982	52,100	25,000	12,900	5,900	21,900	600	3,900	4,100	700	12,400	1,400	91,900	1,800	6,400	241,000	126,400	114,600
1983	45,500	18,200	11,000	7,300	15,200	1,900	3,000	5,300	100	4,300	3,000	35,700	2,000	2,000	154,500	107,400	47,100
1984	75,600	46,800	13,000	12,100	16,900	4,000	5,800	18,600	800	17,900	7,300	150,700	2,500	8,800	380,800	192,800	188,000
1985	72,300	39,500	9,300	5,300	14,300	3,900	4,700	13,100	700	6,000	1,100	119,600	4,300	11,700	305,800	162,400	143,400
1986	74,100	19,600	9,200	3,900	14,400	1,100	4,400	9,700	0	2,700	0	21,500	100	3,300	164,000	136,400	27,600
1987	28,300	13,500	5,900	2,900	5,900	800	2,600	8,200	100	5,000	200	22,400	500	800	97,100	68,100	29,000
1988	34,000	10,900	5,900	1,700	3,200	1,100	1,400	1,600	100	1,300	2,500	16,700	1,400	1,500	83,300	59,800	23,500
1989	19,200	11,600	9,600	1,600	3,200	400	2,400	4,700	200	2,000	500	11,800	600	1,400	69,200	52,700	16,500
1990	24,900	10,400	5,000	1,600	4,900	300	2,500	2,200	100	1,800	1,500	3,600	100	TR	58,900	51,800	7,100
1991	29,700	15,200	5,500	7,200	17,500	1,100	1,400	6,900	100	2,600	1,100	11,600	100	2,600	102,600	84,500	18,100
1992	41,400	8,900	7,400	3,200	7,100	1,100	1,500	3,000	300	1,200	2,300	49,800	1,200	3,900	132,300	73,600	58,700
1993	27,000	7,700	10,000	2,100	4,200	700	1,600	2,100	0	1,100	1,000	5,200	0	1,000	63,700	55,400	8,300
1994	39,700	8,500	12,700	3,300	6,700	300	400	5,800	600	4,400	800	16,500	400	2,000	102,100	77,400	24,700
1995*	48,400	15,800	17,100	4,700	4,500	900	2,900	5,300	0	12,100	800	68,500	500	1,500	183,000	99,600	83,400
% change	22	86	35	42	-33	200	625	-9	-100	175	0	315	25	-25	79	29	238
AVERAGES:																	
61-65	42,840	14,800	12,200	4,460	6,820	500	2,400	5,740	420	800	500	95,240	2,840	2,540	192,100	89,760	102,340
66-70	85,280	35,360	33,960	6,540	10,340	2,060	6,340	9,800	460	1,140	1,000	39,720	4,060	2,020	238,080	189,680	48,400
71-75	90,480	27,340	36,240	10,220	12,820	1,060	4,180	10,600	700	6,500	2,580	115,040	5,500	4,740	328,000	192,940	135,060
76-80	47,620	22,580	16,680	6,620	17,900	3,200	3,840	9,840	1,060	10,860	1,200	81,020	5,700	5,360	233,460	128,260	105,200
81-85	66,320	36,900	12,220	7,320	17,900	2,460	4,360	9,780	640	8,580	2,840	99,780	4,020	8,340	281,460	157,260	124,200
86-90	36,100	13,200	7,120	2,340	6,320	740	2,660	5,280	100	2,560	940	15,200	540	1,400	94,500	73,760	20,740
91-95	37,240	11,220	10,540	4,100	8,000	820	1,560	4,620	200	4,280	1,200	30,320	440	2,200	116,740	78,100	38,640
* - PRELIMINARY																	
79-84	59,167	32,417	12,667	7,750	17,317	3,017	4,000	8,117	767	7,200	2,517	70,317	2,833	5,317	233,400	144,450	88,950
85-87	58,233	24,200	8,133	4,033	11,533	1,933	3,900	10,333	267	4,567	433	54,500	1,633	5,267	188,967	122,300	66,667
88-93	29,367	10,783	7,233	2,900	6,683	783	1,800	3,417	133	1,667	1,483	16,450	567	1,733	85,000	62,967	22,033
94-95	44,050	12,150	14,900	4,000	5,600	600	1,650	5,550	300	8,250	800	42,500	450	1,750	142,550	88,500	54,050
% decline compared to 79-84																	
85-87	-2	-25	-36	-48	-33	-36	-2	27	-65	-37	-83	-22	-42	-1	-19	-15	-25
88-93	-50	-67	-43	-63	-61	-74	-55	-58	-83	-77	-41	-77	-80	-67	-64	-56	-75
94-95	-26	-63	18	-48	-68	-80	-59	-32	-61	15	-68	-40	-84	-67	-39	-39	-39

Table 52. Estimates of Canada goose harvests in the Mississippi Flyway, 1962-1995.

YEAR	MN	WI	MI	IA	IL	IN	OH	MO	KY	AR	TN	LA	MS	AL	ME	TOTAL
1962	5,200	19,100	9,700	6,600	11,500	2,000	1,100	22,700	1,100	0	1,800	0	400	1,700	82,900	
1963	7,300	19,500	14,200	7,200	14,000	800	0	34,300	2,200	0	2,000	300	800	2,400	105,000	
1964	7,300	42,900	11,900	4,300	27,500	2,500	2,200	33,600	1,900	0	3,100	300	100	4,300	141,900	
1965	12,100	50,000	10,400	6,600	16,400	1,100	4,100	32,500	1,100	0	1,700	0	0	5,300	141,300	
1966	20,000	27,900	9,500	7,200	28,000	3,100	3,500	40,300	3,700	0	2,800	800	0	5,400	152,200	
1967	18,900	21,300	11,500	12,400	35,400	2,800	5,200	71,900	4,700	100	4,400	0	900	3,200	192,700	
1968	10,100	25,300	19,400	10,600	21,200	3,100	6,200	47,200	4,900	0	7,200	700	0	2,200	158,100	
1969	25,500	42,800	13,300	15,500	29,400	4,100	4,700	39,800	6,800	0	1,600	1,500	0	4,800	189,800	
1970	22,000	28,600	25,100	12,600	37,700	1,600	9,100	33,500	11,200	0	9,500	1,600	0	400	192,900	
1971	14,000	52,500	19,600	10,400	34,400	3,200	6,100	37,900	9,600	0	3,800	0	1,900	900	194,300	
1972	17,600	35,800	16,400	5,000	33,800	3,000	5,200	41,000	4,400	0	1,900	0	0	1,600	165,700	
1973	19,100	60,800	21,000	11,600	28,500	2,100	13,500	40,300	15,200	0	7,200	0	0	900	220,200	
1974	31,500	77,000	26,500	7,700	47,100	4,100	9,200	64,400	12,600	0	7,100	0	800	1,000	289,000	
1975	56,600	66,400	20,500	13,500	44,900	6,800	11,200	81,800	12,700	2,000	9,500	0	2,000	2,500	330,400	
1976	56,100	45,700	27,500	9,300	53,700	3,400	8,500	59,900	15,000	8,700	29,800	0	18,000	5,000	340,600	
1977	36,100	89,900	31,800	7,800	76,600	3,700	12,600	65,000	18,800	2,100	8,200	1,500	2,800	700	357,600	
1978	53,600	85,700	23,300	11,900	118,700	2,300	10,700	68,300	23,400	4,100	16,500	0	3,900	3,400	425,800	
1979	59,400	62,200	33,200	10,000	69,000	3,600	12,900	57,400	9,800	0	5,200	0	0	2,600	325,300	
1980	61,800	57,600	32,000	11,700	57,700	9,300	11,500	44,700	17,800	0	7,400	1,700	1,300	1,800	316,300	
1981	82,700	39,800	30,400	10,200	51,500	8,100	12,600	45,000	19,200	0	5,800	0	2,300	1,300	308,900	
1982	76,600	45,800	52,200	10,200	27,200	5,900	12,600	42,100	6,600	0	6,800	1,000	2,000	1,100	290,100	
1983	50,100	33,500	53,600	11,500	38,900	8,100	8,200	34,500	25,800	0	20,800	0	2,200	1,600	288,800	
1984	79,700	40,600	56,700	13,300	31,200	5,700	16,700	41,500	11,600	400	12,200	0	500	300	310,400	
1985	67,800	44,600	64,600	10,400	38,900	14,100	19,800	36,900	16,100	300	17,800	700	1,400	2,700	336,100	
1986	67,200	49,600	61,100	17,200	49,400	12,000	17,200	30,000	17,900	0	11,400	0	0	4,000	337,000	
1987	66,000	39,600	61,800	15,100	44,900	10,400	18,800	26,500	17,200	200	16,400	500	0	2,300	319,700	
1988	81,800	67,700	70,600	12,100	91,000	16,800	27,500	31,300	20,300	100	17,900	300	1,000	2,600	441,000	
1989	75,000	85,300	100,200	20,200	97,400	28,400	34,500	33,300	41,700	1,500	55,100	0	2,100	5,400	580,100	
1990	88,800	125,300	71,500	26,600	88,500	14,700	20,800	33,900	11,500	1,900	23,500	2,400	900	100	510,400	
1991	99,000	122,400	73,700	29,300	91,300	17,400	36,000	29,900	16,900	2,900	21,900	600	500	1,800	543,600	
1992	104,400	63,900	90,000	28,700	77,300	21,500	43,900	27,100	9,000	3,500	12,200	1,400	200	1,200	484,300	
1993	108,600	74,900	105,800	17,300	101,300	31,000	51,300	43,100	33,000	3,700	23,300	500	1,400	3,700	598,900	
1994	145,800	76,900	150,600	26,100	79,500	31,000	47,000	39,400	15,300	9,500	17,400	2,900	1,600	1,400	644,400	
1995*	116,000	99,900	162,700	35,500	101,500	47,100	52,200	44,100	33,800	19,000	34,500	2,500	1,300	2,700	752,800	
% change	-20	30	8	36	28	52	11	12	121	100	98	-14	-19	93	17	
AVERAGES:																
62-65	7,975	32,875	11,550	6,175	17,350	1,600	1,850	30,775	1,575	0	2,150	150	325	3,425	117,775	
66-70	19,300	29,180	15,760	11,660	30,340	2,940	5,740	46,540	6,260	20	5,100	920	180	3,200	177,140	
71-75	27,760	58,500	20,800	9,640	37,740	3,840	9,040	53,080	10,900	400	5,900	0	940	1,380	239,920	
76-80	53,400	68,220	29,560	10,140	75,140	4,460	11,240	59,060	16,960	2,980	13,420	640	5,200	2,700	353,120	
81-85	71,380	40,860	51,500	11,120	37,540	8,380	13,980	40,000	15,860	140	12,680	340	1,680	1,400	306,860	
86-90	75,760	73,500	73,040	18,240	74,240	16,460	23,760	31,000	21,720	740	24,860	640	800	2,880	437,640	
91-95	114,760	87,600	116,560	27,380	90,180	29,600	46,080	36,720	21,600	7,720	21,860	1,580	1,000	2,160	604,800	

* - PRELIMINARY

Figure 53. Estimates of active adult waterfowl hunters in the Mississippi Flyway, 1961-1995.

YEAR	MN	WI	MI	IA	IL	IN	OH	MO	KY	AR	TN	LA	MS	AL	MF TOTAL
1961	74,100	73,400	50,900	33,500	52,400	15,100	20,800	32,400	5,200	14,800	12,600	32,300	5,200	4,100	426,800
1962	66,500	58,600	38,700	24,000	34,100	11,900	16,300	22,300	3,700	8,000	6,600	28,200	5,900	5,000	329,800
1963	98,100	76,000	53,900	29,700	40,100	12,100	19,200	27,100	4,600	14,400	12,400	53,000	10,500	9,100	460,200
1964	116,400	86,600	63,600	30,900	42,700	13,900	20,300	32,400	6,200	30,000	18,900	72,600	12,200	11,500	558,200
1965	110,400	92,400	63,000	34,000	48,100	14,100	22,200	30,900	6,100	19,100	14,400	69,700	11,100	11,200	546,700
1966	139,300	94,600	70,800	41,300	56,100	16,100	26,800	34,800	7,300	29,700	21,100	90,500	15,300	13,500	657,200
1967	145,200	94,700	79,000	44,300	64,300	18,200	26,200	46,100	7,900	33,500	21,700	92,400	16,800	14,400	704,700
1968	128,500	88,900	74,900	37,500	50,700	17,800	25,000	35,300	6,100	24,000	19,400	77,300	14,500	11,300	611,200
1969	130,900	107,100	87,300	47,500	59,000	20,800	30,600	43,500	6,600	29,600	20,200	86,200	17,300	12,400	699,000
1970	156,000	131,000	112,200	56,900	71,300	24,000	36,800	50,000	8,900	49,600	25,000	106,100	22,600	14,200	864,600
1971	161,000	135,500	94,000	58,700	66,800	26,700	37,600	49,400	9,800	47,600	29,300	97,500	23,500	10,100	847,500
1972	138,100	119,000	87,200	50,800	67,200	20,400	32,000	49,800	8,900	41,600	23,600	90,700	19,100	13,200	761,600
1973	110,600	105,800	86,900	48,700	62,700	20,800	31,500	45,700	9,000	38,100	27,200	83,100	19,400	10,500	700,000
1974	132,500	119,800	88,300	51,600	63,500	21,600	33,700	49,800	10,400	45,800	29,500	86,300	21,000	10,300	764,100
1975	147,200	129,700	88,100	49,700	53,600	20,000	34,100	52,400	11,200	51,300	23,600	93,300	26,300	11,700	792,200
1976	108,200	118,300	70,900	45,400	54,600	11,700	34,400	51,600	12,700	47,900	22,700	104,800	25,600	13,300	722,100
1977	135,400	122,300	59,400	46,200	55,100	12,300	32,000	53,100	12,400	46,800	25,600	103,700	25,500	13,400	743,200
1978	138,500	104,000	52,900	47,800	57,200	12,700	31,300	51,600	13,000	47,100	25,000	105,100	22,800	13,500	722,500
1979	143,100	89,300	53,400	44,400	57,700	13,500	32,300	45,100	13,100	43,500	24,000	107,100	22,600	10,200	699,300
1980	139,200	93,600	48,200	41,100	52,200	12,400	30,900	39,300	11,400	42,600	21,000	106,200	21,900	9,700	669,700
1981	126,200	85,000	42,100	35,900	51,100	12,500	30,400	41,200	11,700	35,900	20,700	98,600	20,700	9,500	621,500
1982	122,400	77,600	41,800	34,400	45,900	12,000	24,800	39,500	10,900	34,600	20,500	97,500	17,800	9,400	589,100
1983	121,700	77,800	42,600	34,000	45,400	11,800	23,500	37,700	10,900	32,000	20,300	106,900	19,900	9,500	594,000
1984	126,900	78,300	45,200	35,300	47,400	11,600	24,100	37,900	11,400	34,300	19,600	100,600	19,700	9,600	601,900
1985	116,500	74,600	44,600	27,900	42,600	11,000	23,500	32,500	10,300	34,400	19,200	86,700	15,200	8,900	547,900
1986	122,400	79,400	45,200	27,900	45,500	12,300	22,800	34,000	10,900	33,300	19,000	85,900	16,500	10,000	565,100
1987	111,000	75,200	46,500	25,500	43,900	11,900	21,400	31,000	10,600	30,500	19,000	81,100	13,500	9,100	530,200
1988	73,600	61,900	39,200	17,300	41,200	10,400	20,500	23,300	10,200	24,800	16,900	56,000	11,200	8,500	415,000
1989	81,100	71,300	44,200	16,600	45,900	10,700	21,500	24,500	11,400	23,300	18,500	56,500	12,200	8,800	446,500
1990	88,700	84,000	45,400	20,800	44,300	11,700	21,100	23,100	11,000	27,100	20,100	58,600	11,500	8,200	475,600
1991	95,200	79,600	45,200	21,400	43,800	11,700	21,400	23,200	11,100	30,100	18,400	57,600	10,900	7,800	477,400
1992	96,900	68,200	48,800	22,800	45,600	12,000	24,300	23,200	10,900	29,900	18,400	59,000	11,700	8,100	479,800
1993	99,299	73,249	54,042	21,092	44,220	12,919	26,059	22,453	10,737	33,643	18,671	59,642	11,527	7,754	495,307
1994	122,858	82,066	59,296	24,523	45,536	15,380	24,776	23,344	11,669	39,501	20,612	65,207	13,419	8,572	556,759
1995*	112,904	87,146	65,681	22,022	46,611	13,964	23,341	27,296	12,339	44,284	24,287	76,107	15,388	10,053	581,423
AVERAGES:															
61-65	93,100	77,400	54,020	30,420	43,480	13,420	19,760	29,020	5,160	17,260	12,980	51,160	8,980	8,180	464,340
66-70	139,980	103,260	84,840	45,500	60,280	19,380	29,080	41,940	7,360	33,280	21,480	90,500	17,300	13,160	707,340
71-75	137,880	121,960	88,900	51,900	62,760	21,900	33,780	49,420	9,860	44,880	26,640	90,180	21,860	11,160	773,080
76-80	132,880	105,500	56,960	44,980	55,360	12,520	32,180	48,140	12,520	45,580	23,660	105,380	23,680	12,020	711,360
81-85	122,740	78,660	43,260	33,500	46,480	11,780	25,260	37,760	11,040	34,240	20,060	98,060	18,660	9,380	590,880
86-90	95,360	74,360	44,100	21,620	44,160	11,400	21,460	27,180	10,820	27,800	18,700	67,620	12,980	8,920	486,480
91-95	105,432	78,052	54,604	22,367	45,153	13,193	23,975	23,899	11,349	35,486	20,074	63,511	12,587	8,456	518,138

* - PRELIMINARY

KG 07/06/96

Table 54. Average seasonal bag per active adult waterfowl hunter in the Mississippi flyway, 1961-1995.

