

TRAPPING HARVEST STATISTICS

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2011 TRAPPER HARVEST SURVEY

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INTRODUCTION

The Minnesota Department of Natural Resources, Research Surveys and Statistics unit annually conduct a survey of trapper license holders to assess annual harvest rates. Annual harvest estimates from survey data provide the basis for future trapping regulations and season structure. Beginning with the 1999-2000 season survey cards were sent to all trappers with a valid mailing address.

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 consists of all valid Regular, Junior and Non-resident Trapper License holders. For the 2011-12 trapping season there were 6,525 Resident Regular Trappers, 387 Resident Junior Trappers, 1,021 Resident Senior Trappers, 322 “active” Lifetime Trappers (20 youth), and 7 Nonresident (MN landowners) Trapper license holders. Of the 8,280 valid licenses, 8,262 had usable addresses for purposes of the survey. The survey sample is in essence a census but the response rate is < 100%. If non-response (including undeliverable surveys) is completely random, then respondents can be treated as a random sample and results expanded to the entire sampling frame for all licensed trappers. For consistency with previous analyses, the response data was treated as a random sample.

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 two 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, 1989-90 through 2011-12.

Year	Number mailed	Number not delivered	Delivered questionnaires completed and returned	
			Number	Percent
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
2007-08	6,342	104	4,326	69.9
2008-09	6,203	86	4,166	68.1
2009-10	6,144	70	4,425	71.7
2010-11	6,875	94	4,844	71.4
2011-12	8,262	110	5,517	67.7

Table 2. Use of trapper licenses, 2000-01 through 2011-12.

		Return from mail survey	Projections from license sales
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
2007-08	Trapped	3,322 (77.2%)	5,533
	Did not trap	<u>980 (22.8%)</u>	<u>1,634</u>
		4,302 (100.0%)	7,167 ^a
2008-09	Trapped	3,154 (75.7%)	5,319
	Did not trap	<u>1,012 (24.3%)</u>	<u>1,708</u>
		4,166 (100.0%)	7,027 ^a
2009-10	Trapped	3,202 (72.7%)	4,467
	Did not trap	<u>1,202 (27.3%)</u>	<u>1,677</u>
		4,404 (100.0%)	6,144 ^a
2010-11	Trapped	3,546 (73.2%)	5,032
	Did not trap	<u>1,298 (26.8%)</u>	<u>1,843</u>
		4,844 (100.0%)	6,875 ^a
2011-12	Trapped	4,498 (81.5%)	6,748
	Did not trap	<u>1,019 (18.5%)</u>	<u>1,532</u>
		5,517 (100.0%)	8,280 ^a

^a excludes duplicates.

Table 3. Estimated number of trappers of various furbearers, 1998-99 through 2011-12.

	Estimated number of trappers													
	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Muskrat	3121	2137	2052	2419	2137	2117	2269	2351	4228	2371	2393	2088	2760	4,320
Mink	2772	1919	1867	2117	1945	1917	2085	1864	3033	2168	2044	1541	1847	2,470
Short-tailed weasel	366	383	318	411	408	473	470	349	864	595	511	417	546	800
Long-tailed weasel	347	330	272	313	312	374	299	211	694	434	345	254	333	560
Raccoon (Sept -Feb)	2769	1880	1599	2249	2427	2384	2505	2315	3766	3189	3150	2320	2567	4,060
Raccoon (Mar -Aug) ^a	463	315	343	334	354	338	406	322						
Striped skunk	994	681	563	955	1052	1102	1161	1023	1644	1485	1488	949	1130	1,800
Eastern spotted skunk	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	234	178	135	250	237	292	310	219	347	330	293	206	229	310
Opossum	643	458	484	610	754	934	1037	957	1511	1392	1169	701	645	830
Red fox (Sept -Feb)	1186	1033	986	1093	1319	1290	1179	991	1608	1320	1232	1006	1068	1,900
Red fox (Mar -Aug) ^a	137	107	89	91	111	113	110	85						
Gray fox	386	308	468	277	421	441	451	407	806	654	657	529	555	970
Coyote	576	552	491	606	813	812	826	857	1379	1203	1141	888	998	1,720
Beaver (Oct 11- Feb 12)	2483	1891	1695	2054	1844	1883	2171	1965	2659	2008	1877	1650	1722	2,360
Beaver (Mar 11- Apr 11)	1907	1320	1425	1345	1296	1233	1449	1455	1710	1408	1257	1260	1367	1,510

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

Table 4. Estimated take per trapper of various furbearers, 1997-98 through 2011-2012.

