TRAPPING HARVEST STATISTICS

Division of Fish and Wildlife
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2013 TRAPPER HARVEST SURVEY

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INTRODUCTION

The Minnesota Department of Natural Resources (MNDNR) annually conducts a mail survey of licensed trappers. Annual harvest estimates from the survey data are used to help assess and set trapping regulations and season structure. Beginning in 2000, survey cards were sent to all trappers with a valid mailing address.

METHODS

The sampling frame consisted of all individuals with active MNDNR trapping licenses (all types) listed in the Electronic License System (ELS) database in late February 2014. There were 10,224 active trapping licenses in the ELS database, which consisted of 7,815 Resident Regular Trappers, 581 Resident Junior Trappers, 1,310 Resident Senior Trappers, 517 "active" Lifetime Trappers, and 11 Nonresident (MN landowners) license holders. License type was reclassified as "adult" (regular, lifetime, and non-resident) or "youth" for analysis purposes.

The MNDNR Trapper Harvest Survey is a census but the response rate is <100% (mean = 75%, range: 58–84%). Thus, uncertainty in harvest estimates is strictly a function of non-response (missing data) rather than random sampling. However, if non-response (unit and item) is completely random then data from respondents can be treated as a random sample, which is how the Trapper Harvest Survey has been analyzed historically. The critical assumption is that non-response is completely random (e.g., if you repeated the survey, non-respondents would be a random subset of licensed trappers). For consistency with previous analyses, the response data was treated as a random sample.

A postcard survey (Figure 1) was sent to all trapping license holders with a valid mailing address at the close of the license year. Trappers that returned the survey questionnaire within three weeks were marked returned and eliminated from follow-up mailings. A single follow-up mailing was sent to non-respondents.

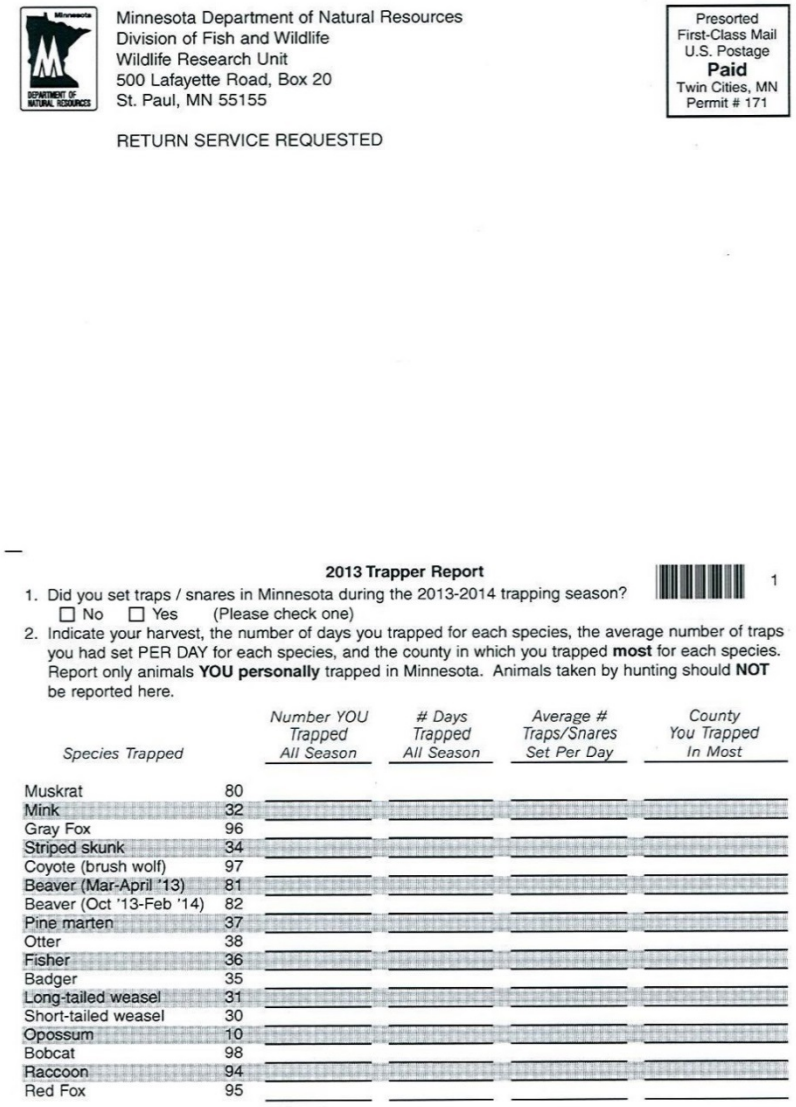
Returned questionnaires were checked for completeness, consistency, and biological practicability. Cards were marked with numeric county codes corresponding to the trapper's written information. Data from each usable card was converted to an electronic database. Duel key-entry and quality control checks were used to minimize transcription errors. Data was tabulated using Viking Data Entry VDE+ software and statistically analyzed using R programming language (ver. 2.9.2; R Development Core Team [RDCT] 2009) to summarize responses.