YEAR	MN	WI	MI	IA	IL	IN	OH	MO	KY	AR	TN	LA	MS	AL	MF AVG	URAVG	LRAVG
1961	4.88	3.97	2.36	3.88	3.75	1.50	2.33	3.78	3.19	4.29	3.68	6.49	3.77	3.51	3.90	3.67	4.39
1962	4.20	3.24	2.49	2.09	2.32	1.07	2.36	1.20	1.55	6.35	1.83	6.53	5.34	4.27	3.27	2.84	5.32
1963	5.60	3.61	2.35	4.68	4.34	1.38	3.39	2.30	2.66	8.68	5.76	12.05	7.87	6.12	5.20	3.95	9.48
1964	7.34	4.52	3.00	6.21	4.20	2.62	3.14	3.30	4.10	9.19	5.56	12.06	5.35	3.83	6.10	4.95	9.19
1965	6.89	4.97	3.36	5.95	4.22	2.38	4.23	3.96	3.44	10.58	4.90	13.75	6.11	4.94	6.33	5.03	10.45
1966	6.63	5.52	4.13	7.37	6.57	3.07	3.96	4.39	3.36	11.23	6.75	14.60	6.61	5.49	7.18	5.67	11.26
1967	6.59	5.12	4.38	6.63	6.07	2.64	5.01	4.74	4.18	9.80	5.64	11.34	6.68	4.14	6.49	5.54	9.12
1968	4.40	3.13	2.50	2.61	2.93	2.23	3.29	2.89	2.10	5.89	3.45	6.35	4.86	3.17	3.79	3.27	5.36
1969	7.97	4.87	3.68	5.09	4.39	3.05	3.89	4.44	2.46	8.02	2.83	12.41	8.70	5.21	6.23	5.24	9.26
1970	5.95	4.19	3.19	5.97	6.09	3.66	4.02	5.70	5.17	11.60	8.16	18.25	10.40	5.56	7.18	4.90	13.59
1971	6.62	4.40	3.17	6.32	4.54	4.28	2.99	5.25	4.05	11.01	7.96	11.05	6.94	5.19	6.15	4.96	9.60
1972	6.74	4.37	4.41	6.35	5.35	4.17	3.83	4.02	5.13	8.17	6.64	12.23	7.85	4.60	6.28	5.18	9.45
1973	5.31	4.58	3.85	3.94	5.13	3.60	3.89	3.95	3.36	11.22	8.01	14.35	7.80	6.71	6.27	4.48	11.16
1974	5.76	5.18	4.53	4.29	4.37	4.16	3.33	4.92	4.28	11.60	8.52	12.85	10.24	5.31	6.46	4.87	10.85
1975	6.62	5.24	3.91	5.93	7.56	5.53	4.08	6.49	6.65	12.54	9.61	17.78	11.92	7.92	7.95	5.72	13.84
1976	5.38	5.14	6.14	4.95	5.96	7.10	4.34	4.16	4.57	13.01	8.54	17.38	13.82	9.36	8.03	5.30	13.99
1977	4.85	3.69	3.91	5.32	6.50	6.74	3.40	5.15	5.42	15.40	9.81	17.81	11.45	9.98	7.70	4.67	14.56
1978	7.59	4.72	5.08	6.70	7.33	6.35	3.55	4.92	4.68	12.02	9.93	18.03	9.01	8.24	8.42	6.04	13.63
1979	7.73	5.61	5.52	9.49	7.15	6.92	3.66	5.87	5.81	11.78	9.87	16.03	11.81	10.11	8.76	6.71	13.21
1980	6.06	5.35	5.62	6.58	6.44	6.02	3.82	5.47	4.17	14.71	10.01	16.47	13.00	10.92	8.45	5.75	14.21
1981	6.42	4.66	5.41	7.89	7.49	5.12	4.02	6.40	5.64	13.63	9.70	15.70	13.92	10.66	8.43	6.01	13.67
1982	6.44	4.88	6.09	9.60	6.66	5.35	4.32	5.89	4.03	10.23	9.11	15.33	8.80	7.64	8.10	6.18	12.10
1983	7.22	5.49	6.24	8.49	8.00	8.00	5.53	6.61	4.75	11.49	11.71	18.68	11.59	10.45	9.57	6.84	14.96
1984	8.07	5.92	7.01	7.54	6.76	6.96	4.83	6.84	5.05	13.04	8.06	18.04	9.90	7.77	9.29	6.74	10.31
1985	5.64	4.30	5.12	6.83	6.65	6.99	4.08	5.67	5.01	13.64	6.74	13.68	8.62	7.71	7.44	5.66	9.23
1986	6.30	4.03	4.78	7.29	6.23	4.70	3.88	5.28	4.16	10.85	7.22	13.98	8.21	6.88	7.20	5.31	8.55
1987	4.91	4.25	4.45	6.04	4.80	4.50	3.21	5.27	4.65	13.60	5.88	14.35	9.83	8.38	6.93	4.68	9.45
1988	3.14	2.73	3.43	4.33	3.18	3.66	2.63	3.12	2.69	9.35	5.08	8.29	6.83	6.56	4.46	3.28	6.47
1989	3.99	2.97	4.18	4.68	3.82	4.27	3.55	4.57	3.96	10.13	7.24	12.61	7.62	10.40	5.64	4.00	8.66
1990	4.06	2.73	3.97	4.90	4.39	3.78	3.41	4.70	4.11	11.00	7.52	10.80	6.20	6.21	5.34	3.99	7.64
1991	5.14	3.21	4.30	6.78	5.33	4.95	3.21	5.47	3.69	10.41	7.48	9.60	7.46	6.25	5.75	4.80	7.48
1992	5.33	3.64	3.91	5.12	4.96	4.01	3.88	4.72	3.40	10.05	7.44	12.62	8.74	6.74	6.10	4.45	8.17
1993	4.95	3.26	4.03	4.69	4.31	4.70	3.77	4.89	4.55	11.17	9.84	11.38	10.06	7.29	5.99	4.33	9.05
1994	5.04	3.58	4.38	5.97	4.99	4.17	3.58	6.40	5.49	15.29	9.13	14.90	11.75	6.39	6.98	4.76	10.49
1995*	6.61	4.31	5.62	8.19	6.38	6.31	4.70	8.84	8.10	19.57	15.02	27.10	20.35	10.60	10.70	6.37	16.79
% change	31	20	28	37	28	51	31	38	48	28	65	82	73	66	53	34	60
AVERAGES:																	
61-65	5.78	4.06	2.71	4.56	3.77	1.79	3.09	2.91	2.99	7.82	4.35	10.18	5.69	4.53	4.96	4.09	7.89
66-70	6.31	4.57	3.58	5.53	5.21	2.93	4.03	4.43	3.45	9.31	5.37	12.59	7.45	4.71	6.17	4.93	9.72
71-75	6.21	4.75	3.97	5.37	5.39	4.35	3.62	4.93	4.69	10.91	8.15	13.65	8.95	5.95	6.62	5.04	10.98
76-80	6.32	4.90	5.25	6.61	6.68	6.63	3.75	5.11	4.93	13.38	9.63	17.14	11.82	9.72	8.27	5.69	13.92
81-85	6.76	5.05	5.97	8.07	7.11	6.48	4.56	6.28	4.89	12.41	9.06	16.28	10.56	8.85	8.57	6.13	13.68
86-90	4.48	3.34	4.16	5.45	4.48	4.18	3.34	4.59	3.91	10.99	6.59	12.01	7.74	7.69	5.91	4.25	8.15
91-95	5.41	3.60	4.45	6.15	5.19	4.83	3.83	6.06	5.05	13.30	9.78	15.12	11.67	7.45	7.10		
* - PRELIMINARY																	
79-84	6.99	5.32	5.98	8.27	7.08	6.39	4.36	6.18	4.91	12.48	9.74	16.71	11.50	9.59	8.77	6.37	13.08
85-87	5.62	4.19	4.78	6.72	5.89	5.40	3.72	5.41	4.60	12.70	6.61	14.00	8.89	7.66	7.19	5.22	9.08
88-93	4.44	3.09	3.97	5.08	4.33	4.23	3.41	4.58	3.73	10.35	7.43	10.88	7.82	7.24	5.55	4.14	7.91
94-95	5.83	3.95	5.00	7.08	5.69	5.24	4.14	7.62	6.80	17.43	12.08	21.00	16.05	8.50	8.84	5.57	13.64
% decline compared to 79-84	-20	-21	-20	-19	-17	-16	-15	-12	-6	2	-32	-16	-23	-20	-18	-18	-31
85-87	-37	-42	-34	-39	-39	-34	-22	-26	-24	-17	-24	-35	-32	-24	-37	-35	-40
88-93	-17	-26	-16	-14	-20	-18	-5	23	38	40	24	26	40	-11	1	-13	4

Table 55. Spring turkey hunting summary, 1978-96.

Year	Area of open hunt zone (mi ²)	Number of permit applicants	Number of permits available	Odds of drawing a permit ^a	Number of permits given	Number of persons hunting ^b	Registered turkey harvest	% success ^c
1978	389	10,740	420	25.6:1	411	398	94	23.6
1979	673	11,116	840	13.2:1	827	794	116	14.6
1980	858	9,613	1,200	8.0:1	1,191	1,072	98	9.1
1981	1,242	8,398	1,500	5.6:1	1,437	1,292	113	8.7
1982	1,490	7,223	2,000	3.6:1	1,992	1,625	106	6.5
1983	1,807	8,153	2,100	3.9:1	2,079	1,663	116	7.0
1984	2,061	7,123	3,000	2.4:1	2,837	2,270	178	7.8
1985	2,118	5,662	2,750	2.1:1	2,449	1,959	323	16.5
1986	1,897	5,715	2,500	2.3:1	2,251	1,801	333	18.5
1987	1,747	6,361	2,700	2.4:1	2,520	2,016	520	25.8
1988	1,781	8,402	3,000	2.8:1	2,994	2,395	674	28.1
1989	2,341	13,007	4,000	3.3:1	3,821	3,057	930	30.4
1990	3,819	14,326	6,600	2.2:1	6,126	5,513	1,709	31.0
1991	4,300	15,918	9,170	**	8,607	7,747	1,724	22.0
1992 ^d	4,381	15,896	9,310	**	9,051	8,146	1,691	21.0
1993	4,921	17,224	9,625	**	9,265	8,339	2,082	25.0
1994	5,881	19,424	9,940	**	9,479	8,531	1,975	23.0
1995	7,740	20,849	9,975	**	9,550	8,600	2,339	27.0
1996	16,979 ^t	23,757	12,131	**	10,983	9,885	2,841	28.7

^a Calculated with total permits available to be given, and not adjusting for undersubscribed zones and time periods.^b For 1978-82, based on a post-hunt mail survey. Number actually hunting in 1983-89 was estimated at 80% (from last year survey results were tabulated). Beginning in 1991, number actually hunting was estimated at 90% (from preliminary results of 1991 survey).^c Registered turkey harvest divided by number actually hunting, expressed as %.^d Legislation allows NON-RESIDENT hunters.

** Computerized preference drawing began spring 1990.

^t Open hunt zone area now calculated using deer permit zones.

Table 56. Spring wild turkey harvest by permit area and season, 1996.

Permit Area	Time Period							Total
	A	B	C	D	E	F	G	
225	1	1	1	1	0	0	0	4
226	1	4	2	0	1	0	0	8
227	1	2	2	0	1	0	1	7
228 / 236	11	6	6	3	5	6	4	41
235	3	3	2	3	2	2	3	18
337 / 338	11	11	8	6	8	6	5	55
339 / 462	17	17	14	4	15	15	13	95
341 / 342	121	115	70	61	69	57	52	545
343 / 347	71	64	54	54	44	39	44	370
344	38	27	14	12	22	20	11	144
345 / 348	112	90	60	58	56	53	49	478
346	74	74	49	18	32	23	30	300
349	116	85	56	49	60	41	57	464
418	7	4	3	4	2	4	2	26
419	3	1	0	1	1	1	0	7
435	5	3	5	0	2	0	2	17
440	4	2	3	2	1	0	0	12
442	14	19	12	10	9	13	10	87
443	6	8	7	7	7	2	6	43
454 / 455 456 / 458	2	8	7	7	7	2	6	43
461	3	3	1	5	1	0	2	15
463	3	6	2	2	1	5	2	21
464 / 465	12	1	7	2	5	2	3	32
464 / 467	8	13	5	6	10	2	5	49
Total	644	560	383	308	354	291	301	2,841

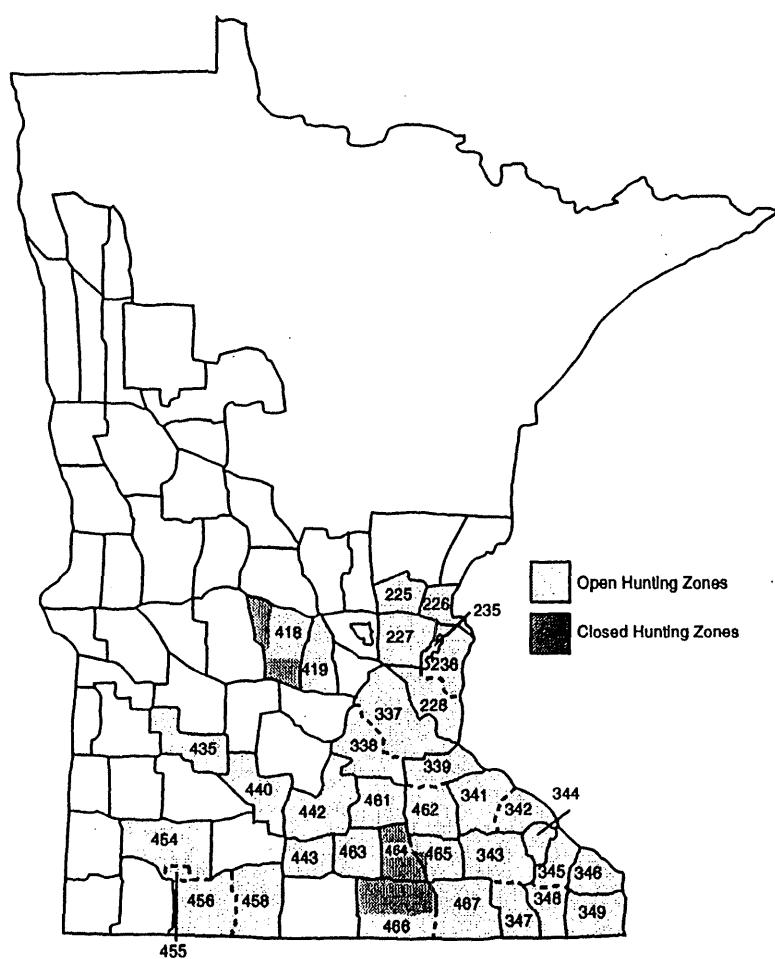


Table 57. Synopsis of fall wild turkey hunt, Minnesota 1990-1995

	1990	1991	1992	1993	1994	1995
# of zones	3	4	4	5	5	5
# of permits available	1,000	2,200	2,200	2,400	2,500	2,500
# of permits issued	951	2,020	2,028	2,094	2,106	2,125
# turkeys registered						
Female - juvenile	85	211	208	184	210	194
- adult	91	140	174	196	203	187
Male - juvenile	67	121	120	110	105	131
- adult	83	80	86	112	83	36
Total	326	552	588	602	601	648
Hunter success (%) ^a	38%	30%	32%	32%	32%	34%

^aBased on 90% of permit holders actually hunting (from mail survey).

