FURBEARER PROGRAM

STATEWIDE HARVEST & MANAGEMENT REPORT 2013-2014

MONTANA

Montana Fish, Wildlife & Parks

WILDLIFE RESTORATION

FURBEARER PROGRAM

2013-14 STATEWIDE

HARVEST AND MANAGEMENT REPORT

PERIOD COVERED: July 2013 – June 2014

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Program Goals

1) Maintain well-distributed and healthy furbearer populations and associated habitats.

2) Provide ecological, recreational, cultural, educational, economic, and scientific benefits of the state's furbearers though sound resource management.

3) Address the social impacts of furbearers on human health, private property, and agricultural values.

Statewide Objectives

1) Monitor population trends and the distribution of each furbearer species.

2) Maintain Montana's viable populations of each species by promoting the conservation and enhancement of furbearer habitats.

3) Address the interest by resident publics for consumptive and non-consumptive uses of the state's furbearer resource.

4) Optimize recreational harvest opportunities through a sustained use management approach under regulatory protections.

5) Minimize animal damage and/or nuisance wildlife problems utilizing Department policies and management practices.

6) Promote trapping practices that minimize the take of non-target species and maximizes the humane harvest of furbearers.

7) Develop a public understanding and acceptance for the basis of the consumptive use of furbearers.

Management Strategies

1) Identify and associate species distribution and population trends with delineated habitats.

2) Investigate species population trends through species/habitat surveys, species occurrence reports, harvest data, and research information.

3) Utilize regulatory mechanisms to provide trapper/hunter participation, harvest data, and biological information.

4) Include furbearer species in land management decisions.

Harvest and Management Activities

1) Population information and harvest data are collected by county and/or trapping district and reported by trapping district and statewide in this report. This method is intended to more closely describe the association between species diversity, distribution, and abundance with identified ecosystems and to use reconcilable legal units in the state. Furbearer species with harvest seasons are beaver, otter, muskrat, mink, marten, fisher, wolverine, bobcat, and swift fox. Furbearers with a closed season are lynx, and are not included in this report. Weasel, skunk and coyote are state classified predators while red fox, raccoon, and badger are nongame species of which limited harvest data is collected so they are included in this report.

2) The annual harvests of otter, marten, fisher, wolverine, bobcat and swift fox are monitored through a statewide reporting, pelt tagging and harvest registration system. Registration is initiated under 24-hour mandatory reporting through an automated telephone call-in system referred to as the Mandatory Reporting Response Entry (MRRE) system. All pelt tag sealing and completion of species harvest registration forms, which are generated in MRRE, are conducted by FWP personnel. Marten, fisher, wolverine and swift fox pelts are tagged under the authority of the state, while otter and bobcat are tagged under oversight of the U.S. Fish & Wildlife Service to meet federal CITES pelt export requirements.

3) Harvest data on the three remaining furbearers (beaver, muskrat, mink) and six fur-producing animals (weasel, skunk, coyote, fox, raccoon, badger) was collected through a mailed trapper harvest survey questionnaire. In addition, the same harvest data is collected on the five tagged/registered furbearers through the same survey questionnaire to specifically measure trapper effort and catch rates. Trapper effort will be used in developing long-term species population trend indices. The trapping and fur harvest survey was mailed to all resident and nonresident trapping license holders. This year a reminder was sent to non-respondents. Expanded estimates of furbearer trapping, hunting, and harvest activities were made from the returned sample. The survey requests information on the estimated number of species harvested by county and trapping district, harvest method, and harvest effort. Summary harvest statistics and calculated catch rates were generated by a software package through FWP's Research & Technical Services Unit.

4) Mandatory carcass collections are required for fisher and wolverine, and skulls must be surrendered from harvested otter, bobcat and swift fox. Marten skulls have not been required to be turned in since the 2008-09 season, but were collected in prior years. All carcasses and skulls are forwarded to FWP's Wildlife Laboratory in Bozeman for biological analysis to determine specimen age, sex, body condition, food habits, reproductive history, and to collect tissue samples for potential genetic analysis.

5) A Montana fur dealer survey conducted by the state furbearer coordinator has been replaced by checking the North American Fur Auction (NAFA) website after the winter and spring sales in order to obtain average pelt values for each fur-producing species. An increasing number of Montana trappers are shipping directly to NAFA. This information can be used to calculate economic fur value of each species as a predictor of harvest pressure (i.e. higher prices = greater harvest pressure).