RESULTS

There were 10,224 licensed trappers (99.2%) with deliverable addresses for the mail survey; 5,851 of these individuals returned useable questionnaires (response rate = 57.7%; Table 1, Figure 2). Seventy five percent of respondents (adults = 74%, youth = 81%) reported setting traps for at least one species (Table 1).

Historic trapper estimates are presented in Table 2 estimated number of trappers; Table 3 estimated take per successful trapper; and Table 4 estimated annual harvest, 2000-01 through 2013-2014.

This project was funded in part by the Wildlife Restoration Program (Pittman-Robertson).



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Division of Fish and Wildlife
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RETURN SERVICE REQUESTED

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Permit # 171

2013 Trapper Report

1

1. Did you set traps / snares in Minnesota during the 2013-2014 trapping season?
   ☐ No ☐ Yes (Please check one)
2. Indicate your harvest, the number of days you trapped for each species, the average number of traps you had set PER DAY for each species, and the county in which you trapped **most** for each species. Report only animals **YOU personally** trapped in Minnesota. Animals taken by hunting should **NOT** be reported here.

Species Trapped		*Number YOU Trapped All Season*	*# Days Trapped All Season*	*Average # Traps/Snares Set Per Day*	*County You Trapped In Most*
Muskrat	80				
Mink	32				
Gray Fox	96				
Striped skunk	34				
Coyote (brush wolf)	97				
Beaver (Mar-April '13)	81				
Beaver (Oct '13-Feb '14)	82				
Pine marten	37				
Otter	38				
Fisher	36				
Badger	35				
Long-tailed weasel	31				
Short-tailed weasel	30				
Opossum	10				
Bobcat	98				
Raccoon	94				
Red Fox	95				

Dear Trapper:

You are being asked as a trapping license buyer to assist us in evaluating the 2013-2014 trapping season (**March 2013-February 2014**). For Spring Beaver, please report only animals taken between March 2013 and April 2013. We need this information to estimate the season's harvest and to help set future furbearer trapping seasons. Similar to past years we are also asking for the **average number of traps you set per day** for each species. If a trap is set for multiple species, count the trap for both species when answering the question. For example, if you ran 20 mink/coon traps each day, enter 20 traps/day for both mink and coon.

YOUR RESPONSE IS NEEDED
EVEN IF YOU DID NOT SET TRAPS THIS YEAR.

Please fill out the attached questionnaire and mail as soon as possible. A reminder will be sent to individuals not returning the questionnaire within three weeks. No envelope or stamp is necessary; just tear along the perforation and drop into a mailbox.

THANK YOU FOR YOUR COOPERATION

Ed Boggess, Director
Division of Fish and Wildlife
Department of Natural Resources

Minnesota Department of Natural Resources
Division of Fish and Wildlife
Wildlife Research Unit
500 Lafayette Road, Box 20
St. Paul, MN 55155

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STATE OF MINNESOTA
395 JOHN IRELAND BLVD
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Figure 1. Trapper survey card 2013.