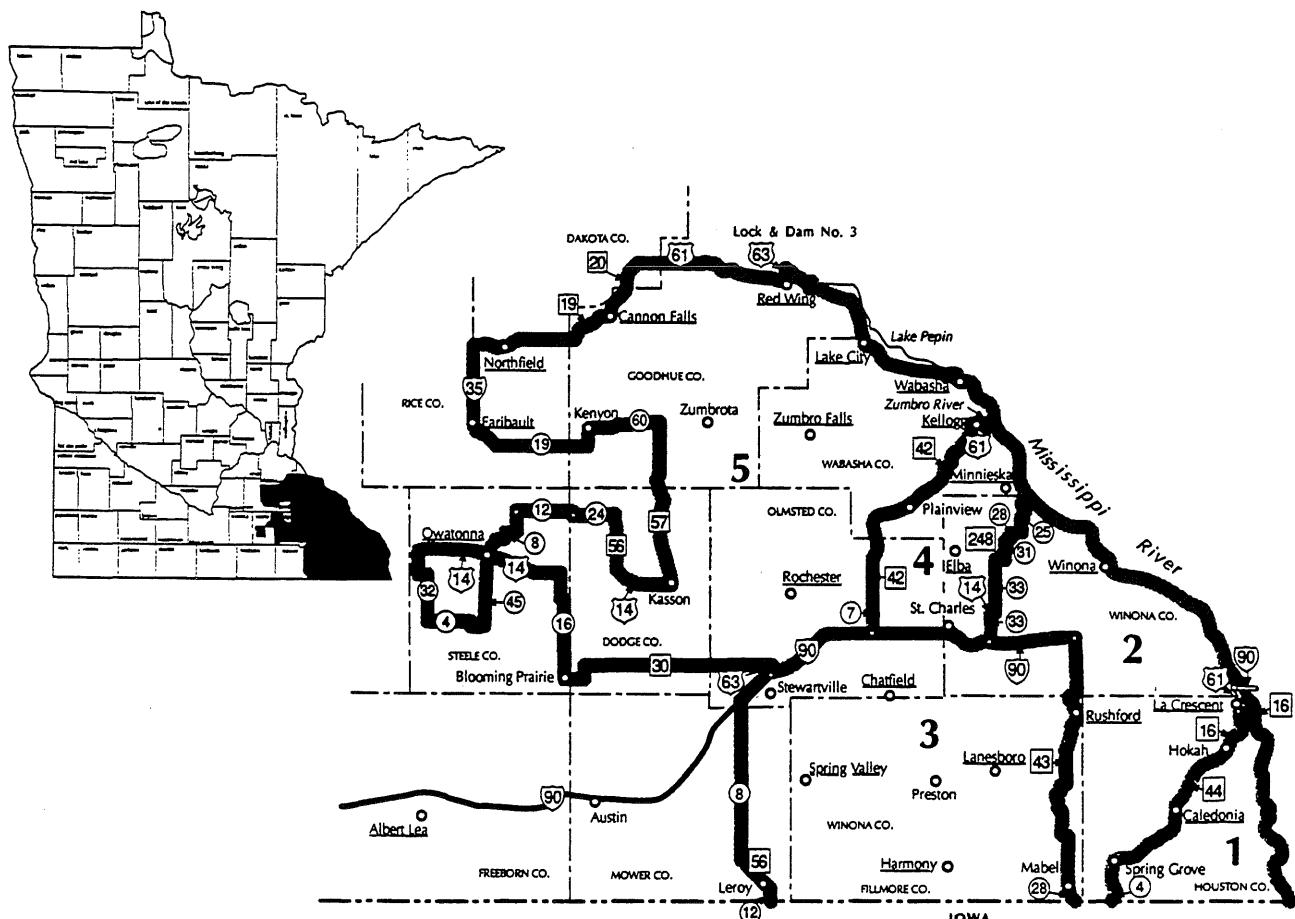


Figure 41. Fall wild turkey hunt zones, 1995.

Table 58. Deer hunting license sales, 1957-95^a.

Year	Firearms License Sales			Archery License Sales			Grand Total
	Resident	Non-resident	Total	Resident	Non-resident	Total	
1957	180,028	488	180,516	10,033	119	10,152	190,668
1958	203,430	552	203,982	10,968	118	11,086	215,068
1959	200,102	530	200,632	11,768	101	11,869	212,501
1960	233,593	621	234,214	11,834	122	11,956	246,170
1961	250,031	632	250,663	13,229	141	13,370	264,033
1962	244,166	676	244,842	11,776	150	11,926	256,768
1963	257,333	771	258,104	11,724	165	11,889	269,993
1964	278,032	1,021	279,053	13,472	193	13,665	292,718
1965	289,918	1,128	291,046	15,628	265	15,893	306,939
1966	284,195	1,287	285,482	17,203	277	17,480	302,962
1967	305,717	1,311	307,028	18,405	289	18,694	325,722
1968	302,216	1,442	303,658	20,188	292	20,480	324,138
1969	253,891	1,168	255,059	15,658	256	15,914	270,973
1970	188,166	334	188,500	12,277	220	12,497	200,997
1971	no firearms season			17,360	111	17,471	17,471
1972	257,998	959	258,957	21,985	326	22,311	281,268
1973	294,349	1,342	295,691	29,169	545	29,714	325,405
1974	296,248	1,747	297,995	30,701	644	31,345	329,340
1975	327,596	1,921	329,517	31,836	804	32,640	362,157
1976	263,868	1,029	264,897	21,773	263	22,036	286,933
1977	287,271	1,430	288,701	29,404	402	29,806	318,507
1978	307,910	1,776	309,686	32,546	476	33,022	342,708
1979	312,754	1,910	314,664	35,657	447	36,104	350,768
1980	344,516	2,378	346,894	41,328	634	41,962	388,856
1981	369,425	2,973	372,398	50,063	906	50,969	423,367
1982	369,018	3,038	372,056	54,084	848	54,932	426,988
1983	391,099	3,611	394,710	55,822	478	56,300	451,010
1984	396,074	4,307	400,381	61,576	583	62,159	462,540
1985 ^b	416,474	4,983	421,457	66,687	589	67,276	488,733
1986 ^b	413,542	4,476	418,018	68,689	547	69,236	487,254
1987 ^b	414,426	4,931	419,357	70,195	604	70,799	490,156
1988 ^b	406,727	5,623	412,350	68,196	716	68,912	481,262
1989 ^b	406,234	6,137	412,371	68,217	714	68,931	481,302
1990 ^b	418,284	6,455	424,739	68,457	742	69,199	493,938
1991 ^b	432,686	6,861	439,547	74,576	800	75,376	514,923
1992 ^b	488,887	8,145	497,032	86,274	935	87,209	584,241
1993 ^b	463,952	8,580	472,532	86,036	1,170	87,206	559,738
1994 ^b	469,843	9,272	479,115	84,118	1,175	85,293	564,408
1995 ^b	472,824	9,467	482,291	86,954	1,203	88,157	570,448

^a Duplicate licenses not included. Leech Lake licenses are included during years they were issued.^b Numbers include the following bonus deer licenses:

Year	1988	1989	1990	1991	1992	1993	1994	1995
Resident firearms (regular quota areas)	721	436	4,375	7,280	40,303	20,021	15,924	19,221
Resident firearms (state parks)	107	325	620	927	168	55	272	655
Non-resident firearms (regular quota area)	1	-	1	7	112	59	66	65
Resident archery	-	-	-	3,418 ^c	14,328	15,983	12,783	15,657
Resident archery (metro)	1,013	1,223	1,412	-	-	-	-	-
Non-Resident archery (regular quota area)	-	-	-	-	21	28	23	23
Totals	1,842	1,984	6,408	11,632	54,932	36,146	29,068	35,621

^c For 1991 the metro resident archery bonus permit was abolished. Archery bonus permits are now classified as Resident archery and not broken down by State Parks or Orchard zone.

Table 59. Registered deer harvest and hunter success rates, 1974-95.

	Registered Harvest			Percent Success		
	Regular firearms	Archery	Special Muzzleloader season ^a	Total	Regular firearms and special muzzleloader seasons	Archery
1974	64,997	2,176	-	67,173	21.8	6.9
1975	63,604	2,265	-	65,869	19.3	6.9
1976	28,613	1,167	-	29,780	10.8	5.3
1977	45,918	2,609	32	48,559	15.9	8.8
1978	47,372	2,608	346	50,326	15.4	7.9
1979	44,340	2,577	318	47,235	14.2	7.1
1980	68,539	3,641	294	72,474	19.8	8.7
1981	93,027	5,535	385	98,947	25.1	10.9
1982	93,045	5,566	441	99,052	25.1	10.1
1983	132,457	5,977	652	139,086	33.6	10.6
1984	132,042	6,390	532	138,941	33.0	10.3
1985	138,065	7,575	563	146,203	33.4	11.3
1986	129,770	7,610	593	137,923	31.2	11.1
1987	135,003	7,535	535	143,073	32.4	10.9
1988	138,946	8,262	686	148,394	33.6	12.0
1989	129,551	9,307	622	139,480	31.4	13.5
1990	166,589	11,106	730	178,425	39.4	16.1
1991	206,275	12,964	961	220,200	46.9	17.5
1992	229,236	13,004	828	243,068	46.1	14.9
1993	188,109	13,722	1,097	202,928	40.0	16.1
1994	178,283	13,818	1,725	193,826	37.1	16.1
1995	198,193	14,521	2,452	215,166	40.1	16.8

^a No special muzzleloader seasons were held before 1977.

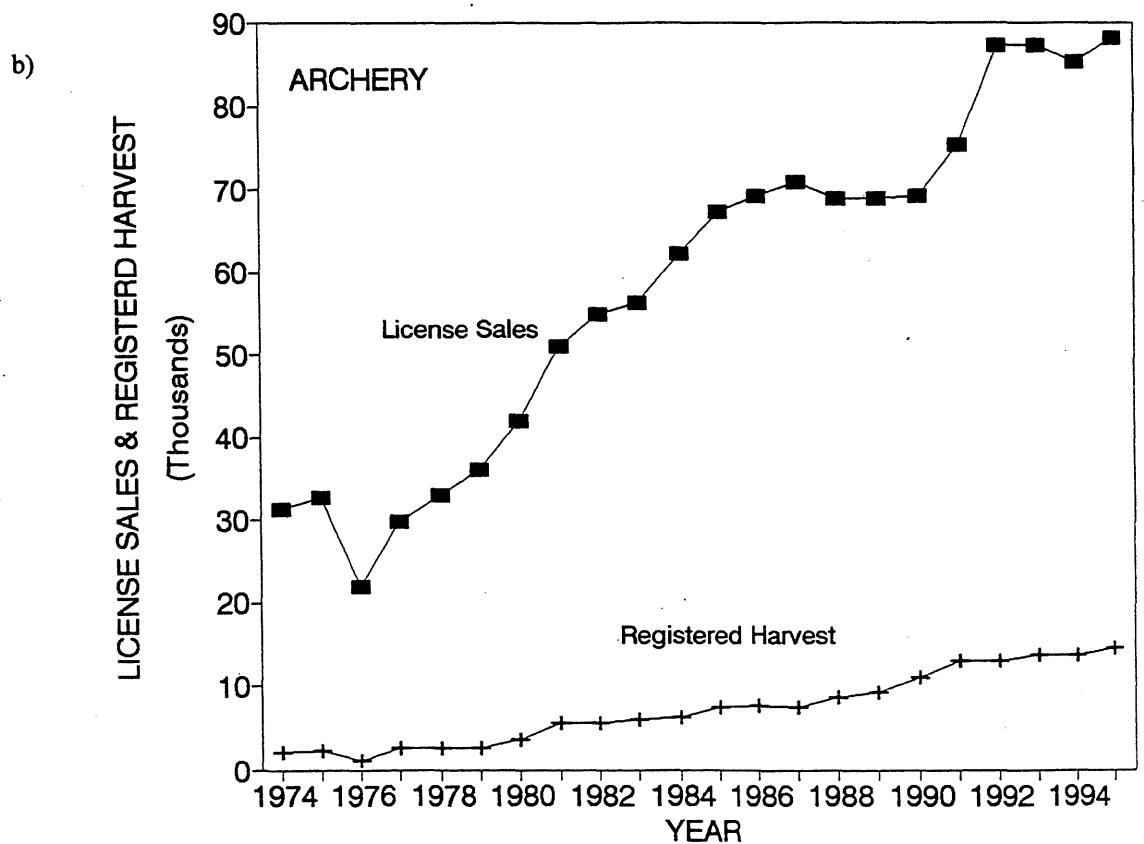
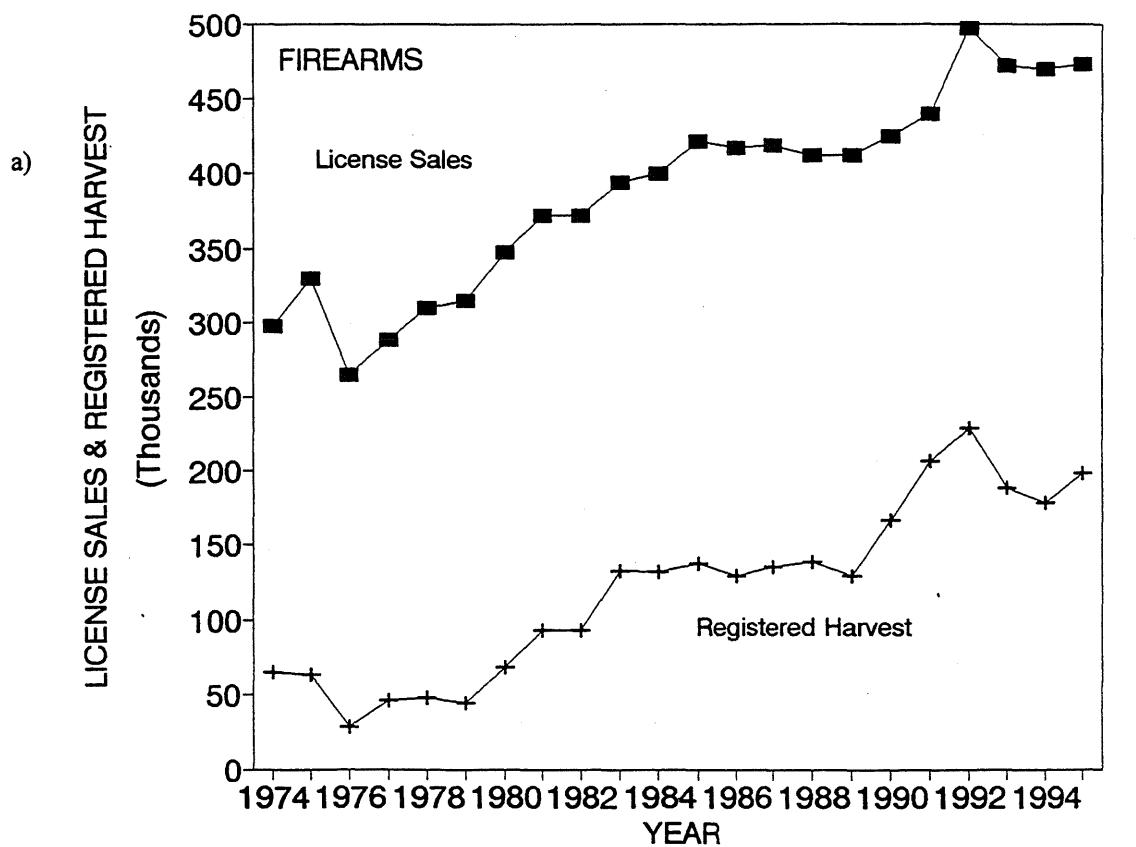


Figure 42. Numbers of Minnesota deer hunting licenses sold and registered harvest by (a) firearm and (b) archery hunters, 1974-95.

