

TRAPPING HARVEST STATISTICS

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2006 Trapper Harvest Survey

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INTRODUCTION

The Minnesota Department of Natural Resources, Research Surveys and Statistics unit annually conducts a survey of trapper license holders. Annual harvest estimates from survey data provide the basis for future trapping regulations and season structure.

METHODS

The Research Surveys and Statistics unit requests a list of all active trapper license holders from the Electronic License System database in late February. The sample consisted of all valid Regular, Junior and Non-resident Trapper License holders. For the 2006-07 trapping season there were 7,472 Resident Regular Trappers, 1,081 Resident Junior Trappers, and 4 Nonresident (MN landowners) Trappers surveyed. Of the 8,557 valid licenses, 8,508 had usable addresses for purposes of the survey.

Trappers that returned the survey questionnaire within three weeks were marked returned and eliminated from follow-up mailings. Follow-up mailings were sent to non-respondents at intervals of three weeks. There were three follow-up mailings to non-respondents.

Completed and returned questionnaires were checked for completeness, consistency, and biological practicability. Cards were marked with numeric county codes corresponding to the trapper's written information. Data from each usable card was converted to an electronic database. Data were checked for errors, duplicate responses, and /or missing data. The following is a list of assumptions made in data coding:

- 1) If an individual checked the box indicating (s)he did not trap, but harvest information was provided, it was assumed that the individual did trap.
- 2) If a range was given for "number of days trapped" or "number of animals harvested", the median of the range, rounded to the nearest even integer was recorded.
- 3) If a trapper indicated spending time trapping for a species, but left "number trapped" blank, the # trapped was entered as missing data.
- 4) If a trapper indicated taking a species, but left "number of days trapped" blank, then "number of days trapped" was recorded as missing data.
- 5) If more than one county was indicated for "county trapped in most", the first county listed was recorded. However, if the several counties listed were indicated to apply to all species trapped, then counties were recorded in sequential order in relation to species hunted.
- 6) If "county trapped in most" was left unanswered or not legible, the county was recorded as missing data.

Data from all usable cards were tabulated and statistically analyzed by the St. Paul staff, using SAS statistical analysis software programs.

RESULTS

Attached are the survey results for Harvest Statewide and by License type, in tabular form (Tables 1 – 5).

Table 1. Trapper response to mail surveys, 1981-82 through 2006-07.

Year	Number mailed	Number not delivered	Delivered questionnaires <u>completed and returned</u>	
			Number	Percent
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
1996-97	4,071	132	3,017	76.6
1997-98	3,500	96	2,629	77.2
1998-99	3,900	117	2,878	76.4
1999-00	3,110	74	2,313	76.2
2000-01	5,262	146	3,941	77.0
2001-02	5,482	127	4,132	78.6
2002-03	5,655	210	4,148	76.0
2003-04	5,812	197	4,234	75.4
2004-05	6,267	235	4,547	75.4
2005-06	6,060	88	4,396	73.6
2006-07	8,508	139	5,835	69.9

Table 2. Use of trapper licenses, 1994-95 through 2006-07.

		Return from mail survey	Projections from license sales
1994-95	Trapped	1,647 (87.8%)	6,054
	Did not trap	<u>228 (12.2%)</u>	<u>841</u>
		1,875 (100.0%)	6,895 ^a
1995-96	Trapped	2,053 (83.2%)	4,684
	Did not trap	<u>414 (16.8%)</u>	<u>946</u>
		2,467 (100.0%)	5,630 ^a
1996-97	Trapped	2,505 (84.8%)	5,660
	Did not trap	<u>450 (15.2%)</u>	<u>1,015</u>
		2,955 (100.0%)	6,675 ^a
1997-98	Trapped	2,310 (88.6%)	6,198
	Did not trap	<u>296 (11.4%)</u>	<u>798</u>
		2606 (100.0%)	6,996 ^a
1998-99	Trapped	2,398 (88.6%)	5,541
	Did not trap	<u>480 (16.7%)</u>	<u>1,111</u>
		2,878 (100.0%)	6,652 ^a
1999-00	Trapped	1,927 (83.5%)	4,122
	Did not trap	<u>381 (16.5%)</u>	<u>814</u>
		2,308 (100.0%)	4,936 ^a
2000-01	Trapped	2,897 (75.9%)	4,051
	Did not trap	<u>920 (24.1%)</u>	<u>1,286</u>
		3,817 (100.0%)	5,337 ^a
2001-02	Trapped	3,332 (81.5%)	4,510
	Did not trap	<u>754 (18.5%)</u>	<u>1,024</u>
		4,086 (100.0%)	5,534 ^a
2002-03	Trapped	3,344 (80.6%)	4,615
	Did not trap	<u>804 (19.4%)</u>	<u>1,111</u>
		4,148 (100.0%)	5,726 ^a
2003-04	Trapped	3,412 (81.1%)	4,737
	Did not trap	<u>793 (18.9%)</u>	<u>1,104</u>
		4,205 (100.0%)	5,841 ^a
2004-05	Trapped	3,697 (81.9%)	5,136
	Did not trap	<u>815 (18.1%)</u>	<u>1,135</u>
		4,512 (100.0%)	6,271 ^a
2005-06	Trapped	3,495 (80.0%)	4,930
	Did not trap	<u>875 (20.0%)</u>	<u>1,233</u>
		4,370 (100.0%)	6,163 ^a
2006-07	Trapped	4,782 (81.9%)	7,008
	Did not trap	<u>1,053 (18.1%)</u>	<u>1,549</u>
		5,835 (100.0%)	8,557 ^a