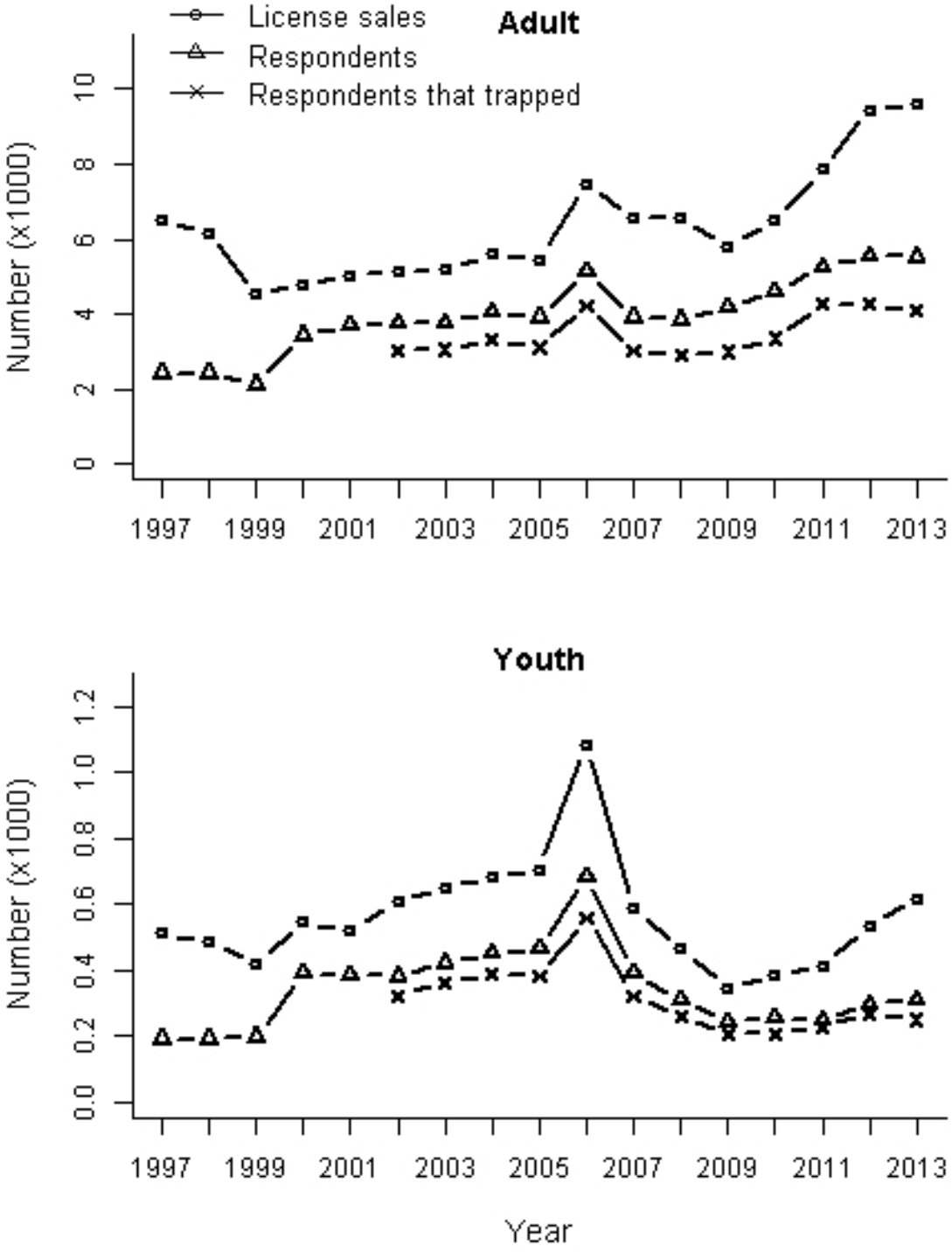

Figure 2. Trapper license sales and mail survey response by age class (Adult vs Youth), 1997-98 through 2013-14.

Table 1. Use of trapper licenses, 2001-02 through 2013-14.