Table 60. White-tailed deer harvest by Sub-DMU and permit area, 1995^a.

Sub-DMU	Permit Area	Antlerless Registered	Bucks Registered	Total Registered Harvest
Red River West	401A(B)	101(91)	150 (136)	251 (227)
	402A(B)	269 (169)	235 (157)	501 (326)
	Total A(B)	370 (260)	385 (293)	755 (553)
Red River East	403 A(B)	156 (205)	137 (192)	293 (397)
	404 A(B)	353 (407)	254 (269)	607 (676)
	405 A(B)	441 (370)	303 (221)	744 (591)
	406 A(B)	454 (392)	277 (248)	731 (640)
	407 A(B)	422 (391)	330 (201)	752 (592)
	408 A(B)	400 (315)	257 (233)	657 (548)
	Total A(B)	2226 (2080)	1558 (1364)	3784 (3444)
Aggasiz	201	171	135	306
	202	403	281	684
	203	346	211	557
	204	1126	729	1855
	205	1535	869	2404
	206	735	569	1304
	207	505	331	836
	208	378	315	693
	209	660	425	1085
	210	1032	581	1613
	Total	6891	4446	11337
Rainy River West	211	812	935	1747
	212	432	587	1019
	213	10	22	32
	214	2	65	67
	Total	1256	1609	2865
Rainy River Central	104	313	332	645
	105	187	200	387
	106	725	513	1238
	110	449	394	843
	Total	1674	1439	3113
Rainy River East	107	1062	939	2001
	108	676	470	1146
	109	354	348	702
	195	3	1	4
	Total	2095	1758	3853
Superior West	119	761	701	1462
	120	588	591	1179
	121	350	365	715
	Total	1699	1657	3356
Superior Wilderness	115	69	94	163
	116	4	39	43
	117	2	101	103
	118	1	3	4
	Total	76	237	313
Superior Central	122	83	192	275
	123	32	92	124
	124	43	106	149
	125	64	237	301
	Total	222	627	849

Table 60 (con't.)

Sub-DMU	Permit Area	Antlerless Registered	Bucks Registered	Total Registered Harvest
Grand Portage I.R.	194	0	1	1
Superior East	126	69	191	260
	127	2	80	82
	128	49	278	327
	129	18	85	103
	130	0	20	20
	Total	138	654	792
Itasca North West	167	765	672	1437
	168	1210	974	2184
	169	1405	1002	2407
	Total	3380	2648	6028
Itasca North East	175	824	1303	2127
	176	255	474	729
	177	263	346	609
	178	319	500	819
	179	576	774	1350
	Total	2237	3397	5634
Itasca South East	180	562	862	1424
	181	679	1019	1698
	182	404	471	875
	183	648	878	1526
	184	295	464	759
	199	49	100	149
Itasca South West	Total	2637	3794	6431
	170	1058	1046	2104
	171	662	569	1231
	172	1628	1278	2906
	173	859	929	1788
	174	399	446	845
Leech Lake I.R.	Total	4606	4268	8874
	197	398	492	890
	198	165	252	417
	Total	563	744	1307
Bemidji	284	1263	1202	2465
	285	929	786	1715
	286	1850	1330	3180
	287	384	128	512
	Total	4426	3446	7872
Mille Lacs West	244	2274	2222	4496
	245	1488	1354	2842
	251	225	109	334
	Total	3987	3685	7672
Mille Lacs Central	246	3215	2376	5591
	247	1490	1164	2654
	248	553	370	923
	249	1182	860	2042
	Total	6440	4770	11210

Table 60 (con't.)

Sub-DMU	Permit Area	Antlerless Registered	Bucks Registered	Total Registered Harvest
Mille Lacs East	152	106	137	243
	154	306	347	653
	155	495	563	1058
	156	763	1096	1859
	157	973	1074	2047
	158	866	1228	2094
	159	888	1622	2510
	Total	4397	6067	10464
White Earth I.R.	297	111	205	316
	298	287	532	819
	Total	398	737	1135
Big Woods North	409 A(B)	1439 (838)	796 (375)	2235 (1213)
	410 A(B)	2189 (899)	1180 (405)	3369 (1304)
	411 A(B)	2173 (901)	1114 (387)	3277 (1288)
	412 A(B)	1663 (856)	981 (365)	2644 (1221)
	413 A(B)	1334 (749)	763 (348)	2097 (1097)
	414 A(B)	1233 (997)	847 (302)	2080 (1299)
	415 A(B)	926 (608)	495 (375)	1421 (983)
	416 A(B)	567 (534)	443 (302)	1010 (836)
	417 A(B)	1136 (637)	840 (306)	1986 (943)
	418 A(B)	795 (513)	624 (218)	1419 (731)
	419 A(B)	493 (346)	323 (169)	816 (515)
	429 A(B)	170 (168)	117 (82)	287 (250)
	Total A(B)	14118 (8046)	8523 (3634)	22641 (11680)
Big Woods Central	221	1155	739	1894
	222	1250	671	1921
	223	956	532	1488
	224	146	100	246
	225	1146	658	1804
	Total	6001	3484	9485
Big Woods Metro North	227	1203	825	2028
	228	365	273	638
	235	90	71	161
	236	953	694	1647
	Total	2611	1863	4474
Big Woods Metro South	337 A(B)	16 (612)	263 (114)	279 (726)
	338 A(B)	7 (335)	208 (133)	215 (468)
	339 A(B)	0 (383)	277 (92)	277 (475)
	Total A(B)	23 (1330)	748 (339)	771 (1669)
Big Woods Southeast	341 A(B)	0 (970)	558 (287)	558 (1257)
	342 A(B)	1 (771)	490 (182)	491 (953)
	343 A(B)	0 (718)	604 (229)	604 (947)
	344 A(B)	1 (750)	482 (146)	483 (896)
	345 A(B)	0 (710)	504 (221)	504 (931)
	346 A(B)	51 (1055)	698 (280)	749 (1335)
	347 A(B)	7 (741)	538 (153)	545 (894)
	348 A(B)	3 (1028)	689 (225)	692 (1253)
	349 A(B)	0 (1176)	813 (277)	813 (1453)
	Total A(B)	63 (7919)	5379 (2000)	5439 (9919)

Table 60 (con't.)

Sub-DMU	Permit Area	Antlerless Registered	Bucks Registered	Total Registered Harvest
Prairie North	420 A(B)	256 (285)	185 (173)	441 (458)
	421 A(B)	292 (231)	243 (147)	535 (378)
	422 A(B)	250 (107)	163 (85)	413 (192)
	423 A(B)	253 (178)	197 (104)	450 (282)
	424 A(B)	384 (249)	295 (164)	679 (413)
	425 A(B)	162 (270)	125 (165)	287 (435)
	426 A(B)	268 (314)	206 (130)	474 (444)
	427 A(B)	265 (234)	252 (145)	517 (379)
	428 A(B)	271 (265)	166 (138)	437 (403)
	Total A(B)	2401 (2133)	1832 (1251)	4233 (3384)
Prairie River	431 A(B)	238 (69)	181 (45)	419 (114)
	433 A(B)	331 (358)	362 (149)	693 (507)
	435 A(B)	313 (316)	333 (167)	646 (483)
	440 A(B)	338 (185)	371 (115)	709 (300)
	442 A(B)	380 (369)	358 (214)	738 (583)
	443 A(B)	210 (289)	251 (110)	461 (399)
	Total A(B)	1810 (1586)	1856 (800)	3666 (2386)
Prairie Southwest	446 A(B)	208 (178)	197 (59)	405 (237)
	447 A(B)	163 (161)	233 (111)	396 (272)
	448 A(B)	143 (126)	172 (99)	315 (225)
	449 A(B)	294 (200)	320 (95)	614 (295)
	450 A(B)	186 (180)	202 (108)	388 (288)
	451 A(B)	71 (143)	74 (145)	145 (288)
	452 A(B)	97 (99)	84 (188)	181 (287)
	453 A(B)	128 (106)	176 (136)	304 (242)
	454 A(B)	292 (238)	352 (202)	644 (440)
	455 A(B)	28(44)	26 (33)	54 (77)
	456 A(B)	208 (202)	194 (145)	402 (347)
	457 A(B)	133 (111)	201 (120)	334 (231)
	458 A(B)	175 (156)	186 (147)	361 (303)
	459 A(B)	199 (247)	331 (258)	530 (505)
	Total A(B)	2325 (2191)	2748 (1846)	5073 (4137)
Prairie Southeast	461 A(B)	364 (458)	289 (171)	653 (629)
	462 A(B)	355 (359)	334 (203)	689 (562)
	463 A(B)	206 (184)	186 (108)	392 (292)
	464 A(B)	137 (197)	158 (145)	295 (342)
	465 A(B)	130 (198)	104 (139)	234 (337)
	466 A(B)	226 (308)	263 (265)	489 (573)
	467 A(B)	136 (180)	227 (295)	363 (475)
	Total A(B)	1554 (1884)	1561 (1326)	3115 (3210)
Special Hunt Totals	-	1143	226	1369
GRAND TOTALS		109196	76144 (12853)	157911 (40282)

Table 61. Archery deer harvest by Sub-DMU and permit area, 1991-95.

Sub-DMU	Permit area	1991	1992	1993	1994*	1995
Red River West	401	88	95	79	97	159
	402	59	105	131	120	94
Red River East	403	46	37	55	76	121
	404	44	49	78	48	91
	405	27	38	27	40	20
	406	28	24	37	34	14
	407	67	140	145	114	98
	408	21	20	62	37	35
Aggasiz	201	21	15	17	11	9
	202	18	16	7	16	21
	203	9	9	3	2	2
	204	53	42	29	62	66
	205	72	77	113	151	183
	206	60	56	32	62	84
	207	15	18	11	14	23
	208	21	24	22	33	32
	209	28	44	57	48	44
	210	10	12	37	33	29
Rainy River West	211	76	43	67	96	116
	212	13	6	11	12	22
	213	0	1	0	0	1
	214	4	1	9	11	2
Rainy River Central	104	6	5	6	9	10
	105	5	2	2	1	3
	106	22	20	19	16	19
	110	20	10	19	11	17
Rainy River East	107	24	13	9	18	20
	108	19	10	17	9	9
	109	1	2	2	6	5
	195	0	0	0	0	0
Superior West	119	5	6	5	7	6
	120	12	4	8	8	9
	121	11	3	3	6	2
Superior Wilderness	115	0	1	1	0	0
	116	1	2	1	1	3
	117	2	3	3	4	5
	118	0	1	0	0	0
Superior Central	122	14	8	9	10	12
	123	2	2	1	3	5
	124	5	5	4	6	2
	125	25	27	13	17	3
Grand Portage I.R.	194	0	0	0	0	0
Superior East	126	28	14	16	9	20
	127	2	1	2		1
	128	23	10	6	6	18
	129	7	1	2	3	5
	130	1	1	2	1	3
Itasca North West	167	15	9	12	16	13
	168	57	20	31	24	32
	169	68	36	44	46	51

Table 61 (con't.)

Sub-DMU	Permit area	1991	1992	1993	1994	1995
Itasca North East	175	23	19	28	36	50
	176	12	22	15	15	13
	177	16	8	13	13	5
	178	15	13	10	15	12
	179	30	17	20	35	31
Itasca South East	180	73	65	46	81	86
	181	34	12	24	29	32
	182	32	13	21	17	14
	183	48	22	28	45	42
	184	19	7	5	25	17
Itasca South West	199	4	5	5	3	2
	170	77	34	50	60	60
	171	56	15	47	49	2
	172	107	68	55	36	47
	173	73	40	40	51	54
Leech Lake I.R.	174	35	35	24	31	24
	197	17	8	7	15	13
Bemidji	198	6	5	5	2	2
	284	106	129	61	143	113
	285	13	19	18	18	30
	286	111	146	136	189	155
Mille Lacs West	287	5	0	7	3	10
	244	78	123	102	68	54
	245	85	76	56	67	64
Mille Lacs Central	251	4	2	11	2	7
	246	168	244	120	159	129
	247	236	165	193	208	186
Mille Lacs East	248	74	92	55	51	49
	249	98	135	54	74	74
	152	32	8	3	5	3
White Earth I.R.	154	56	58	26	22	21
	155	49	41	23	19	20
	156	90	66	30	56	50
	157	223	123	44	70	62
	158	242	120	78	96	102
	159	354	176	121	163	122
Big Woods North	297	5	8	5	5	7
	298	5	2	10	3	2
Big Woods North	409	112	158	159	164	185
	410	120	132	269	227	242
	411	136	127	231	207	202
	412	139	173	287	213	269
	413	165	179	165	243	288
	414	107	98	112	86	234
	415	230	199	216	219	205
	416	106	86	84	65	84
	417	268	259	245	216	256
	418	287	318	214	252	252
	419	254	479	132	123	246
	429			57	156	76

Table 61 (con't.)

Sub-DMU	Permit area	1991	1992	1993	1994	1995
Big Woods Central	221	116	79	83	81	77
	222	64	31	100	42	57
	223	187	128	218	307	293
	224	22	13	16	11	10
	225	276	356	151	70	77
	226	235	339	259	263	243
Big Woods Metro North	227	297	280	381	382	353
	228				689	711
	235	94	52	35	35	44
	236	608	639	626	602	623
Big Woods Metro South	337	299	405	1,223	861	953
	338	394	368	195	112	215
	339	308	335	155	256	245
Big Woods Southeast	341	114	117	196	134	223
	342	68	58	118	88	129
	343	233	350	281	400	391
	344	124	131	99	91	88
	345	88	92	148	105	197
	346	177	221	197	116	105
	347	68	129	141	208	195
	348	79	137	153	101	70
	349	101	89	129	92	84
Prairie North	420	106	164	160	100	94
	421	60	105	108	81	81
	422	35	76	65	53	52
	423	22	22	49	30	46
	424	53	47	57	42	65
	425	40	130	41	44	102
	426	42	43	48	110	101
	427	98	87	53	33	51
	428	142	83	88	101	89
Prairie River	431	45	53	47	48	38
	433	195	147	171	174	122
	435	109	93	86	79	71
	440	113	109	113	74	112
	442	238	198	205	191	222
	443	92	68	82	94	76
Prairie Southwest	446	33	26	29	16	23
	447	64	58	48	41	38
	448	44	49	42	47	40
	449	128	113	92	78	100
	450	40	25	26	34	44
	451	105	73	76	45	57
	452	50	72	97	39	37
	453	50	42	46	42	43
	454	130	117	130	93	77
	455	30	20	19	21	18
	456	125	147	79	82	77
	457	66	79	61	71	33
	458	77	68	53	84	60
	459	107	96	71	74	84

Table 61 (con't.)