6) Annual winter furbearer snow track surveys had been conducted by regional wildlife biologists following a standardized survey protocol and track identification methods in Trapping Districts 1-4 (NW and SW mountainous forest habitats). However, track surveys were discontinued after the 2011-12 winter until a further monitoring evaluation is conducted.

7) Biologists in trapping districts 4-7 are in the process of developing lagomorph prey indices through the use of headlight surveys. The numbers of lagomorphs are counted on established routes three times each survey period. This index to prey availability is utilized to predict bobcat population fluctuations by anticipating changes in annual rabbit production (March surveys) or recruitment levels (September surveys).

8) Department furbearer occurrence/distribution report forms are distributed and collected annually. Reports are completed only by Department personnel from verified reports or personal observations. Accumulated reports provide species occurrence and location data to assist in delineating statewide and trapping district distribution of selected furbearer species (primarily otter, fisher, wolverine, lynx and swift fox).

9) Furbearer research is an ongoing statewide activity that is utilized to address management related issues on a species-specific basis when funding is available.

Statewide Harvest and Management Results

Harvest and management results were analyzed by county and trapping district and reported as a statewide summary. The seven legally defined trapping districts (TDs) and 56 Montana counties are shown in Fig. 1.

License Sales

The 5,957 trapping licenses sold during the 2013-14 season was a 6% decrease from the previous year of 6,299 licenses and about 30% above the 10-year average (Fig. 2). License purchases in the seven regions and at the Helena headquarters are somewhat mixed each year. However, in 2013-14 three regions and Helena had decreased sales from the previous year (Table 1). High furbearer pelt prices, the ability to purchase licenses online, and continued interest in the second gray wolf trapping season with the requirement that wolf trapper's purchase a general trapper license have all contributed to higher sales. Again, this general trend in statewide license sales is apparently continuing through 2013-14 from the lowest license numbers at any time in 1990-91 when 1,736 licenses were sold.

Annual Harvest Summary

Montana's furbearer harvest for the 2013-14 season is presented in Table 2. A 10-year harvest summary for years that species harvest data is available is presented in Table 3. These figures represent the known legal harvest of registered furbearer species and an estimated harvest of the remaining six species based on the trapper harvest survey. Detailed harvest statistic estimates by species, trapping district and county are available in the Trapping and Fur Harvest Reports (K. Podruzny, pers. comm.). During the most recent year, trapper survey questionnaires were returned from approximately 43% of the 5,546 sampled trapper's license holders during the 2013-

14 furbearer season. The total number of animals reported being taken during the 2013-14 season decreased by 27% over the 2012-13 season (Table 3). This decrease may be the result of weather conditions in portions of the state, generally stable populations of most furbearing animal species in areas of the state, and a decline in average pelt prices for some species.

Pelt Prices

Pelt prices generally were stable to declining among the various species during the 2013-14 season, with several species demonstrating decreases in value, particularly beaver, otter, and bobcat, although bobcat prices still remain high (Table 4). Average pelt prices remained very strong in 2013-14 for muskrat and coyote with record or near record high pelt prices for mink and marten, similar to the previous year.

Species Harvest Summary

Statewide species harvest trends by trapping districts and statewide are presented in the Species Harvest Summary section (pages 17 to 54). The statewide harvest of most species was generally stable to decreasing with larger decreases in the beaver and coyote harvests during 2013-14. These changes are variable, however, among the seven trapping districts. Harvest numbers may correspond to species abundance within each habitat type, although other variables, such as trapper effort and daily catch rate, may be more useful indicators to correlate harvest data with population trends. Under this assumption, there are specific implications for habitat and species harvest management opportunities.

Population Monitoring

Results calculated from the trapper harvest survey that reports trapper effort for all species, including the known registered species harvest, provided Catch Per Unit Effort (CPUE = 1 divided by the # of animals harvested x 1,000 trap days) which is used to help monitor population trends (Species Harvest Summary pages 17 to 54). Using estimated catch rates (trap days/catch) from the annual harvest survey continues to be evaluated as a population monitoring parameter. Metrics such as these will be examined further to determine how well they may reflect species population trend. Graphs of the CPUE for species groups, to compare trends among similar species, are presented on pages 53 and 54 in the Species Harvest Summary section.