		Returns from mail survey	Projections from license sales
2001-02	Trapped	3,332 (81.5%)	4,510
	Did not trap	754 (18.5%)	1,024
		4,086 (100 %)	5,534 [a]
2002-03	Trapped	3,344 (80.6%)	4,615
	Did not trap	804 (19.4%)	1,111
		4,148 (100 %)	5,726 [a]
2003-04	Trapped	3,412 (81.1%)	4,737
	Did not trap	793 (18.9%)	1,104
		4,205 (100 %)	5,841 [a]
2004-05	Trapped	3,697 (81.9%)	5,136
	Did not trap	815 (18.1%)	1,135
		4,512 (100 %)	6,271 [a]
2005-06	Trapped	3,495 (81.0%)	4,930
	Did not trap	875 (20.0%)	1,233
		4,370 (100 %)	6,163 [a]
2006-07	Trapped	4,782 (81.9%)	7,008
	Did not trap	1,053 (18.1%)	1,549
		5,835 (100 %)	8,557 [a]
2007-08	Trapped	3,322 (77.2%)	5,533
	Did not trap	980 (22.8%)	1,634
		4,302 (100 %)	7,167 [a]
2008-09	Trapped	3,154 (75.7%)	5,319
	Did not trap	1,012 (24.3%)	1,708
		4,166 (100 %)	7,027 [a]
2009-10	Trapped	3,202 (72.7%)	4,467
	Did not trap	1,202 (27.3%)	1,677
		4,404 (100 %)	6,144 [a]
2010-11	Trapped	3,546 (73.2%)	5,032
	Did not trap	1,298 (26.8%)	1,843
		4,844 (100 %)	6,875 [a]
2011-12	Trapped	4,498 (81.5%)	6,748
	Did not trap	1,019 (18.5%)	1,532
		5,517 (100 %)	8,280 [a]
2012-13	Trapped	4,537 (77.6%)	7,747
	Did not trap	1,307 (22.4%)	2,236
		5,844 (100 %)	9,983 [a]
2013-14	Trapped	4,342 (74.6%)	7,627
	Did not trap	1,480 (25.4%)	2,597
		5,822 (100 %)	10,224 [a]

[a] excludes duplicates.

Table 2. Estimated number of trappers of various furbearers, 2000-01 through 2013-14.

	Estimated number of trappers													
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Muskrat	2052	2419	2137	2117	2269	2351	4228	2371	2393	2088	2760	4,320	4,110	3,410
Mink	1867	2117	1945	1917	2085	1864	3033	2168	2044	1541	1847	2,470	3,110	2,780
Short-tailed weasel	318	411	408	473	470	349	864	595	511	417	546	800	690	510
Long-tailed weasel	272	313	312	374	299	211	694	434	345	254	333	560	540	480
Raccoon (Sept -Feb)	1599	2249	2427	2384	2505	2315	3766	3189	3150	2320	2567	4,060	4,680	4,660
Raccoon (Mar -Aug)[a]	343	334	354	338	406	322								
Striped skunk	563	955	1052	1102	1161	1023	1644	1485	1488	949	1130	1,800	1,940	1,610
Eastern spotted skunk	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	135	250	237	292	310	219	347	330	293	206	229	310	360	390
Opossum	484	610	754	934	1037	957	1511	1392	1169	701	645	830	1,100	1,110
Red fox (Sept -Feb)	986	1093	1319	1290	1179	991	1608	1320	1232	1006	1068	1,900	2,240	2,080
Red fox (Mar -Aug)[a]	89	91	111	113	110	85								
Gray fox	468	277	421	441	451	407	806	654	657	529	555	970	1,180	1,060
Coyote	491	606	813	812	826	857	1379	1203	1141	888	998	1,720	2,360	2,200
Beaver (Oct 13- Feb 14)	1695	2054	1844	1883	2171	1965	2659	2008	1877	1650	1722	2,360	2,620	2,710
Beaver (Mar 13- Apr 13)	1425	1345	1296	1233	1449	1455	1710	1408	1257	1260	1367	1,510	1,810	1,150

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

Table 3. Estimated take per trapper of various furbearers, 2000-01 through 2013-2014.

	Estimated take per successful trapper reporting that species													
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Muskrat	42	42	35	33	32	39	58	32	34	47	65	81	58	39
Mink	12	14	10	9	10	10	9	9	8	9	8	6	6	6
Short-tailed weasel	8	10	7	7	6	6	9	7	7	8	9	9	7	6
Long-tailed weasel	5	7	4	5	3	3	5	5	3	3	5	5	4	4
Raccoon (Sept -Feb)	20	27	25	22	23	21	21	23	23	19	22	24	17	16
Raccoon (Mar Aug)[a]	11	19	12	15	12	11								
Striped skunk	8	8	8	8	8	7	7	7	7	7	7	7	7	6
Eastern spotted skunk	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	2	2	2	2	1	2	1	2	1	2	2	2	2	2
Opossum	11	8	11	12	14	12	14	12	10	7	7	5	6	6
Red fox (Sept -Feb)	6	6	6	5	4	4	4	3	3	3	3	4	3	3
Red fox (Mar -Aug)[a]	4	5	5	6	3	3								
Gray fox	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Coyote	4	4	4	5	4	5	4	4	4	4	4	5	5	5
Beaver (Oct 12-Feb 13)	15	18	13	12	13	13	13	11	11	11	10	11	9	9
Beaver (Mar 12 - Apr 12)	26	31	26	21	26	24	24	19	22	20	21	20	19	10