Sub-DMU	Permit area	1991	1992	1993	1994	1995
Prairie Southeast	461	92	118	86	145	131
	462	116	130	127	143	234
	463	50	55	43	47	47
	464	60	59	57	55	64
	465	91	86	82	85	171
	466	120	118	122	121	113
	467	126	113	129	153	173
Unknown	UNK	128	124	8	0	0
Camp Ripley		219	158	287	267	247
TOTAL		12,964	12,999	13,722	13,427	4013 (527) [†]

* Includes Regular licenseses, Management permits, Intensive harvest permits, and Special permit areas.

† Harvest in 0 shows Intensive Harvest Permit harvest.

Table 62. Special Muzzleloader Season harvest by block, 1995.
(Includes Special Permit Areas)

Block Number	Adult		Fawns		Total
	Male	Female	Male	Female	
104	1	0	0	0	1
105	0	1	0	0	1
106	2	0	0	0	2
108	0	4	0	0	4
109	0	1	0	0	1
120	2	1	0	0	3
121	0	1	1	0	2
124	1	0	0	0	1
152	1	7	2	4	14
154	1	1	1	0	3
155	0	1	0	1	2
156	2	1	1	0	4
157	0	6	2	2	10
158	1	5	1	1	8
159	6	14	7	1	28
169	3	3	1	0	7
170	2	3	1	0	6
171	1	1	0	1	3
172	1	3	2	1	7
173	3	2	0	1	6
174	0	1	0	0	1
175	2	0	0	0	2
176	0	0	1	0	1
178	1	0	0	0	1
179	0	4	0	0	4
180	0	2	0	1	3
181	3	0	1	0	4
182	0	1	0	0	1
183	6	2	0	0	8
184	0	0	1	0	1
197	1	0	0	0	1
198	1	0	0	0	1
201	2	4	1	3	10
202	5	1	1	0	7
203	0	1	0	0	1
204	6	6	2	2	16
205	5	29	4	3	41
206	8	6	5	0	19
207	1	0	0	0	1
208	3	1	1	3	8
209	4	1	0	0	5
210	1	1	3	0	5
211	19	31	3	5	58
212	1	3	0	1	5
221	0	2	3	0	5
222	2	4	3	2	11
223	2	4	1	3	10
225	1	1	2	1	5

Table 62. (Cont.)

Block Number	Male	Adult		Fawns		Total
		Male	Female	Male	Female	
226	0		1	0	1	2
227	3		5	3	1	12
228	13		5	1	3	22
235	0		8	1	4	13
236	7		11	6	3	27
244	3		3	1	2	9
245	5		13	3	2	23
246	3		7	5	4	19
247	2		10	3	3	18
248	8		3	0	0	11
249	2		4	2	1	9
285	1		1	0	0	2
286	1		3	2	2	8
298	0		1	0	0	1
337	6		10	3	1	20
338	3		2	3	2	10
339	14		7	0	0	21
341	6		7	5	2	20
342	5		14	10	8	37
343	5		21	12	2	40
344	10		12	2	4	28
345	3		8	2	3	16
346	0		4	0	1	5
347	5		34	5	9	53
348	2		7	8	3	20
349	2		4	1	0	7
401	6		7	1	1	15
402	10		11	1	1	23
403	5		8	1	1	15
404	9		4	6	2	21
405	1		1	1	1	4
406	2		2	1	0	5
407	5		10	6	4	25
408	3		4	1	1	9
409	0		6	1	2	9
410	6		24	4	9	43
411	1		10	3	3	17
412	12		24	14	4	54
413	10		9	5	3	27
414	2		4	5	0	11
415	9		9	5	1	24
416	5		11	1	1	18
417	10		28	5	4	47
418	7		15	7	4	33
419	5		14	3	3	25
420	4		11	2	3	20
421	2		6	0	2	10
422	7		13	7	5	32
423	4		5	3	4	16
424	12		17	5	7	41

Table 62. (Cont.)

Block Number	Adult		Fawns		Total
	Male	Female	Male	Female	
425	12	17	4	9	42
426	4	12	0	2	18
427	5	6	2	0	13
428	4	4	2	3	13
429	4	4	0	2	10
431	15	19	7	6	47
433	20	52	20	7	99
435	9	10	3	7	29
440	2	11	2	5	20
442	13	33	14	11	71
443	4	25	11	2	42
446	2	5	2	0	9
447	9	5	3	3	20
448	4	8	2	1	15
449	5	9	4	5	23
450	5	4	1	0	10
451	19	13	2	3	37
452	5	4	2	0	11
453	1	1	0	0	2
454	10	12	5	3	30
455	1	3	1	1	6
456	4	9	1	0	14
457	2	0	0	0	2
458	5	6	2	1	14
459	15	19	9	3	46
461	13	15	6	10	44
462	13	29	9	10	61
463	4	4	1	0	9
464	2	16	6	3	27
465	4	20	12	11	47
466	14	20	7	4	45
467	21	26	12	8	67
926	0	24	6	14	44
928	0	1	0	0	1
930	1	61	17	16	95
931	0	3	4	3	10
932	0	6	3	5	14
Total	598	1,134	399	321	2,452

Table 63. Muzzleloader Special Permit Area Data, 1995.

Area	Dates	Permits Issued		Harvest				Total
		Regular	Mgmt Permit	Adult male	Fawn male	Adult Female	Fawn Female	
Forestville S.P. (926)	11/25-12/10	100 ^a	Yes ^b	0	6	25	14	44
Glacial Lakes S.P.(927)	12/6-12/10	30 ^a	Yes	-	-	No Data	-	-
Lac qui Parle S.P. (928)	11/25-11/26	15 ^a	Yes	-	Hunt was	Cancelled	-	-
Lake Louise State Park (929)	11/25-11/27	20 ^a	Yes	1	4	8	6	19
Nerstrand S.P. and Game Refuge (930)	11/25-11/27 12/2 -12/3	50 ^a	Yes	0	17	61	16	94
Rice Lake State Park (931)	11/25-11/28	15 ^a	Yes	0	4	3	3	10
Zipple Bay S.P. (932)	11/25-12/3	55 ^a	Yes ^c	0	3	6	5	14

a Antlerless-only permits

b Hunters were authorized to take up to 3 deer in these hunts.

c Hunters were authorized to take up to 5 deer in these hunts.

Table 64. Black bear registered harvest and hunter success, 1990-1995.

Quota Area	Harvest (success rate)					
	1990	1991	1992	1993	1994	1995
12	79 (29%)	93 (32%)	109 (36%)	90 (27%)	130 (34%)	229 (49%)
13	95 (37%)	93 (34%)	111 (36%)	98 (32%)	108 (34%)	258 (59%)
22	29 (13%)	39 (18%)	40 (21%)	26 (13%)	33 (16%)	29 (14%)
24	137 (30%)	155 (34%)	253 (45%)	199 (32%)	176 (26%)	288(32%)
25	167 (32%)	237 (37%)	331 (47%)	248 (33%)	199 (27%)	489(40%)
26	252 (40%)	337 (38%)	328 (40%)	330 (39%)	260 (30%)	513(59%)
31	323 (38%)	377 (39%)	554 (55%)	342 (34%)	260 (27%)	636(47%)
41	101 (39%)	74 (23%)	95 (28%)	85 (28%)	92 (31%)	148(50%)
44	348 (34%)	234 (24%)	436 (36%)	539 (37%)	294 (24%)	643(43 %)
45					91 (14%)	173(24%)
51	433 (39%)	247 (20%)	521 (37%)	585 (35%)	432 (23%)	872(37%)
No Quota	417 (28%)	257 (19%)	397 (27%)	435 (29%)	254 (17%)	678(35%)
Total	2,381 (37%)	2,143 (30%)	3,175 (41%)	2,977 (35%)	2,329 (26%)	4,956 (43%)

Table 65. Minnesota bear permits, licenses, hunters, harvests, and success rates during 1983-95.

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Permit applications	13,617	17,886	22,954	20,694	19,687	25,879	24,096	24,861	25,890	26,428	27,365	30,127	29,922
Permits available	3,550	3,880	4,290	4,730	4,810	5,310	5,520	6,370	7,140	7,920	8,630	9,400	11,950
Licenses purchased:													
Quota area	3,471	3,489	3,948	4,188	4,213	4,297	4,628	5,568	6,257	6,845	7,528	8,125	10,304
No-quota area	--	--	--	--	1,789	1,297	1,145	1,472	1,384	1,460	1,508	1,438	1,930
% Permit-holders buying license	97.8	89.9	92.0	88.5	87.6	80.9	83.8	87.4	87.6	86.4	87.2	86.4	86.2
Estimated number of hunters	3,100	3,100	3,700	3,900	5,500	5,100	5,400	6,500	7,100 ^a	7,700 ^a	8,400 ^a	8,900 ^a	11,400 ^a
Harvest	1,038	919	1,340	1,438	1,577	1,509	1,930	2,381	2,143	3,175	2,976	2,329	4,956
% Success rate ^b	33	30	36	37	29	30	36	37	30	41	35	26	43

^a In 1991 thru 1995 No-quota hunters were not surveyed, so the percent of license-holders hunting in the quota areas was used to calculate the total number of hunters. Total number of people hunting was based on a three year average of survey data indicating that 93% of license holders hunt.

^b Based on harvest divided by the estimated number of people hunting.

Table 66. Success rates of Minnesota bear hunters as measured by registered harvest/licenses sold, 1989-95.

Area	1989	1990	1991	1992	1993	1994	1995
12	31	29	32	36	27	34	49
13	46	37	34	36	32	34	59
22	16	13	18	21	13	16	14
24	32	30	34	45	32	26	32
25	33	32	39	47	33	27	40
26	47	40	38	40	39	30	59
31	38	38	39	55	34	27	47
41	28	39	23	28	28	31	50
44						24	43
45	39	34	24	36	37	14	24
51	35	39	20	37	35	23	37
No Quota Areas	-	28	19	27	29	17	35

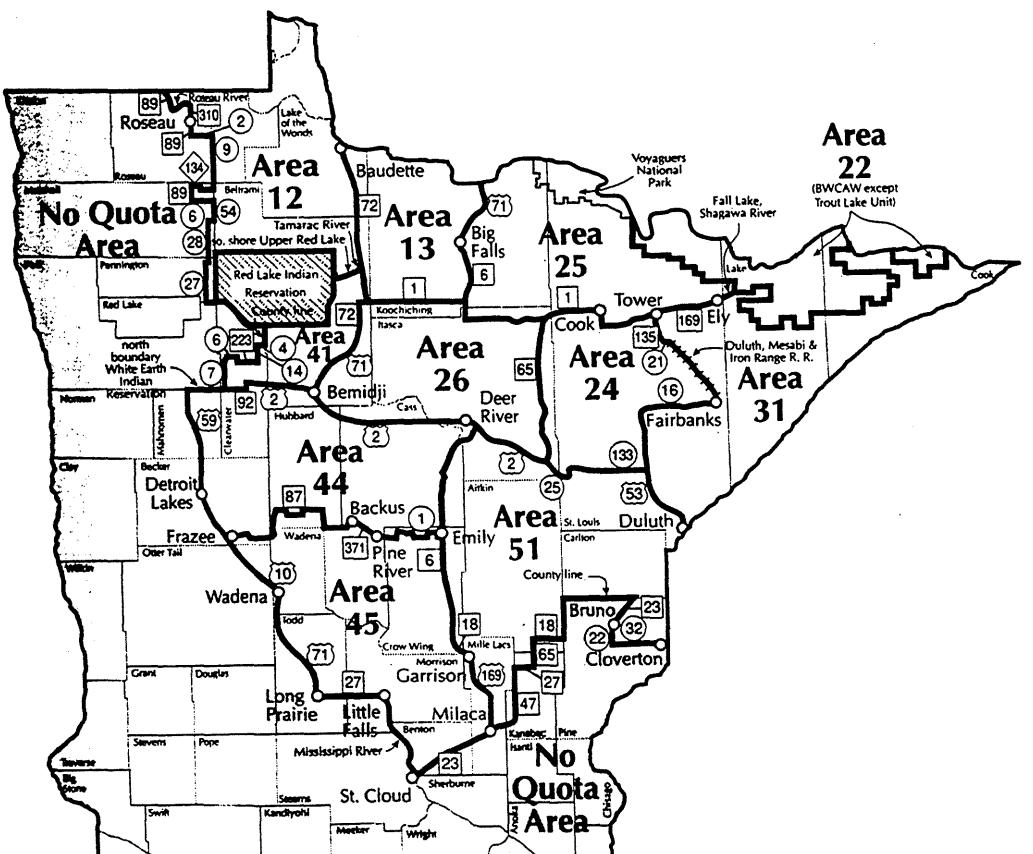


Figure 43. Black bear permit areas, 1995.

Table 67. Moose hunt quota and harvest statistics, 1973-95.

Year	Area	Number of 2,3 or 4-person licenses issued	Number of 2, 3 or 4-person license applications	Chances for permit	Harvest	Party success (%)	Sex of Moose	
							Male	Female
1973	NW	335	13,560	1:26	306	91	213 (76%)	91 (24%)
	NE	185			159	86	131 (83%)	24 (13%)
1975	NW	475	15,792	1:20	449	94	259 (58%)	188 (42%)
	NE	275			227	82	147 (65%)	80 (35%)
1977	NW	630	16,586	1:18	598	95	348 (58%)	250 (42%)
	NE	300			243	81	172 (71%)	71 (29%)
1979	NW	395	19,023	1:28	330	83	196 (59%)	134 (41%)
	NE	290			236	81	158 (67%)	78 (33%)
1981	NW	505	20,521	1:23	455	90	283 (62%)	172 (38%)
	NE	375			309	82	218 (71%)	91 (29%)
1983	NW	780	17,754	1:14	737	94	493 (67%)	244 (33%)
	NE	523			442	84	273 (62%)	169 (38%)
1985	NW	768	14,772	1:14	718	93	419 (58%)	299 (42%)
	NE	300			250	83	165 (66%)	85 (34%)
1987	NW	772	14,234	1:11	727	94	505 (69%)	222 (31%)
	NE	528			436	83	292 (67%)	144 (33%)
1989	NW	449	15,381	1:15	438	98	291 (66%)	147 (34%)
	NE	545			444	81	285 (64%)	159 (36%)
1991	NW	365	5,665	1:16	359	98	258 (72%)	101 (28%)
	NE	0			-	-		
1993	NW	446	9,925	1:13	419	94	317 (76%)	102 (24%)
	NE	315			264	84	200 (76%)	64 (24%)
1994	NW	262	11,351	1:25	245	93	166 (65%)	77 (32%)
	NE	189			155	82	115 (74%)	40 (26%)
1995	NW	191	10,753	1:28	172	90	112 (65%)	60 (35%)
	NE	188			156	83	129 (83%)	27 (17%)

TRAPPING HARVEST STATISTICS
Section of Wildlife
Box 7, 500 Lafayette Rd.
St. Paul, MN 55155
(612) 296-3344

Table 68. Trapper response to mail surveys, 1979-80 through 1995-96.

Year	Number mailed	Number not delivered	Delivered questionnaires <u>completed and returned</u>	
			Number	Percent
1979-80	1,011	29	888	90.4
1980-81	1,345	110	1,072	86.8
1981-82	1,345	36	1,167	89.2
1982-83	925	28	794	88.5
1983-84	770	10	663	87.2
1984-85	556	9	495	90.5
1985-86	581	13	506	89.1
1986-87	582	8	514	89.5
1987-88	721	11	607	85.5
1988-89	852	25	727	87.9
1989-90	3,302	120	2,804	88.1
1990-91	2,294	102	1,875	85.5
1991-92	2,643	149	2,062	82.7
1992-93	2,080	76	1,681	83.9
1993-94	2,828	100	2,194	80.4
1994-95	2,382	76	1,876	81.5
1995-96	3,244	118	2,467	80.3

Table 69. Use of trapper licenses, 1984-85 through 1995-96.