^a excludes duplicates.

Table 3. Estimated number of trappers of various furbearers, 1992-93 through 2006-07.

Estimated number of trappers (thousands)															
	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Muskrat	3	3	4	3	4	4	3	2	2	2	2	2	2	2	4
Mink	3	3	3	2	3	3	3	2	2	2	2	2	2	2	3
Short-tailed weasel	<1	<1	1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	1
Long-tailed weasel	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	1
Raccoon (Sept 06-Feb 07)	2	3	3	2	3	3	3	2	2	2	2	2	3	2	4
Raccoon (Mar 05-Aug 05) ^a			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Striped skunk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Eastern spotted skunk	<1	<1	<1	<1	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Opossum	1	1	1	1	1	1	1	<1	<1	1	1	1	1	1	2
Red fox (Sept 06-Feb 07)	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2
Red fox (Mar 05-Aug 05) ^a			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Gray fox	<1	<1	<1	<1	n.a.	<1	<1	<1	<1	<1	<1	<1	<1	<1	1
Coyote	1	1	1	1	1	1	1	1	<1	1	1	1	1	1	1
Beaver (Oct 06- Feb 07)	2	2	3	2	2	3	3	2	2	2	2	2	2	2	3
Beaver (Mar 06- Apr 06)	1	1	2	1	2	2	2	1	1	1	1	1	1	1	2

^a Raccoon and red fox season continuous May 1994 thru March 15, 2006.

Table 4. Estimated take per trapper of various furbearers, 1992-93 through 2006-2007.

	Estimated take per successful trapper reporting that species														2005-06	2006-07
	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05			
Muskrat	36	64	90	70	55	58	42	46	42	42	35	33	32	39	58	
Mink	12	12	12	11	11	11	13	14	12	14	10	9	10	10	9	
Short-tailed weasel	5	6	12	10	9	10	7	5	8	10	7	7	6	6	9	
Long-tailed weasel	4	4	6	5	5	5	5	5	5	7	4	5	3	3	5	
Raccoon (Sept 06-Feb 07)	16	5	20	23	23	24	23	20	20	27	25	22	23	21	21	
Raccoon (Mar 05-Aug 05) ^a			15	15	13	14	15	14	11	19	12	15	12	11		
Striped skunk	8	9	8	8	10	10	9	8	8	8	8	8	8	7	7	
Eastern spotted skunk	2	6	4	5	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	
Badger	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	
Opossum	10	8	9	9	9	9	11	13	11	8	11	12	14	12	14	
Red fox (Sept 06-Feb 07)	11	11	11	9	7	7	5	6	6	6	6	5	4	4	4	
Red fox (Mar 05-Aug 05) ^a			9	5	4	4	3	4	4	5	5	6	3	3		
Gray fox	4	3	2	2	n.a.	3	3	2	2	2	2	2	2	2	2	
Coyote	5	5	4	5	4	3	3	4	4	4	4	5	4	5	4	
Beaver (Oct 06-Feb 07)	13	16	18	14	16	16	16	16	15	18	13	12	13	13	13	
Beaver (Mar 06 - Apr 06)	29	29	37	29	31	32	29	27	26	31	26	21	26	24	24	

^a Raccoon and red fox season continuous May 1994 thru March 15, 2006.