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

Table 4. Minnesota trapper license sales and estimated annual harvest, 2000-01 through 2013-2014[a]

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Trapper license sales [b]	5,337	5,534	5,725	5,841	6,271	6,163	8,557	7,167	7,027	6,158	6,885	8,280	9,998	10,224
Estimated harvest [c]														
Muskrat	85,555	100,819	75,190	69,131	72,079	91,271	243,360	75,439	80,157	98,524	180,505	352,030	242,120	120,500
Mink	22,590	28,684	19,894	16,716	21,478	18,048	26,084	18,626	16,647	13,207	13,853	15,770	18,460	14,710
Short-tailed weasel	2,586	4,160	2,895	3,519	2,679	2,223	8,145	4,155	3,515	3,128	4,914	7,300	4,500	2,360
Long-tailed weasel	1,354	2,243	1,138	1,781	1,007	651	3,494	2,013	1,118	838	1,732	3,020	2,030	1,410
Raccoon (Oct - Feb)	32,460	60,292	61,221	53,534	56,848	48,966	78,571	73,498	71,893	45,118	57,245	98,240	79,800	70,380
Raccoon (Mar -Aug)[f]	3,702	6,468	4,137	4,933	4,940	3,594								
Striped skunk	4,580	7,168	7,901	8,474	8,704	6,881	10,773	10,811	10,354	6,194	8,023	12,250	12,620	9,430
Eastern spotted skunk [g]	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Badger	205	407	358	552	455	339	461	499	424	316	344	490	570	600
Opossum	5,351	5,127	8,491	11,251	14,313	11,754	20,442	17	11,296	4,963	4,193	4,400	6,780	6,720
Red fox (Oct - Feb)	6,165	6,870	7,851	6,721	4,684	3,528	6,783	4,060	3,500	2,984	3,311	7,250	7,540	5,710
Red fox (Mar -Aug)[f]	357	447	612	635	334	222								
Gray fox	468	525	892	915	898	797	1,703	1,360	1,320	1,084	1,110	2,100	2,550	1,940
Coyote	2,112	2,369	3,641	3,805	3,607	3,915	5,315	5,355	4,532	3,797	4,292	8,780	11,130	9,010
Beaver (Oct 13- Feb 14)	24,802	35,963	23,592	22,801	28,716	26,029	33,966	21,813	21,075	18,178	17,048	26,620	24,590	23,220
Beaver (Mar 13-Apr 13)	37,455	41,829	33,721	26,363	37,861	35,252	41,652	26,286	27,815	25,008	29,118	29,500	34,600	10,110
Registered harvest														
Otter	1,578	2,301	2,145	2,766	3,450	2,846	2,720	1,861	1,938	1,544	1,814	2,294	3,171	2,824
Lynx [g]	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Bobcat [e]	231	250	544	483	631	590	890	702	853	884	1,012	1,711	1,875	1,038
Fisher	1,674	2,119	2,660	2,517	2,552	2,388	3,251	1,682	1,712	1,259	903	1,473	1,293	1,146
Marten	1,629	1,928	2,839	3,214	3,241	2,653	3,788	2,221	1,823	2,073	1,842	2,525	1,472	1,014

[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, 2013 - 10,224 trapping licenses were sold in 2013: 581 (5.7%) were junior licenses, 7,815 (76.4%) were Regular adult licenses, 1,310 (12.8%) were Senior licenses, 517 (5.1%) were Lifetime licenses, and 11 (<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 2013-2014 HUNTING AND TRAPPING SEASON

Jason Abraham, Wildlife Season Setting/Furbearer Specialist
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 2014, questionnaires were mailed to the 54 licensed fur buyers in Minnesota. The survey asked them to report the number and type of fur purchased from Minnesota trappers and hunters in 2013-14 and the "average price" paid to those hunters and trappers based on all fur purchased. A total of 34 usable surveys were received, for a return rate of 63 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 2013-14 was $795,863.44, a 50 percent decrease from 2012-2013.