Results of carcass collections from fisher and wolverine, and skull turn-in from otter and bobcat are shown under each of these species sections in the Species Harvest Summary (pages 17 to 54). The most important aspect of these collections is to extract a tooth for age determination. The graphs illustrate analysis of the biological parameters reported, which are juvenile/adult female ratios, age structure, sex ratios, and median ages of the harvest sample which should represent population parameters. Not all years or the most recent year, including 2013-14, are available for age data during this report period, as processing adult teeth can take 1-2 years for results. Marten skull collections were discontinued beginning with the 2008-09 season, partially because population parameters have remained relatively stable. Fisher and wolverine sample sizes are extremely small, so they do not necessarily represent any population trend. Additional species information from FWP wildlife laboratory analysis will be reported as it becomes available in future reports.

The number of FWP occurrence/distribution reports received showed a consistent trend during the past several years with the majority of reports collected for wolverine and swift fox. Recent reports will to be entered in a locational referenced database, similar to the furbearer harvest database that provides species distribution data. The number of counties in the state for reported swift fox observations continues to increase.

Furbearer Research

Research related to furbearers that were permitted and/or financially supported by FWP or the state furbearer program during the report period includes an ongoing lynx project in northwestern Montana and an otter genetics population connectivity investigation that was initiated during the last report period. The USFS lynx project is continuing, focusing on adult female reproduction and kitten survival. No results are yet available from the otter genetics analysis. Wolverine work conducted from 2002-2010 has been completed and continues to be published in peer review journals (R. Inman, pers. comm.). A bibliography of most furbearer program related research and management to date is listed on pages 55 to 63 in this report.

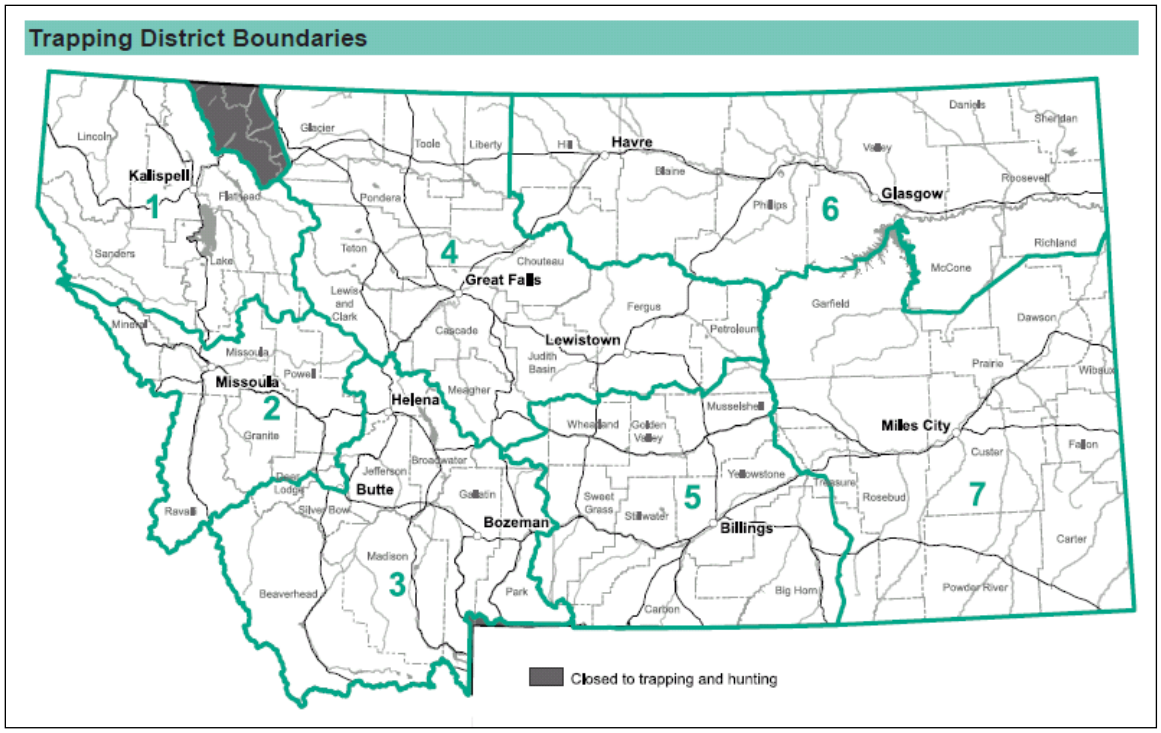

Figure 1. Map of Montana delineating furbearer regulation trapping districts and counties.