Estimated take per successful trapper reporting that species															
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Muskrat	58	42	46	42	42	35	33	32	39	58	32	34	47	65	81.4
Mink	11	13	14	12	14	10	9	10	10	9	9	8	9	8	6
Short-tailed weasel	10	7	5	8	10	7	7	6	6	9	7	7	8	9	9
Long-tailed weasel	5	5	5	5	7	4	5	3	3	5	5	3	3	5	5
Raccoon (Sept -Feb)	24	23	20	20	27	25	22	23	21	21	23	23	19	22	24
Raccoon (Mar Aug) ^a	14	15	14	11	19	12	15	12	11						
Striped skunk	10	9	8	8	8	8	8	8	7	7	7	7	7	7	7
Eastern spotted skunk	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	2	2	2	2	2	2	2	1	2	1	2	1	2	2	2
Opossum	9	11	13	11	8	11	12	14	12	14	12	10	7	7	5
Red fox (Sept -Feb)	7	5	6	6	6	6	5	4	4	4	3	3	3	3	4
Red fox (Mar -Aug) ^a	4	3	4	4	5	5	6	3	3						
Gray fox	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2
Coyote	3	3	4	4	4	4	5	4	5	4	4	4	4	4	5
Beaver (Oct 11-Feb 12)	16	16	16	15	18	13	12	13	13	13	11	11	11	10	11
Beaver (Mar 11 - Apr 11)	32	29	27	26	31	26	21	26	24	24	19	22	20	21	20

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

Table 5. Minnesota trapper license sales and estimated annual harvest, 1996-97 through 2011-2012^a

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Trapper license sales ^b	6,996	6,652	4,936	5,337	5,534	5,725	5,841	6,271	6,163	8,557	7,167	7,027	6,158	6,885	8,280
Estimated harvest ^c															
Muskrat	188,189	131,439	97,333	85,555	100,819	75,190	69,131	72,079	91,271	243,360	75,439	80,157	98,524	180,505	352,030
Mink	32,449	36,152	26,808	22,590	28,684	19,894	16,716	21,478	18,048	26,084	18,626	16,647	13,207	13,853	15,770
Short-tailed weasel	6,401	2,400	1,763	2,586	4,160	2,895	3,519	2,679	2,223	8,145	4,155	3,515	3,128	4,914	7,300
Long-tailed weasel	3,880	1,863	1,619	1,354	2,243	1,138	1,781	1,007	651	3,494	2,013	1,118	838	1,732	3,020
Raccoon (Oct - Feb)	71,705	63,680	37,435	32,460	60,292	61,221	53,534	56,848	48,966	78,571	73,498	71,893	45,118	57,245	98,240
Raccoon (Mar -Aug) ^f	8,986	6,849	4,263	3,702	6,468	4,137	4,933	4,940	3,594						
Striped skunk	10,027	9,181	5,266	4,580	7,168	7,901	8,474	8,704	6,881	10,773	10,811	10,354	6,194	8,023	12,250
Eastern spotted skunk ^g	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	446	400	319	205	407	358	552	455	339	461	499	424	316	344	490
Opossum	5,201	6,916	5,907	5,351	5,127	8,491	11,251	14,313	11,754	20,442	17	11,296	4,963	4,193	4,400
Red fox (Oct - Feb)	9,995	6,347	6,508	6,165	6,870	7,851	6,721	4,684	3,528	6,783	4,060	3,500	2,984	3,311	7,250
Red fox (Mar -Aug) ^f	680	458	379	357	447	612	635	334	222						
Gray fox	1,163	976	743	468	525	892	915	898	797	1,703	1,360	1,320	1,084	1,110	2,100
Coyote	2,720	1,637	2,372	2,112	2,369	3,641	3,805	3,607	3,915	5,315	5,355	4,532	3,797	4,292	8,780
Beaver (Oct 11- Feb 12)	47,370	38,720	30,564	24,802	35,963	23,592	22,801	28,716	26,029	33,966	21,813	21,075	18,178	17,048	26,620
Beaver (Mar 11-Apr 11)	65,472	55,262	36,189	37,455	41,829	33,721	26,363	37,861	35,252	41,652	26,286	27,815	25,008	29,118	29,500
Registered harvest															
Otter	2,145	1,946	1,635	1,578	2,301	2,145	2,766	3,450	2,846	2,720	1,861	1,938	1,544	1,814	2,294
Lynx ^g	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Bobcat ^e	359	103	206	231	250	544	483	631	590	890	702	853	884	1,012	1,711
Fisher	2,761	2,695	1,725	1,674	2,119	2,660	2,517	2,552	2,388	3,251	1,682	1,712	1,259	903	1,473
Marten	2,261	2,299	2,423	1,629	1,928	2,839	3,214	3,241	2,653	3,788	2,221	1,823	2,073	1,842	2,525

^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. Nonresident (MN Landowner) licenses started in 2004. Senior trapping licenses were first issued in 2007. Lifetime Licenses became available for free when renewing lifetime sports or small game licenses in 2007. As of April, 2012 - 8,285 trapping licenses were sold in 2011 - 387 (4.7%) were juvenile licenses, 6,525 (78.8%) were Regular adult licenses, 1,021 (12.3%) were Senior licenses, 322 (3.9%) were Lifetime licenses, and 7 (<1%) were Nonresident (MN Landowner) licenses. Duplicate licenses excluded.