Table 5. Minnesota trapper license sales and estimated annual harvest, 1992-93 through 2006-2007^a

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Trapper license sales ^b	5,763	5,601	6,895	5,630	6,675	6,996	6,652	4,936	5,337	5,534	5,725	5,841	6,271	6,163	8,557
Estimated harvest ^c (thousands)															
Muskrat	92	202	355	195	202	194	131	97	86	101	75	69	72	91	243
Mink	32	33	40	26	35	34	36	27	23	29	20	17	21	18	26
Short-tailed weasel	1	2	6	4	4	4	2	2	3	4	3	4	3	2	8
Long-tailed weasel	1	1	3	2	2	2	2	2	1	2	1	2	1	1	3
Raccoon (Sept 06- Feb 07)	34	56	58	53	69	66	64	37	32	60	61	54	57	49	79
Raccoon (Mar 05-Aug 05) ^f			1	5	5	5	7	4	4	6	4	5	5	4	
Striped skunk	7	9	9	8	11	11	9	5	5	7	8	8	9	7	11
Eastern spotted skunk ^g	<1	<1	<1	<1	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	1	1	1	<1	1	1	<1	<1	<1	<1	<1	1	<1	<1	<1
Opossum	6	5	5	6	6	6	7	6	5	5	8	11	14	12	20
Red fox (Sept 06- Feb 07)	23	22	24	14	13	12	6	7	6	7	8	7	5	4	7
Red fox (Mar 05-Aug 05) ^f			1	1	1	1	<1	<1	<1	<1	1	1	<1	<1	
Gray fox	1	1	1	1	n.a.	1	1	1	<1	1	1	1	1	1	2
Coyote	4	4	5	3	3	3	2	2	2	2	4	4	4	4	5
Beaver (Oct 06- Feb 07)	22	29	49	25	38	36	39	31	25	36	24	23	29	26	34
Beaver (Mar 06-Apr 06)	34	32	64	41	48	47	55	36	37	42	34	26	38	35	42
Registered harvest															
Otter	1,368	1,459	2,445	1,435	2,219	2,145	1,946	1,635	1,578	2,301	2,145	2,766	3,450	2,846	2,720
Lynx ^g	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Bobcat ^c	168	201	238	134	223	359	103	206	231	250	544	483	631	590	890
Fisher	778	1,159	1,771	942	1,773	2,761	2,695	1,725	1,674	2,119	2,660	2,517	2,552	2,388	3,251
Marten	1,602	1,438	1,527	1,500	1,625	2,261	2,299	2,423	1,629	1,928	2,839	3,214	3,241	2,653	3,788

^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 March 3, 2007 8,557 trapping licenses were sold in 2006 1,081 (12.6%) were juvenile licenses and 7,472 (87.3%) were adult licenses 4 (<1%) were Nonresident (MN Landowner) 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 bobcat includes animals taken by hunting. ^f Raccoon and red fox season continuous May 1994 thru March 15, 2006.

^g Lynx (1984) and Eastern spotted skunk (1996) listed as Special Concern and threatened species (respectively) and are fully protected.

Minnesota Fur Buyers Survey For the 2006-2007 Hunting and Trapping Season

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INTRODUCTION

Fur buyers are individuals licensed by the State of Minnesota to buy and sell raw fur. They are required to keep complete records of all transactions and activities related to buying, selling, and disposing of raw furs. Each year buyers are sent a questionnaire asking them to submit information regarding the “average” price they paid to trappers for various furbearers the previous season.

METHODS

In July 2007, questionnaires were mailed to the 32 licensed furbuyers in Minnesota. The survey asked them to report the number and type of fur purchased from Minnesota trappers and hunters in 2005-06 and the “average price” paid to those hunters and trappers based on all furs purchased. A total of 28 usable surveys were received, for a return rate of 87.5 percent. Calculations of average pelt price for each species (Table 1) were weighted according to the number of pelts purchased by each buyer. Average pelt prices for the past 15 years are summarized in Table 2. Total estimated value of the furbearer harvest to trappers and hunters in 2006-07 was \$1,865,741, an increase of about 14 percent from 2005-06.

RESULTS

Survey summaries are presented in the following tables.

Table 1. Minnesota fur prices as reported by licensed fur dealers, 2006-07.

Species	Number Buyers	Number Pelts	Minimum Price	Maximum Price	Weighted Mean
Muskrat	22	81406	\$2.00	\$7.00	\$5.79
Mink, female	21	4238	\$5.00	\$18.00	\$13.18
Mink, male	20	4623	\$6.00	\$20.00	\$18.04
Raccoon	23	44771	\$6.50	\$14.90	\$11.92
Red fox	22	1907	\$9.00	\$22.00	\$17.68
Gray fox	15	376	\$15.00	\$30.00	\$22.36
Coyote	22	3799	\$8.00	\$49.00	\$17.76
Bobcat	12	340	\$43.33	\$110.00	\$101.07
River Otter	12	679	\$30.00	\$60.00	\$42.85
Beaver, fall	23	9858	\$7.00	\$22.00	\$18.35
Beaver, spring	16	8311	\$8.00	\$16.00	\$14.81
LT weasel	6	193	\$3.00	\$5.00	\$4.35
ST weasel	12	751	\$1.00	\$8.00	\$3.58
Striped skunk	13	432	\$2.00	\$6.57	\$4.46
Badger	15	187	\$8.52	\$26.00	\$15.71
Opossum	12	906	\$0.40	\$3.00	\$1.52
Fisher, male	14	771	\$25.00	\$90.00	\$76.33
Fisher, female	11	501	\$45.00	\$80.00	\$67.82
Marten, male	8	312	\$40.00	\$80.00	\$74.04
Marten, female	8	179	\$35.00	\$75.00	\$66.09
Deer Hides	19	22966	\$2.50	\$7.50	\$4.51
Bear Hides	8	75	\$25.00	\$53.00	\$43.03