Table 1. Minnesota fur prices as reported by licensed fur dealers, 2013-14.

Species	Number Pelts	Minimum Price	Maximum Price	Weighted Mean
Muskrat	16,443	5.00	10.50	8.72
Mink Female	1,207	5.00	22.00	13.72
Mink male	1,329	10.00	24.00	18.11
Raccoon	19,818	9.00	28.00	16.58
Red Fox	860	15.00	50.00	30.90
Gray Fox	171	10.00	25.25	21.27
Coyote	3,487	0.00	40.00	21.30
Bobcat	48	65.00	133.00	88.63
River Otter	201	20.00	80.00	61.32
Beaver 10-12	2,153	8.00	20.00	16.52
Beaver 3-4	2,329	8.00	17.75	14.77
L.T. Weasel	0	0.00	0.00	0.00
S.T. Weasel	165	1.00	5.00	2.35
Striped Skunk	148	2.00	7.00	4.14
Badger	132	7.00	30.00	13.72
Opossum	217	1.00	2.00	1.52
Fisher Male	72	40.00	86.40	73.50
Fisher Female	66	50.00	85.00	67.73
Marten Male	50	50.00	80.00	74.10
Marten Female	32	50.00	80.00	70.94
Deer Hides	11,892	3.00	10.00	6.09
Bear Hides	19	25.00	60.00	42.63

Table 2. Average price per pelt paid to hunters and trappers in Minnesota, 2003-04 through 2013-14.

	Average pelt prices paid hunters and trappers in Minnesota (dollars)										
Species	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Muskrat	2.05	1.9	2.81	5.79	2.96	1.85	4.43	5.33	5.86	7.91	8.72
Mink (female)	7.23	10.22	10.23	13.18	9.05	7.45	8.02	9.33	11.54	17.53	13.72
Mink (male)	11.41	11.34	14.29	18.04	12.32	9.14	9.37	13.66	14.68	18.27	18.11
S.T. Weasel	2.53	2.52	2.6	3.58	3.18	3.57	3.02	1.50	2.10	2.51	0.00
L.T. Weasel	3.34	3.05	2.56	4.35	5	2.21	3.12	2.87	4.02	4.10	2.35
Raccoon	11.45	10.49	9.61	11.92	14.32	9.34	9.18	10.87	12.57	16.60	16.58
Striped Skunk	4.66	3.95	3.77	4.46	5.27	2.56	3.66	3.29	3.55	5.00	4.14
Badger	14.23	12.94	13.4	15.71	13.92	7.70	8.81	10.43	13.47	14.54	13.72
Opossum	1.23	1.51	1.4	1.52	1.76	1.21	1.30	2.64	5.80	1.52	1.52
Red Fox	20.02	17.28	16.96	17.68	14.69	11.79	10.85	13.35	22.87	33.52	30.90
Gray Fox	13.64	12.58	15	22.36	30.09	14.08	11.55	14.64	15.11	19.20	21.27
Coyote	18.37	15.24	13.57	17.76	13.51	7.12	8.62	9.47	17.99	22.04	21.30
Bobcat	95.9	98.99	95.74	101.07	93.41	74.74	42.77	71.44	98.18	144.79	88.63
Beaver (fall-winter)	12.57	13.62	14.48	18.35	14.6	14.63	12.49	11.95	14.29	18.47	16.52
Beaver (spring)	11.09	13.8	16.49	14.81	17.77	9.36	14.47	14.50	19.96	12.80	14.77
Otter	85.33	87.23	88.89	42.85	29.49	24.33	35.65	34.53	51.40	72.12	61.32
Fisher (male)	27.15	30.02	36.03	76.33	63.09	22.27	34.45	38.19	47.69	62.38	61.32
Fisher (female)	25.71	27.47	31.46	67.82	48.24	37.22	34.90	37.31	39.59	63.02	67.73
Marten (male)	30.09	30.65	37.47	74.04	58.72	30.61	26.76	39.80	42.32	56.57	74.10
Marten (female)	26.7	27.42	31.53	66.09	50.05	28.19	29.95	36.57	39.49	54.29	70.94
Deer Hides	5.41	3.95	4.14	4.51	3.92	3.53	4.44	4.41	3.95	5.18	6.09
Bear Hides	41.55	46.61	39.3	43.03	36.57	29.81	43.00	33.38	28.79	30.28	42.63