		Return from mail survey	Projections from license sales
1984-85	Trapped	445 (89.9%)	15,136
	Did not trap	<u>50</u> (10.1%)	<u>1,700</u>
		495 (100.0%)	16,836
1985-86	Trapped	420 (83.0%)	12,201
	Did not trap	<u>86</u> (17.0%)	<u>2,498</u>
		506 (100.0%)	14,699
1986-87	Trapped	442 (86.0%)	13,240
	Did not trap	<u>72</u> (14.0%)	<u>2,155</u>
		514 (100.0%)	15,395
1987-88	Trapped	512 (84.6%)	15,777
	Did not trap	<u>93</u> (15.4%)	<u>2,866</u>
		605 (100.0%)	18,643
1988-89	Trapped	582 (80.1%)	9,789
	Did not trap	<u>145</u> (19.9%)	<u>2,432</u>
		727 (100.0%)	12,221
1989-90	Trapped	2,251 (80.3%)	7,314
	Did not trap	<u>553</u> (19.7%)	<u>1,794</u>
		2,804 (100.0%)	9,108
1990-91	Trapped	1,399 (80.6%)	4,972
	Did not trap	<u>337</u> (19.4%)	<u>1,197</u>
		1,736 (100.0%)	6,169 ^a
1991-92	Trapped	1,639 (79.5%)	4,150
	Did not trap	<u>423</u> (20.5%)	<u>1,070</u>
		2,062 (100.0%)	5,220 ^a
1992-93	Trapped	1,438 (85.5%)	4,927
	Did not trap	<u>243</u> (14.5%)	<u>836</u>
		1,681 (100.0%)	5,763 ^a
1993-94	Trapped	1,904 (85.5%)	4,862
	Did not trap	<u>290</u> (13.2%)	<u>739</u>
		2,194 (100.0%)	5,601 ^a
1994-95	Trapped	1,647 (87.8%)	6,054
	Did not trap	<u>228</u> (12.2%)	<u>841</u>
		1,875 (100.0%)	6,895 ^a
1995-96	Trapped	2,053 (87.8%)	4,684
	Did not trap	<u>414</u> (16.8%)	<u>946</u>
		2,467 (100.0%)	5,630 ^a

^a excludes duplicates.

Table 70. Estimated number of trappers of various furbearers, 1983-84 through 1995-96.

	Estimated number of trappers (thousands)												
	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Muskrat	11	13	9	11	15	7	4	2	2	3	3	4	3
Mink	8	9	8	9	13	7	5	3	2	3	3	3	2
Short-tailed weasel	<1	1	<1	1	1	1	<1	<1	<1	<1	<1	1	<1
Long-tailed weasel	<1	1	<1	1	2	1	1	<1	<1	<1	<1	<1	<1
Raccoon (Sept 95-Feb 96)	9	9	8	8	11	6	4	2	2	2	3	3	2
Raccoon (Mar 95-Aug 95) ^a												<1	<1
Striped skunk	4	5	4	4	5	3	2	1	1	1	1	1	1
Eastern spotted skunk	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Badger	1	1	1	1	1	1	<1	<1	<1	<1	<1	<1	<1
Opossum	<1	<1	1	1	2	1	1	1	1	1	1	1	1
Red fox (Sept 95-Feb 96)	6	6	5	5	6	4	2	2	2	2	2	2	2
Red fox (Mar. 95-Aug 95) ^a												<1	<1
Gray fox	2	2	2	2	2	1	1	<1	<1	<1	<1	<1	<1
Coyote	2	2	1	2	2	1	1	1	1	1	1	1	1
Beaver (Oct 95 - Feb 96)	4	5	4	6	8	4	3	2	2	2	2	3	2
Beaver (Mar 95 - Apr 95)	4	3	4	4	4	2	2	1	1	1	1	2	1

^a Raccoon and red fox season changed to year round beginning May, 1994.

Table 71. Estimated take per trapper of various furbearers, 1983-84 through 1995-96.

	Estimated take per trapper reporting that species												
	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Muskrat	75.8	75.1	51.8	72.9	68.7	28.3	26.5	24.3	20.3	35.9	64.1	90.3	70.3
Mink	6.8	8.0	7.6	8.7	8.5	8.9	8.8	9.5	8.3	11.6	12.2	11.7	11.0
Short-tailed weasel	4.6	3.5	2.6	4.2	4.7	4.2	4.6	3.2	4.3	4.9	6.1	11.5	10.3
Long-tailed weasel	4.0	2.1	2.0	5.2	4.4	5.0	4.6	2.8	5.2	3.6	3.6	6.4	5.4
Raccoon (Sept 95-Feb 96)	7.8	8.3	11.3	11.4	11.9	12.8	11.6	15.8	14.2	16.1	4.8	20.2	22.5
Raccoon (Mar 95-Aug 95) ^a												14.6	14.5
Striped skunk	8.5	9.4	10.3	10.2	10.2	10.1	9.5	11.8	9.0	8.2	8.7	7.7	8.1
Eastern spotted skunk	2.5	1.4	2.5	2.5	1.8	2.0	4.8	7.3	2.7	1.6	5.6	4.3	5.3
Badger	2.1	1.6	2.1	1.7	1.9	2.0	1.8	2.4	2.2	1.8	1.8	1.9	1.8
Opossum	3.1	2.8	8.7	13.8	6.7	8.2	8.6	10.7	9.1	10.0	8.4	8.5	9.1
Red fox (Sept 95-Feb 96)	6.9	9.2	6.1	7.5	8.7	13.3	10.1	18.3	13.7	10.8	11.3	10.6	9.3
Red fox (Mar 95-Aug 95) ^a												8.8	5.0
Gray fox	2.5	2.9	3.5	2.9	2.6	4.1	3.1	3.0	2.0	3.5	3.1	2.1	2.4
Coyote	4.8	5.3	4.5	3.8	3.3	3.7	4.3	3.4	3.8	4.7	4.7	4.4	4.5
Beaver (Oct 95-Feb 96)	7.3	10.0	9.8	11.5	16.3	11.2	14.6	13.2	15.1	12.5	16.1	17.6	13.5
Beaver (Mar - Apr 95)	25.4	30.3	21.7	21.7	22.7	14.1	19.9	18.8	26.7	28.7	28.9	36.6	29.1

^a Raccoon and red fox season changed to year round beginning May, 1994.

Table 72. Minnesota trapper license sales and estimated annual harvest, 1983-84 through 1995-96.^a

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Trapper license sales ^b	16,741	16,836	14,699	15,395	18,643	12,221	9,108	6,163	5,220	5,763	5,601	6,895	5,630
Estimated harvest^c (thousands)													
Muskrat	865	963	477	826	1,007	185	118	55	45	92	202	355	195
Mink	58	75	57	77	110	59	40	25	21	32	33	40	26
Short-tailed weasel	2	3	1 ^d	3	7	3	2	1	1	1	2	6	4
Long-tailed weasel	1	1	1	3	7	3	2	1	1	1	1	3	2
Raccoon (Sept 95- Feb 96)	69	78	89	95	134	74	41	34	31	34	56	58	53
Raccoon (Mar 95-Aug 95) ^e												1	5
Striped skunk	36	47	41	42	54	31	17	15	10	7	9	9	8
Eastern spotted skunk	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Badger	2	2	2	2	3	2	1	1	1	1	1	1	<1
Opossum	2	1	7	14	10	9	6	6	5	6	5	5	6
Red fox (Sept 95- Feb 96)	42	58	29	40	57	53	25	33	25	23	22	24	14
Red fox (Mar 95-Aug 95) ^f												1	1
Gray fox	5	5	6	6	5	5	2	1	1	1	1	1	1
Coyote	9	10	7	7	7	3	4	3	3	4	4	5	3
Beaver (Oct 95- Feb 96)	30	51	43	71	132	47	48	24	25	22	29	49	25
Beaver (Mar 95-Apr 95)	101	103	92	101	26	-	31	20	26	34	32	64	41
Registered harvest													
Otter	408	529	559	777	1,386	922	1,294	88	855	1,368	1,459	2,445	1,435
Lynx ^g	9	closed	closed	closed	closed	closed	closed	closed	closed	closed	closed	closed	closed
Bobcat ^h	208	280	119	160	214	140	129	84	106	168	201	238	134
Fisher	631	1,289	678	1,068	1,642	1,025	1,243	746	528	778	1,159	1,771	942
Marten	closed	closed	430	798	1,363	2,072	2,119	1,349	656	1,602	1,438	1,527	1,500

^a Includes data for all seasons from October through April of years indicated.^b Separate licenses were issued for juveniles (13-17 years old) and adults (18 and older), beginning in 1982. As of August 1, 1994, 5,601 trapping licenses were sold in 1993, 662 (11.8%) were juvenile licenses and 4,939 (88.2%) were adult licenses. Duplicate licenses excluded.^c Based upon trappers' responses to mail surveys.^d 1 is any number which rounds to 1. <1 is any number which is <0.5.^e Registered harvest for lynx and bobcat includes animals taken by hunting.^f Raccoon and red fox seasons changed to year round beginning May 1994.

Table 73. Average price per pelt paid to hunters and trappers in Minnesota, 1982-83 through 1995-96.

Species	Average pelt prices paid hunters and trappers in Minnesota (dollars)													
	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Muskrat	2.19	2.24	2.81	1.85	2.89	3.12	2.07	0.80	0.75	1.55	1.35	1.35	1.61	1.53
Mink (male)	24.43	30.33	28.40	25.29	35.75	40.54	39.76	30.38	23.06	27.30	24.74	21.89	14.90	11.75
Mink (female)	10.63	14.55	14.04	13.37	18.43	20.25	22.70	17.26	14.73	17.36	15.02	12.18	11.43	8.56
S.T. Weasel	0.56	0.56	0.77	0.98	0.98	0.89	1.11	1.20	1.55	0.77	1.31	1.72	1.73	1.84
L.T. Weasel	0.80	0.93	1.10	1.06	1.28	1.02	1.04	1.25	0.58	1.21	1.06	1.05	2.05	1.24
Raccoon	17.95	12.66	19.91	15.51	21.81	16.67	7.53	4.88	4.19	8.57	7.29	8.26	9.02	9.40
Striped Skunk	2.58	2.77	2.74	1.58	2.06	2.47	1.90	1.31	1.84	1.47	2.69	3.70	3.52	3.21
Eastern Spotted Skunk	1.75	N.A.	3.00	6.17	N.A.									
Badger	9.04	10.96	9.18	6.45	5.43	5.74	2.99	2.91	4.33	3.51	4.20	4.62	6.12	6.33
Opossum	0.87	0.71	1.14	0.62	0.97	0.91	0.62	0.76	3.51	0.96	0.78	0.89	0.98	0.97
Red Fox	31.10	32.81	29.07	17.51	22.07	16.69	9.89	8.58	7.17	10.81	8.88	10.59	13.42	14.21
Gray Fox	23.48	22.95	21.58	15.00	22.60	22.56	11.45	7.39	5.16	5.22	6.73	6.55	9.69	7.49
Coyote	25.41	18.79	19.06	18.19	22.03	18.35	8.43	6.42	8.95	14.85	15.55	14.68	13.55	10.89
Lynx	94.17	125.00	-	-	-	-	-	-	-	-	-	-	-	-
Bobcat	66.40	61.40	75.81	70.00	120.15	101.10	68.31	48.50	42.50	37.44	28.18	43.42	36.36	31.81
Beaver ^a (fall-winter)	10.69	9.52	12.51	15.03	20.32	16.75	13.84	12.49	9.44	9.00	7.10	11.24	13.80	12.56
Beaver ^a (spring)	11.60	12.24	16.11	17.90	-	17.12	12.62	10.99	9.66	9.25	7.89	9.41	14.48	10.96
Otter	25.65	24.79	21.56	20.81	24.15	22.85	22.02	22.01	24.21	24.74	29.90	43.14	47.50	38.76
Fisher ^a (male)	69.91	70.59	70.26	73.55	84.32	84.36	53.83	26.15	34.85	21.46	15.73	14.17	19.06	16.17
Fisher ^a (female)	99.08	121.08	121.76	130.47	162.29	170.31	99.63	52.92	46.25	47.93	28.79	28.40	29.93	24.90
Marten (male)	<u>No Open Season</u>			30.29	35.68	43.13	50.08	47.90	43.89	39.59	27.87	35.86	34.07	28.30
Marten (female)				27.61	26.58	39.20	43.46	46.88	40.84	27.24	24.96	29.58	28.34	21.42

^a Differences in pelt prices were not calculated before 1979 for beaver, and 1978 for fisher.

REGISTERED FURBEARER HARVEST STATISTICS
Forest Wildlife Populations and Research Group
1201 E. Hwy 2
Grand Rapids, MN 55744
(218) 327-4432

Table 74. Registered furbearer harvests and total permits issued, 1985-95^a.

Year	Bobcat		Fisher		Marten		Otter	
	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest
1985	--	119	--	678	746	430	--	559
1986	--	160	3,302	1,607	2,171	798	3,198	777
1987	--	214	4,952	1,642	3,025	1,363	4,708	1,386
1988	--	140	4,419	1,025	3,369	2,072	4,070	922
1989	--	129	3,712	1,243	3,074	2,119	3,549	1,294
1990	--	84	2,385	746	2,090	1,349	2,199	888
1991 ^b	--	106	2,360	528	2,020	686	2,282	855
1992 ^b	--	168	2,420	778	2,050	1,602	3,440	1,368
1993 ^b	--	201	2,299	1,159	1,925	1,438	2,254	1,459
1994 ^b	--	238	2,186	1,771	2,477	1,527	2,964	2,445
1995 ^b	--	134	2,520	942	2,268	1,500	2,579	1,435

^a Prior request tags and permits were required beginning in 1985 for marten and in 1986 for fisher and otter.
No possession tags or permits are required for bobcat.

^b Confiscation and 1854 Authority removed.