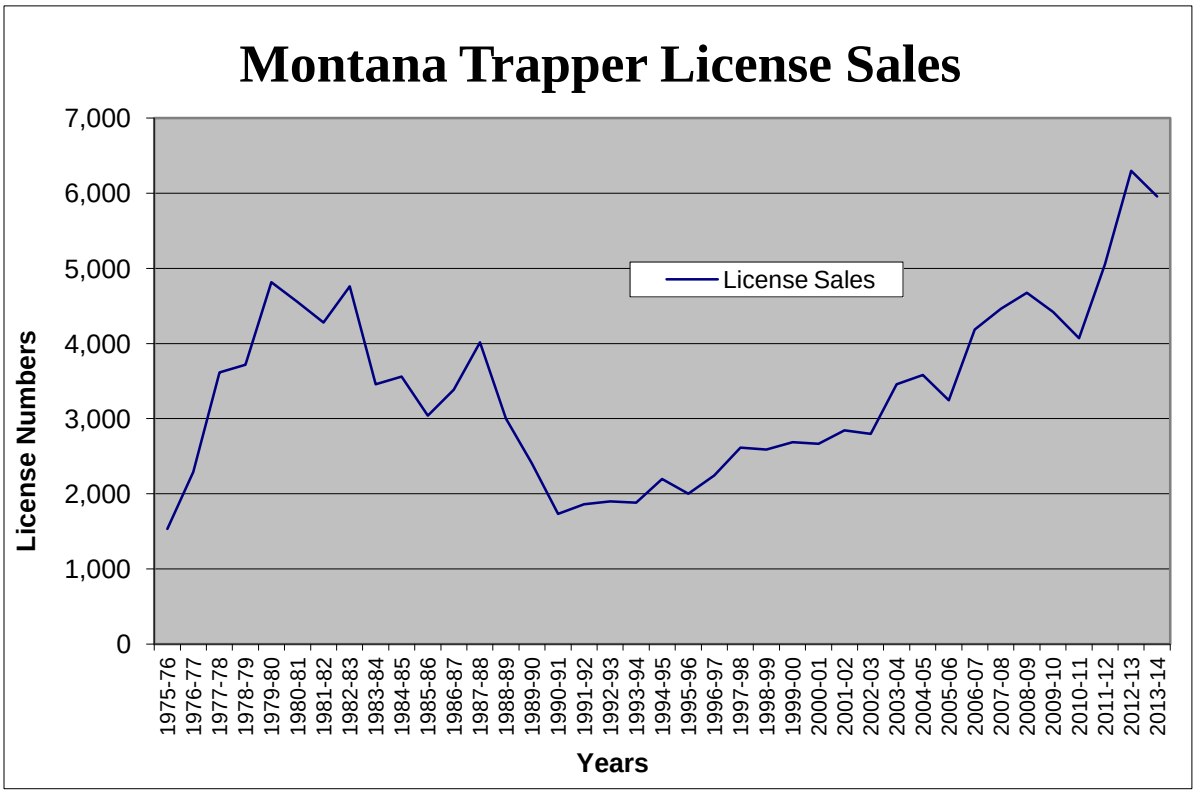

Figure 2. Montana trapper license sales trend, 1975-76 to 2013-14.

Table 1. Montana trapping license sales, 2013-14.

License Type	Kalispell	Missoula	Bozeman	Great Falls	Billings	Glasgow	Miles City	Helena	Statewide
General	859	642	1,036	615	752	209	530	1,140	5,783
Youth	10	5	11	3	7	1	5	6	48
Landowner	7	8	14	26	21	9	23	6	114
Nonresident	0	2	1	4	2	1	2	0	12
Total	876(+2%)	657(-6%)	1,062(-1%)	648(-1%)	782 (0%)	220 (+11%)	560 (+9%)	1,152(-24)	5,957(-6%)

Table 2. Montana furbearer, predator and nongame species harvest summary, 2013-14.