^c Based upon trappers' responses to mail surveys.

^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 2011-2012 HUNTING AND TRAPPING SEASON

Jason Abraham, Wildlife Furbearer Program Coordinator
Margaret Dexter, Wildlife Policy and Research Unit

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 August 2012, questionnaires were mailed to the 41 licensed fur buyers in Minnesota. The survey asked them to report the number and type of fur purchased from Minnesota trappers and hunters in 2011-12 and the “average price” paid to those hunters and trappers based on all furs purchased. A total of 32 usable surveys were received, for a return rate of 82 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 2011-12 was \$1,970,338.77, a 220 percent increase from 2010-2011.

Table 1. Minnesota fur prices as reported by licensed fur dealers, 2011-12.

Species	Number Pelts	Minimum Price	Maximum Price	Weighted Mean
Muskrat	114,523	4.89	7.50	5.86
Mink Female	3,172	6.00	15.75	11.54
Mink male	3,467	8.89	20.00	14.68
Raccoon	42,408	7.00	15.00	12.57
Red Fox	1,692	13.00	30.00	22.87
Gray Fox	437	10.00	20.00	15.11
Coyote	2,570	8.00	30.00	17.99
Bobcat	435	25.00	120.00	98.18
River Otter	733	12.00	75.00	51.40
Beaver (Fall-Winter)	8,431	0.00	23.00	14.29
Beaver (Spring)	11,379	5.00	27.00	19.96
L.T. Weasel	92	2.00	5.00	2.10
S.T. Weasel	1,671	1.00	30.00	4.02
Striped Skunk	360	1.00	6.00	3.55
Badger	174	8.00	45.00	13.47
Opossum	151	0.65	45.00	5.80
Fisher Male	357	30.00	60.00	47.69
Fisher Female	193	30.00	50.00	39.59
Marten Male	192	36.60	50.00	42.32
Marten Female	137	40.00	50.00	39.49
Deer Hides	27,589	2.25	6.00	3.95
Bear Hides	29	17.50	50.00	28.79

Table 2. Average price per pelt paid to hunters and trappers in Minnesota, 2002-03 through 2011-12.

Species	Average pelt prices paid hunters and trappers in Minnesota (dollars)									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Muskrat	2.11	2.05	1.9	2.81	\$5.79	2.96	1.85	4.43	5.33	5.86
Mink (female)	6.52	7.23	10.22	10.23	\$13.18	9.05	7.45	8.02	9.33	11.54
Mink (male)	9.55	11.41	11.34	14.29	\$18.04	12.32	9.14	9.37	13.66	14.68
S.T. Weasel	2.63	2.53	2.52	2.6	\$3.58	3.18	3.57	3.02	1.50	4.02
L.T. Weasel	1.94	3.34	3.05	2.56	\$4.35	5	2.21	3.12	2.87	2.10
Raccoon	10.33	11.45	10.49	9.61	\$11.92	14.32	9.34	9.18	10.87	12.57
Striped Skunk	5.81	4.66	3.95	3.77	\$4.46	5.27	7.12	8.62	9.47	3.55
Badger	13.18	14.23	12.94	13.4	\$15.71	13.92	7.70	8.81	10.43	13.47
Opossum	1.22	1.23	1.51	1.4	\$1.52	1.76	1.21	1.30	2.64	5.80
Red Fox	22.08	20.02	17.28	16.96	\$17.68	14.69	11.79	10.85	13.35	22.87
Gray Fox	9.05	13.64	12.58	15	\$22.36	30.09	14.08	11.55	14.64	15.11
Coyote	16.12	18.37	15.24	13.57	\$17.76	13.51	7.12	8.62	9.47	17.99
Bobcat	71.54	95.9	98.99	95.74	\$101.07	93.41	74.74	42.77	71.44	98.18
Beaver (fall-winter)	10.05	12.57	13.62	14.48	\$18.35	14.6	14.63	12.49	11.95	14.29
Beaver (spring)	9.99	11.09	13.8	16.49	\$14.81	17.77	9.36	14.47	14.50	19.96
Otter	61.16	85.33	87.23	88.89	\$42.85	29.49	24.33	35.65	34.53	51.40
Fisher (male)	26.7	27.15	30.02	36.03	\$76.33	63.09	22.27	34.45	38.19	47.69
Fisher (female)	25.44	25.71	27.47	31.46	\$67.82	48.24	37.22	34.90	37.31	39.59
Marten (male)	28	30.09	30.65	37.47	\$74.04	58.72	30.61	26.76	39.80	42.32
Marten (female)	27.3	26.7	27.42	31.53	\$66.09	50.05	28.19	29.95	36.57	39.49
Deer Hides	3.48	5.41	3.95	4.14	\$4.51	3.92	3.53	4.44	4.41	3.95
Bear Hides	40.56	41.55	46.61	39.3	\$43.03	36.57	29.81	43.00	33.38	28.79