BOBCAT 1995-1996

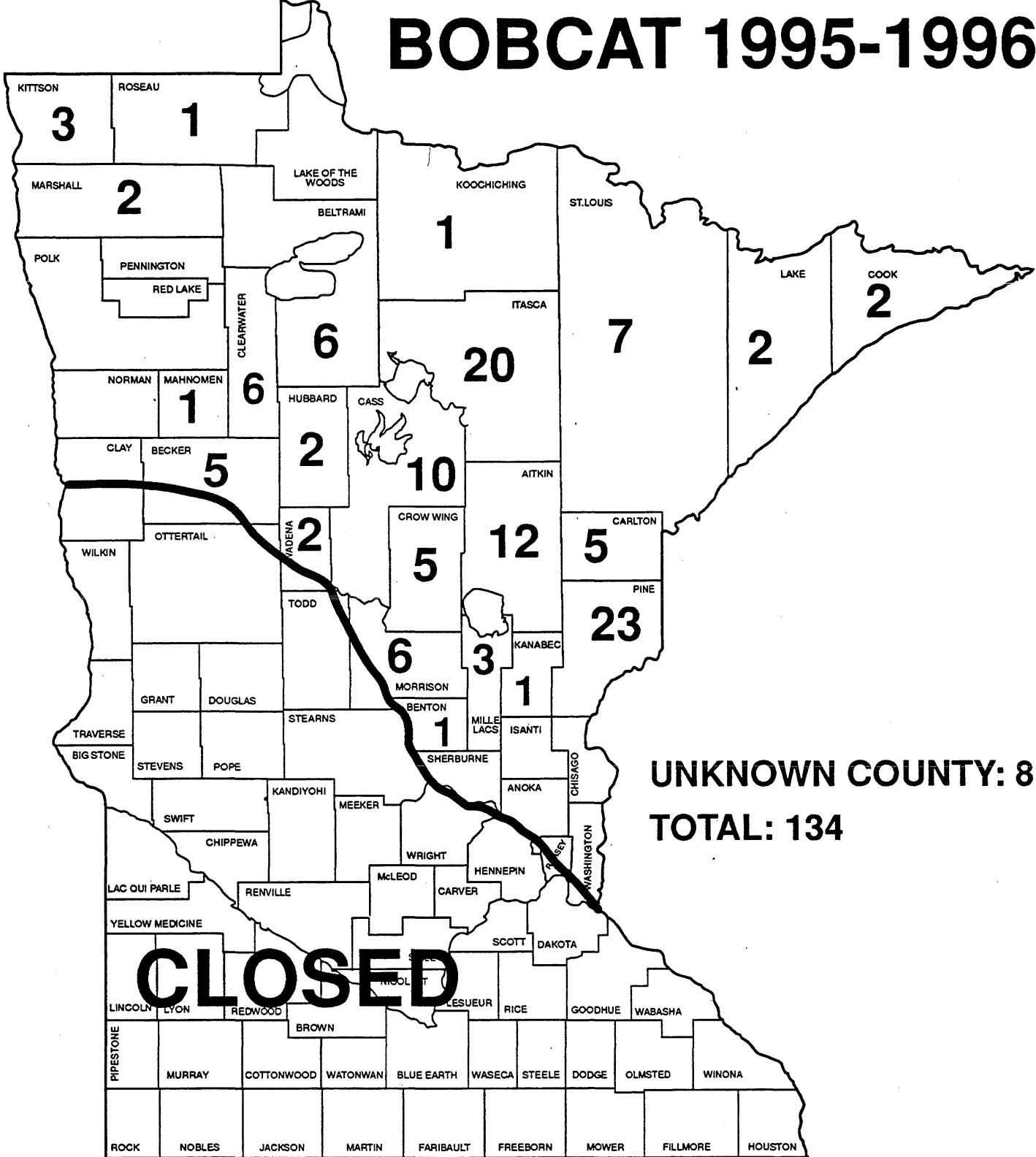


Figure 44. Bobcat harvest by county, 1995-1996.

Table 75. Time distribution of bobcat harvest by 5-day increments, 1995-96 season.

Interval	Sex			Total	% of Known Total	Cumulative Percent
	M	F	U			
Dec. 2 - 6	8	7	-	15	14	14
Dec. 7-11	10	7	1	18	16	30
Dec. 12-16	6	13	-	19	17	47
Dec. 17-21	7	11	-	18	16	63
Dec. 22-26	4	5	-	9	8	71
Dec. 27-31	10	4	-	14	13	84
Jan. 1- 5	6	2	-	8	7	91
Jan. 6-7*	4	5	-	9	9	100
Unknown	8	8	8	24	-	-
Total	63	62	9	134	100	100

* 2-day interval

Table 76. Distribution of bobcat harvest among takers, 1983-84 thru 1995-96.

Number of Takers	Number Taken (%)					
	1	2	3	4	5	Total
1983-84	108 (72.0)	32 (21.3)	6 (4.0)	4 (2.7)	0 (0.0)	150
1984-85	116 (65.2)	39 (21.9)	13 (7.3)	9 (5.1)	1 (0.5)	178
1985-86	70 (78.7)	11 (12.4)	6 (6.7)	1 (1.1)	1 (1.1)	89
1986-87	92 (76.7)	18 (15.0)	9 (7.5)	0 (0.0)	1 (0.8)	120
1987-88	104 (71.7)	23 (15.9)	10 (6.9)	6 (4.1)	2 (1.4)	145
1988-89	88 (81.5)	11 (10.2)	7 (6.5)	1 (0.9)	1 (0.9)	108
1989-90	56 (69.1)	13 (16.0)	5 (6.2)	3 (3.7)	4 (4.9)	81
1990-91	47 (77.0)	9 (14.7)	1 (1.6)	4 (6.5)	0 (0.0)	61
1991-92	42 (63.6)	15 (22.7)	4 (6.1)	3 (4.5)	2 (3.0)	66
1992-93	69 (64)	21 (20)	9 (9)	5 (5)	2 (2)	106
1993-94	90 (70)	17 (13)	13 (10)	7 (5)	2 (2)	201
1994-95	103 (68)	25 (17)	12 (8)	6 (4)	5 (3)	151
1995-96	67 (74)	13 (14)	5 (6)	4 (4)	2 (2)	91
Total	1052(68.0)	247 (16.0)	100 (6.5)	53 (3.4)	23 (1.5)	1,547

Table 77. Bobcat harvest by method of take, 1979-1995.

Year	Total Harvest	Trapping				Hunting			
		Harvest	(% of Total)	Takers	Average Take	Harvest	(% of Total)	Takers	Average Take
1979	291	253	(86.9)	--	--	38	(13.1)	--	--
1980	210	177	(84.3)	68	2.6	33	(15.7)	24	1.4
1981	260	219	(84.2)	143	1.5	41	(15.8)	30	1.4
1982	274	239	(87.2)	147	1.6	35	(12.8)	23	1.5
1983	208	168	(80.8)	118	1.4	40	(19.2)	32	1.3
1984	280	252	(90.0)	156	1.6	28	(10.0)	22	1.3
1985	119	83	(69.7)	62	1.3	36	(30.3)	27	1.3
1986	160	119	(74.4)	89	1.3	41	(25.6)	31	1.3
1987	214	177	(82.7)	118	1.5	37	(17.3)	26	1.4
1988	140	94	(67.1)	76	1.2	46	(32.9)	32	1.4
1989	129	90	(69.5)	49	1.8	39	(30.5)	28	1.4
1990	84*	61	(72.6)	43	1.4	22	(26.2)	17	1.3
1991	106*	59	(55.7)	31	1.9	43	(40.6)	33	1.3
1992	168	133	(80.0)	85	1.6	35	(20.0)	23	1.5
1993	201	147	(73.1)	88	1.7	54	(26.8)	41	1.3
1994	238	189	(79.4)	120	1.6	49	(20.6)	31	1.6
1995	134	73	(54.5)	53	1.4	61	(45.5)	38	1.6

* Sum of trapping and hunting harvest is not equal to total harvest due to incomplete method of take data.

Table 78. Comparison of bobcat harvest by county, 1985-86 through 1994-95.

County	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Aitkin	14	12	25	18	31	4	3	22	28	14	12
Becker	1	1	3	2	1	3	5	1	1	7	5
Beltrami	5	7	15	7	8	4	6	8	15	23	6
Benton							1	0	0	0	1
Carlton	6	9	9	4	1	1	2	10	5	8	5
Cass	20	34	28	13	27	11	14	27	16	31	10
Chisago	1	0	0	1	0	0	0	0	0	0	0
Clearwater	0	3	0	1	2	0	0	5	2	7	6
Cook	0	1	2	4	2	3	0	0	1	0	2
Crow Wing	6	5	1	2	0	5	4	6	3	8	5
Douglas	0	Closed									
Hubbard	0	0	2	3	1	1	3	3	2	4	2
Isanti	0	1	0	0	1	0	0	0	0	0	0
Itasca	15	28	44	20	19	11	16	35	39	51	20
Kanabec	2	3	0	1	6	1	0	4	7	3	1
Kittson	0	3	6	2	0	3	3	3	1	3	3
Koochiching	8	6	9	13	1	0	5	5	3	6	1
Lake	1	3	4	2	1	0	1	5	1	0	2
Lake of the Woods	1	0	2	4	0	0	0	0	0	2	0
Mahnomen											1
Marshall	1	3	4	0	0	1	5	0	6	4	2
Mille Lacs	4	3	8	2	0	3	7	3	1	5	3
Morrison	4	4	4	2	2	2	2	5	14	5	6
Ottertail	3	2	1	2	1	0	1	0	2	0	0
Pennington	0	0	0	0	0	0	0	0	0	0	0
Pine	14	11	15	23	15	18	16	11	29	26	23
Folk	0	0	0	1	0	0	0	0	0	0	0
Red Lake	1	0	0	0	0	0	0	0	0	0	0
Renville	0	Closed									
Roseau	2	2	2	2	0	2	1	3	5	9	1
St. Louis	8	19	26	10	7	8	3	8	10	15	7
Wadena	2	0	2	2	2	2	2	0	2	0	2
Unknown	0	2	0	0	1	1	6	5	8	7	8
Total	119	160	214	140	129	84	106	168	201	238	134

FISHER 1995-1996

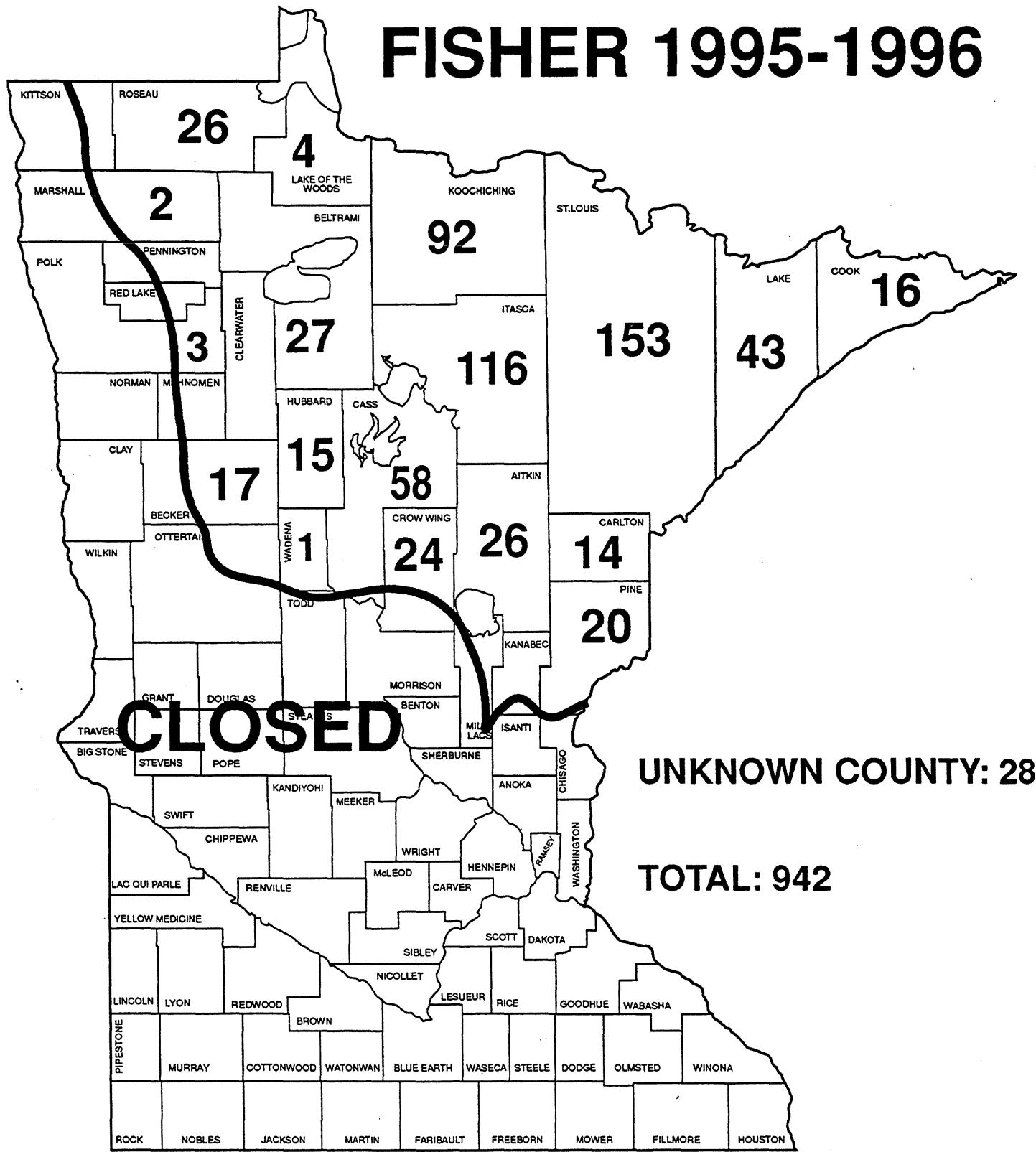


Figure 45. Fisher harvest by county, 1995-1996.

Table 79. Fisher harvest by date and sex, 1995-96 season.

Date	Sex			Total	% of known		Cumulative Percent
	Male	Female	Unknown		Total	Percent	
Dec. 2	1	1	0	2	0	0	0
Dec. 3	24	22	0	46	8	8	
Dec. 4	62	25	1	55	10	18	
Dec. 5	20	21	2	43	8	26	
Dec. 6	28	25	0	53	10	36	
Dec. 7	18	11	0	29	5	41	
Dec. 8	16	19	1	36	7	48	
Dec. 9	16	17	0	33	6	54	
Dec. 10	17	23	0	40	7	61	
Dec. 11	6	8	0	14	3	64	
Dec. 12	10	14	0	24	4	68	
Dec. 13	13	12	0	25	5	73	
Dec. 14	9	13	1	23	4	77	
Dec. 15	21	15	0	36	7	84	
Dec. 16	23	28	2	53	10	94	
Dec. 17	13	17	0	30	6	100	
Unknown	129	183	88	400	--	--	
Total	393	454	95	942	100	100	

Table 80. Fisher harvest by county and sex, 1995-96 season.

County	Sex			Total
	Male	Female	Unknown	
Aitkin	13	9	4	26
Becker	10	7	0	17
Beltrami	11	16	0	27
Carlton	7	7	0	14
Cass	24	30	4	58
Clearwater	0	0	0	0
Cook	7	5	0	12
Crow Wing	12	12	0	24
Hubbard	11	4	0	15
Itasca	17	23	76	116
Kanabec	0	0	0	0
Kittson	0	0	0	0
Koochiching	42	50	0	92
Lake	16	27	0	43
Lake of the Woods	2	2	0	4
Mahnomen	0	0	0	0
Marshall	2	0	0	2
Pennington	0	0	0	0
Pine	12	8	0	20
Polk	2	1	0	3
Red Lake	0	0	0	0
Roseau	19	7	0	26
St. Louis	76	73	4	153
Wadena	0	1	0	1
Unknown	110	72	7	289
Total	393	454	95	942

Table 81. Comparison of fisher harvest by county, 1984-95.

County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Aitkin	10	8	8	24	14	26	17	8	15	17	23	26
Becker	3	1	4	2	4	4	5	4	6	4	22	17
Beltrami	96	27	71	115	68	78	34	34	34	44	103	27
Carlton	3	0	3	6	3	2	3	3	8	12	14	14
Cass	19	17	32	60	24	43	34	30	33	57	100	58
Clearwater	6	4	4	3	1	3	3	2	3	3	13	0
Cook	16	9	15	29	29	10	14	4	17	17	16	12
Crow Wing	11	6	11	14	3	12	12	14	18	23	30	24
Hubbard	7	1	7	9	6	8	4	6	7	6	8	15
Itasca	228	84	183	247	135	184	99	73	76	177	299	116
Kanabec	0	0	0	0	1	0	0	0	2	0	1	0
Kittson	2	1	1	4	2	1	2	1	0	1	1	0
Koochiching	255	157	195	303	128	211	77	96	97	148	250	92
Lake	80	49	81	114	78	80	78	17	57	82	99	43
Lake of the Woods	85	46	58	91	66	58	27	21	26	8	43	4
Mahnomen	0	0	0	0	5	0	0	0	0	1	1	0
Marshall	10	5	2	19	7	4	3	2	3	7	9	2
Norman	-----closed-----			1 ^a	1 ^a	-----closed-----						
Pennington	0	0	0	0	1	0	0	0	0	0	1	0
Pine	1	0	0	1	1	3	2	0	3	17	23	20
Polk	0	0	1	0	1	0	0	0	0	1	2	3
Red Lake	0	0	0	1	0	0	0	1	0	1	0	0
Roseau	111	68	75	90	68	53	32	21	32	68	93	26
St. Louis	345	195	316	509	377	463	279	187	229	463	616	153
Wadena												1
Unknown	1	0	0	0	3	0	21	4	112	2	5	289
Total	1289	678	1068	1642	1025	1243	746	528	778	1,159	1,771	942

^a The reported harvest is accidental take - Norman County is closed to fisher trapping.