Trapping District	1	2	3	4	5	6	7	Total*
Beaver	445	707	1,368	1,510	591	566	247	5,435
Otter	21	20	37	7	4	0	0	89 (10)
Muskrat	2,256	4,277	6,163	1,549	670	1,011	319	16,248
Mink	70	148	448	169	36	131	22	1,024
Marten	399	709	667	4	49	--	--	1,828
Fisher	2	5	--	--	--	--	--	7 (0)
Wolverine	0	0	0	0	0	--	--	0
Bobcat	302	195	271	173	307	57	334	1,639
Swift Fox	-	-	-	-	-	7	-	7
Weasel	131	133	82	7	7	0	2	363
Skunk	152	70	128	419	465	196	123	1,554
Coyote	583	620	1,237	4,118	2,501	3,568	3,026	15,652
Red Fox	157	407	281	436	329	191	240	2,041
Raccoon	82	157	680	714	2,551	758	1,058	6,001
Badger	17	48	111	581	22	160	94	1,034
Total	4,617	7,496	11,473	9,687	7,532	6,645	5,465	52,922

*Figure may include animals harvested in unknown trapping district and ( ) indicates incidental harvest.

Table 3. Montana furbearer, predator and nongame species 10-year harvest summary, 2004-05 to 2013-14.

Year	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Beaver		8,918	7,421	7,219	7,124	5,795	5,445	6,833	7,086	5,435
Otter	88	93	78	67	60	64	58	68	88	89
Muskrat		21,270	17,014	10,042	10,699	12,754	18,494	27,236	27,731	16,248
Mink		1,306	1,348	1,018	655	584	760	872	1,491	1,024
Marten	1,248	952	856	1,141	844	711	932	1,083	1,721	1,828
Fisher	7	9	7	6	7	6	7	7	7	7
Wolverine	11	11	9	9	4	3	4	2	0	0
Bobcat	2,114	2,201	2,228	2,389	2,428	1,738	1,644	1,975	1,638	1,639
Swift Fox							7	16	21	7
Weasel		243	503	310	175	120	488	342	301	363
Skunk		2,325	1,933	2,599	1,845	2,717	3,975	1,735	1.711	1,554
Coyote		9,412	10,886	9,723	6,969	9,048	8,489	16,398	20,131	15,652
Red Fox		2,473	3,164	1,862	1,696	1,471	1,418	2,469	2,837	2,041
Raccoon		4,540	4,368	4,506	4,052	4,099	2,201	6,409	6,557	6,001
Badger		1,166	1,330	871	643	450	609	1,474	1,292	1,034
TOTAL		54,939	51,145	41,762	37,201	39,110	45,531	66,919	72,591	52,922

Table 4. Average pelt price reported by species, 1990-91 to 2013-14.

Year	Beaver	Otter	Muskrat	Mink	Marten	Fisher	Wolverine	Bobcat	Coyote	Red Fox	Raccoon	Weasel	Skunk	Badger
1990-91	9.52	25.15	0.73	13.84	25.47	35.00	140.00	90.98	13.01	8.45	4.32	0.27	4.05	5.29
1991-92	11.81	17.50	1.30	20.50	25.58	40.00	130.00	87.00	23.95	22.50	8.28	2.25	4.25	7.65
1992-93	8.02	39.76	1.18	10.21	17.24	35.00	135.00	85.37	22.18	11.17	10.68	3.50	4.52	8.38
1993-94	12.35	33.30	1.54	10.02	21.74	32.74	147.80	90.43	15.78	10.68	10.10	2.00	3.01	6.82
1994-95	14.95	30.00	1.67	9.31	15.00			81.75	20.61	15.33	9.30	2.66	3.40	11.87
1995-96	16.13	35.95	2.82	9.16	19.17		200.00	75.42	19.46	18.58	10.97	1.75	6.15	10.00
1996-97	23.59	30.98	3.83	14.48	25.01			124.05	24.68	17.74	15.26	1.83	3.86	11.19
1997-98	21.18	20.00	1.94	9.54	17.25			95.25	17.15	12.72	14.67	1.00	2.85	11.73
1998-99								85.50						
1999-00					19.33			98.67	22.06					
2000-01	15.98	59.17	1.71	8.37	19.95	28.62	212.94	106.05	18.93	16.24	10.02	1.50	3.73	15.98
2001-02	12.40	47.93	2.07	10.05	18.70	25.12	225.00	135.25	23.70	22.65	19.30	2.00	5.00	18.50
2002-03	14.00	75.00	2.10	10.50	19.50	25.00	225.00	203.00	30.70	24.00	11.00	3.00	7.00	21.50
2003-04	14.50	90.00	2.15	11.00	20.50	28.10	275.00	280.25	28.50	20.00	11.50	3.00	5.50	23.00
2004-05	15.25	94.00	2.25	11.50	19.50	28.25	275.00	325.00	30.70	21.50	11.00	3.00	7.00	23.50
2005-06	20.50	100.00	3.50	15.00	45.50	35.00	300.00	345.00	38.50	25.00	11.50	3.00	6.50	27.50
2006-07	23.49	80.00	3.20	12.88	61.57	74.31	217.85	257.33	43.36	20.84	22.05	4.96	4.04	27.57
2007-08	24.80	40.91	3.23	15.22	77.29	87.51	280.35	449.45	37.90	22.49	33.22	5.69	5.27	42.60
2008-09	25.21	30.85	2.55	11.53	37.58	42.83	254.67	281.35	30.70	21.59	17.86	4.02	2.32	24.80
2009-10	16.74	51.10	4.23	17.39	47.76	50.08	211.42	346.54	35.29	22.34	18.02	4.07	2.34	72.56
2010-11	16.57	57.63	6.66	17.48	61.98	47.58	253.15	411.84	73.16	24.37	18.50	3.13	2.11	24.12
2011-12	38.22	102.29	10.19	23.14	55.94	74.99	319.67	426.31	77.30	57.49	19.45	3.16	7.30	38.61
2012-13	30.91	112.58	11.51	20.05	84.70	145.30	235.74	589.08	93.98	65.78	27.56	3.13	4.26	25.45
2013-14	22.50	65.46	11.41	21.10	85.92	104.52	232.43	393.49	90.67	47.29	21.61	3.20	4.26	24.38