Table 2. Average price per pelt paid to hunters and trappers in Minnesota, 1992-93 through 2006-07.

Species	Average pelt prices paid hunters and trappers in Minnesota (dollars)														
	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Muskrat	1.35	1.35	1.61	1.53	3.49	2.24	1.11	1.57	1.83	2.32	2.11	2.05	1.90	2.81	\$5.79
Mink (male)	24.74	21.89	14.90	11.75	20.82	13.52	9.83	11.61	11.15	9.34	9.55	11.41	11.34	14.29	\$13.18
Mink (female)	15.02	12.18	11.43	8.56	13.71	9.65	6.11	8.22	7.70	6.76	6.52	7.23	10.22	10.23	\$18.04
S.T. Weasel	1.31	1.72	1.73	1.84	2.32	2.33	1.72	2.16	2.30	2.41	2.63	2.53	2.52	2.60	\$3.58
L.T. Weasel	1.06	1.05	2.05	1.24	3.33	2.67	2.05	2.34	1.80	2.98	1.94	3.34	3.05	2.56	\$4.35
Raccoon	7.29	8.26	9.02	9.40	15.16	13.92	7.25	5.09	8.86	9.53	10.33	11.45	10.49	9.61	\$11.92
Striped Skunk	2.69	3.70	3.52	3.21	2.11	3.18	4.72	4.40	4.79	3.91	5.81	4.66	3.95	3.77	\$4.46
Badger	4.20	4.62	6.12	6.33	8.49	6.53	6.30	7.30	10.15	9.39	13.18	14.23	12.94	13.40	\$15.71
Opossum	0.78	0.89	0.98	0.97	1.04	1.10	0.58	0.96	0.97	1.19	1.22	1.23	1.51	1.40	\$1.52
Red Fox	8.88	10.59	13.42	14.21	14.81	11.23	8.04	11.82	14.45	17.07	22.08	20.02	17.28	16.96	\$17.68
Gray Fox	6.73	6.55	9.69	7.49	9.00	7.69	5.63	7.06	7.52	8.36	9.05	13.64	12.58	15.00	\$22.36
Coyote	15.55	14.68	13.55	10.89	12.25	10.12	5.57	9.42	12.40	13.37	16.12	18.37	15.24	13.57	\$17.76
Bobcat	28.18	43.42	36.36	31.81	32.82	30.39	27.66	24.23	33.09	46.00	71.54	95.90	98.99	95.74	\$101.07
Beaver (fall-winter)	7.10	11.24	13.80	12.56	19.24	16.48	11.40	11.51	14.66	12.74	10.05	12.57	13.62	14.48	\$18.35
Beaver (spring)	7.89	9.41	14.48	10.96	19.14	17.39	14.06	11.02	12.80	12.47	9.99	11.09	13.80	16.49	\$14.81
Otter	29.90	43.14	47.50	38.76	38.75	39.81	34.03	41.41	50.52	46.19	61.16	85.33	87.23	88.89	\$42.85
Fisher (male)	15.73	14.17	19.06	16.17	25.48	31.09	18.92	19.45	20.14	23.18	26.70	27.15	30.02	36.03	\$76.33
Fisher (female)	28.79	28.40	29.93	24.90	34.47	33.65	21.76	19.91	19.01	22.86	25.44	25.71	27.47	31.46	\$67.82
Marten (male)	27.87	35.86	34.07	28.30	34.47	27.82	19.70	24.89	27.56	24.10	28.00	30.09	30.65	37.47	\$74.04
Marten (female)	24.96	29.58	28.34	21.42	29.26	21.79	16.12	21.27	21.25	22.52	27.30	26.70	27.42	31.53	\$66.09
Deer Hides	5.67	5.27	7.17	6.92		6.97	6.40	6.32	6.46	2.86	3.48	5.41	3.95	4.14	\$4.51
Bear Hides	30.21	46.77	38.93	50.72		37.27	36.23	33.87	39.81	36.10	40.56	41.55	46.61	39.30	\$43.03