MARTEN 1995-1996

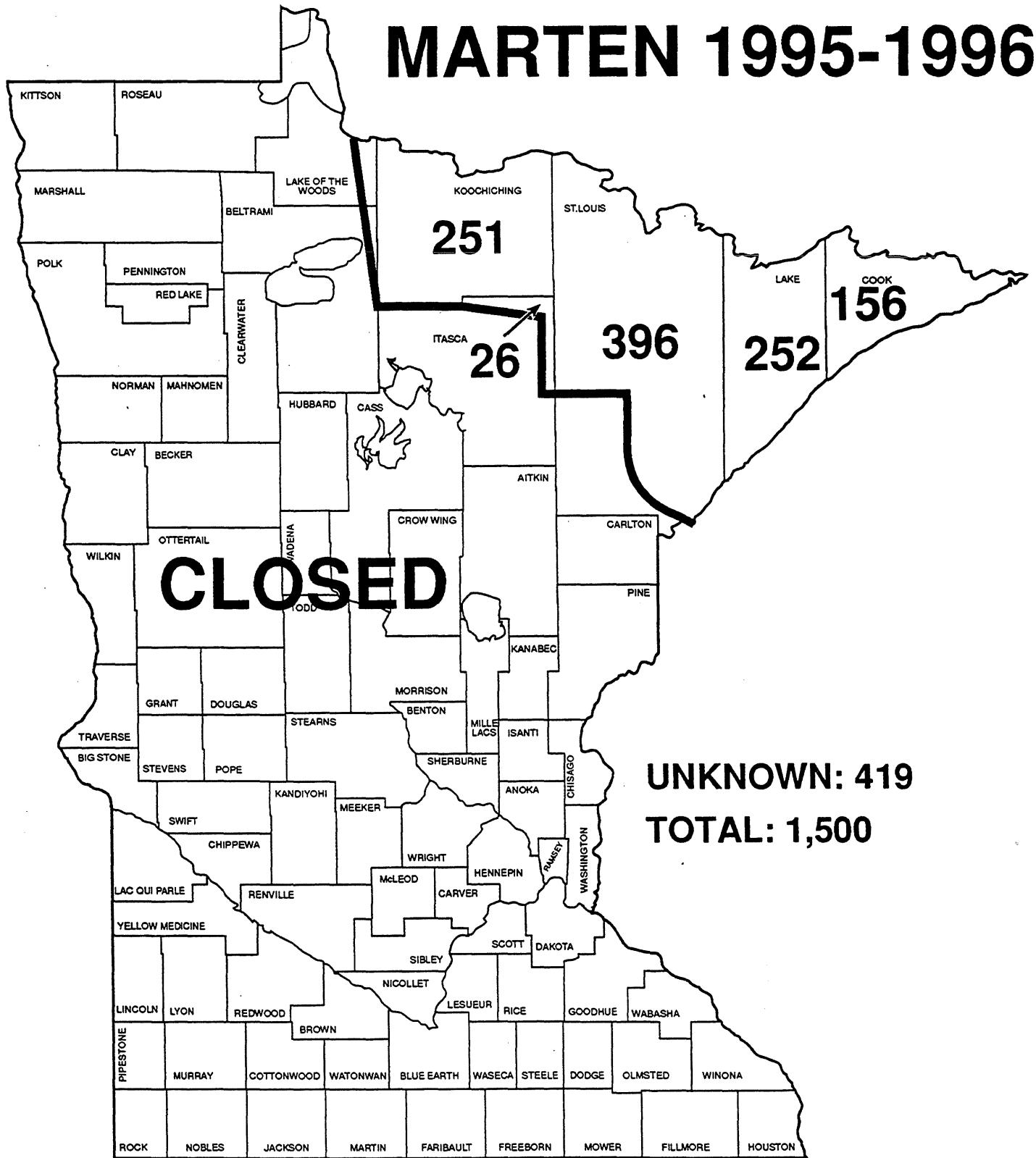


Figure 46. Pine marten harvest by county, 1995-1996.

Table 82. Marten harvest by date and sex, 1995-96 season.

Date	Sex			Total	% of Known Total	Cumulative Percent
	Male	Female	Unknown			
Dec. 2	3	3	0	6	1	1
Dec. 3	97	37	3	137	13	14
Dec. 4	92	49	0	141	14	28
Dec. 5	78	23	0	101	10	38
Dec. 6	78	26	2	106	10	48
Dec. 7	38	11	0	49	5	53
Dec. 8	41	15	0	56	5	58
Dec. 9	44	15	0	59	6	64
Dec. 10	58	29	0	87	8	72
Dec. 11	18	16	0	34	3	75
Dec. 12	26	10	0	36	3	78
Dec. 13	28	11	0	39	4	82
Dec. 14	42	7	0	49	5	87
Dec. 15	34	15	0	49	5	92
Dec. 16	40	16	0	56	5	97
Dec. 17	18	10	0	28	3	100
Unknown	294	130	43	467	-	-
Total	1,029	423	48	1,500	100	100

Table 83. Marten harvest by county and sex, 1995-96 season.

County	Sex			Total
	Male	Female	Unknown	
Beltrami	0	0	0	0
Cook	98	58	0	156
Itasca	12	4	10	26
Koochiching	186	56	9	251
Lake	189	63	0	252
Lake of the Woods	0	0	0	0
St. Louis	257	117	22	396
Unknown	287	125	7	419
Total	1,029	423	48	1,500

Table 84. Comparison of marten harvest by county, 1986-95.^a

County	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Beltrami	0	0	0	0	0	0	1	0	1	0
Cook	75	143	305	288	178	69	180	133	164	156
Itasca	---closed---		11	18	16	12	28	43	41	26
Koochiching	159	275	266	204	123	115	206	232	313	251
Lake	160	270	457	481	446	123	357	252	299	252
Lake of the Woods	---closed---		1	0	0	0	0	1	2	0
St. Louis	401	675	1,032	1,123	567	336	666	771	707	396
Unknown	3	0	0	5	19	1	164	6	0	419
Total	798	1,363	2,072	2,119	1,349	656	1,602	1,438	1,527	1,500

^a No open season on marten prior to 1985.

OTTER 1995-1996

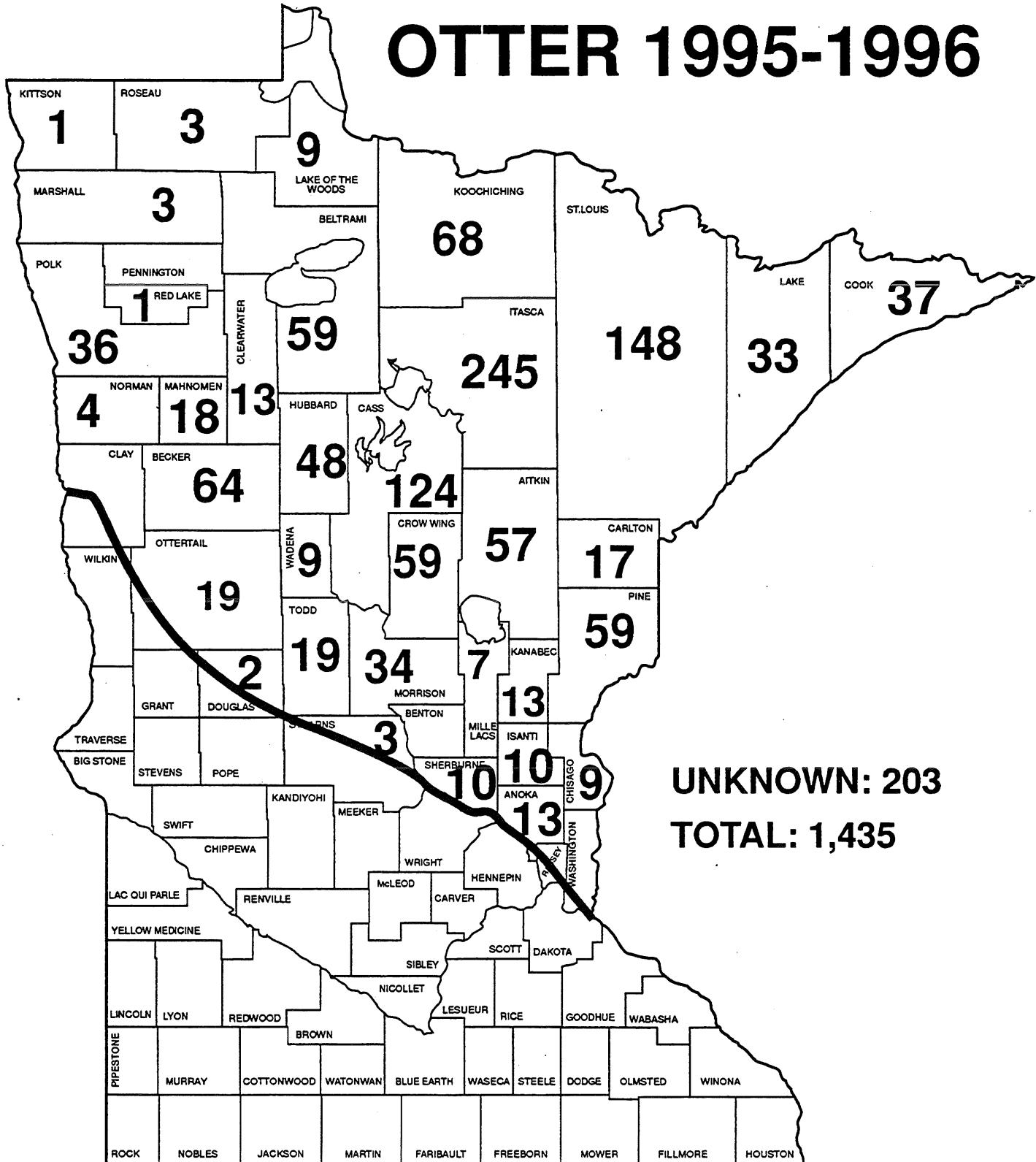


Figure 47. Otter harvest by county, 1995-1996.

Table 85. Otter harvest by 5-day interval and sex, 1995-96 season.

Interval	Sex			Total	% of Known Total	Cumulative Percent
	Male	Female	Unknown			
Oct. 28-Nov. 1	66	54	2	122	11	11
Nov. 2- 6	98	61	4	163	15	26
Nov. 7-11	56	51	0	107	10	36
Nov. 12-16	48	37	3	88	8	44
Nov. 17-21	63	37	4	104	10	54
Nov. 22-26	45	54	1	100	10	64
Nov. 27-Dec. 1	51	37	2	90	9	73
Dec. 2 - 6	42	32	5	79	7	80
Dec. 7-11	39	26	3	68	6	86
Dec. 12-16	22	15	0	37	3	89
Dec. 17-21	20	20	3	43	4	93
Dec. 22-26	13	13	0	26	2	95
Dec. 27- 31	24	10	0	34	3	98
Jan. 1-5	3	5	1	9	1	99
Jan. 6-7*	6	1	0	7	1	100
Unknown	96	100	162	358	-	-
Total	692	553	190	1,435	100	100

* 2-day interval.

Table 86. Otter harvest by county and sex, 1995-96 season.

County	Sex			Total
	Male	Female	Unknown	
Aitkin	31	21	5	57
Anoka	7	6	0	13
Becker	33	31	0	64
Beltrami	36	23	0	59
Benton	0	0	0	0
Carlton	12	5	0	17
Cass	68	42	14	124
Chisago	6	3	0	9
Clearwater	5	8	0	13
Cook	21	16	0	37
Crow Wing	28	31	0	59
Douglas	1	1	0	2
Hubbard	28	18	2	48
Isanti	4	6	0	10
Itasca	61	47	137	245
Kanabec	8	5	0	13
Kittson	1	0	0	1
Koochiching	41	27	0	68
Lake	21	11	1	33
Lake of the Woods	6	3	0	9
Mahnomen	11	7	0	18
Marshall	2	1	0	3
Mille Lacs	4	3	0	7
Morrison	5	6	1	12
Norman	3	1	0	4
Ottertail	9	10	0	19
Pine	27	32	0	59
Polk	18	18	0	36
Red Lake	1	0	0	1
Roseau	0	3	0	3
St. Louis	83	57	8	148
Sherburne	6	4	0	10
Stearns	2	1	0	3
Todd	10	9	0	19
Wadena	5	4	0	9
Washington	0	0	0	0
Unknown	102	79	22	203
Total	706	539	190	1,435

Table 87. Comparison of otter harvest by county, 1984-1995.

County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Aitkin	34	17	43	55	57	62	49	44	78	70	83	57
Anoka	--closed-----		4	2	8	21	14	7	14	18	20	13
Becker	18	24	34	41	55	49	32	21	36	38	62	64
Beltrami	33	46	66	125	87	92	74	93	97	91	166	59
Benton	--closed-----		0	0	1	0	1	1	0	4	5	0
Carlton	13	10	13	24	12	13	25	23	39	38	40	17
Cass	49	59	67	147	84	130	73	67	107	114	184	124
Chisago	--closed-----		4	11	9	8	10	5	9	17	26	9
Clearwater	11	6	17	19	5	13	6	14	14	27	52	13
Cook	16	5	20	33	25	31	24	30	28	44	53	37
Crow Wing	15	26	27	57	31	65	40	41	83	75	111	59
Douglas	-----closed-----											2
Hubbard	22	25	27	36	19	39	45	34	44	30	43	48
Isanti	--closed-----		12	24	12	17	7	5	10	19	20	10
Itasca	94	96	123	199	141	207	108	110	193	259	432	245
Kanabec	9	4	14	28	31	30	18	11	24	32	57	13
Kittson	0	0	1	0	0	0	0	0	1	0	1	1
Koochiching	34	38	45	77	48	59	31	59	52	65	147	68
Lake	18	25	47	61	33	40	26	21	91	44	76	33
Lake of the Woods	13	5	9	39	16	11	6	21	15	1	20	9
Mahnomen	3	14	6	5	8	13	8	0	0	2	21	18
Marshall	0	1	0	1	1	3	0	2	6	7	13	3
Mille Lacs	8	4	0	28	17	12	7	10	5	16	40	7
Morrison	--closed-----		3	17	9	13	12	3	16	13	34	12
Norman	--closed-----		0	1	6	1	1	0	0	0	0	4
Ottertail	1	1	4	1	1	3	5	4	5	10	10	19
Pennington	0	1	0	1	0	1	1	1	0	0	0	0
Pine	29	20	21	70	41	64	49	12	76	52	92	59
Polk	5	6	5	7	8	10	7	12	14	28	33	36
Ramsey	0	0	0	0	0	0	1	0	0	0	0	0
Red Lake	0	0	0	1	0	4	0	5	2	5	8	1
Roseau	5	5	7	12	9	13	6	7	14	11	29	3
St. Louis	96	119	145	256	135	248	180	159	187	286	507	148
Sherburne	--closed-----		1	1	4	5	0	1	8	7	11	10
Stearns	-----closed-----											3
Todd	0	0	0	0	0	3	0	0	0	1	1	19
Wadena	2	2	1	4	1	7	5	7	2	4	3	9
Washington	--closed-----		0	3	3	4	3	1	3	0	1	0
Unknown	2	0	2	0	5	3	12	24	91	31	44	203
Total	529	559	777	1,386	992	1,294	888	855	1,368	1,459	2,445	1,435