BEAVER

The statewide beaver harvest has been relatively stable over the past several years, and after an increase in 2011-12 and again in 2012-13, harvest numbers in 2013-14 declined back to the pre-2011 level, and continue to remain at a lower level from the most recent peak harvests in the late 1990s (Fig.3). The estimated 2013-14 harvest of 5,435 beaver is 23% below the 10-year average annual harvest which corresponds to reported below average pelt prices (Table 5).

Examining the trend in CPUE it appears harvest effort continues to decrease during the 2012-13 and 2013-14 seasons after a slightly increasing trend in previous years, indicating that less beaver are being taken per unit of effort (Fig. 4). Population monitoring activities for beaver are based completely on reported trapper harvest survey data, with the CPUE considered to reflect a relative population trend, which could be considered as a stable to decreasing trend since 2007-08. A comparison of CPUE for beaver with the other semi-aquatic species is shown in Fig. 47.

Generally, higher pelt prices will lead to more trapper effort, as reflected in the CPUE during 2011-12 for beaver and an increase in harvest numbers, particularly in certain portions of the state, however that trend began to decline in 2012-13 and continued through 2013-14. Habitat conditions may also be influencing beaver numbers by expanding water areas and riparian tributaries as a result of more recent good spring moisture conditions, which could lead to less damage control complaints, at least in some regional areas of the state, particularly western and central Montana.

Table 5. Beaver harvest, pelt price, and quota level if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	823	1173	2795	2637	2164	1847	248	11699	14.95	
1995-96	679	846	1854	2118	2127	711	285	8620	16.13	
1996-97	626	1118	2961	5681	3453	1590	1122	16550	23.59	
1997-98	698	1194	4460	3005	2227	972	959	13515	21.18	
1998-99	510	1045	3243	3942	1900	718	276	11634		
1999-00	908	1298	2821	2966	1961	2265	587	12805		
2000-01	399	1095	2623	1756	2528	407	247	9056	15.98	
2001-02	499	1394	3242	2953	1266	1273	460	11156	12.41	
2002-03	685	1071	2296	2040	1201	777	399	8475	14.01	
2003-04	424	1485	2336	2074	2175	477	389	9361	14.51	
2004-05									15.25	
2005-06	767	628	2852	1970	856	1626	219	8918	20.51	
2006-07	479	944	2067	1450	1509	661	310	7421	23.49	
2007-08	209	812	1409	788	698	994	313	7219	24.81	
2008-09	415	513	2015	1199	618	460	107	7124	25.21	
2009-10	466	836	1021	1034	437	233	295	5795	16.74	
2010-11	315	825	963	1356	709	16	267	5445	16.57	
2011-12	357	1225	1805	1931	567	696	252	6833	38.22	
2012-13	653	1104	1931	1711	835	532	309	7085	30.91	
2013-14	445	707	1368	1510	591	566	247	5435	22.50	

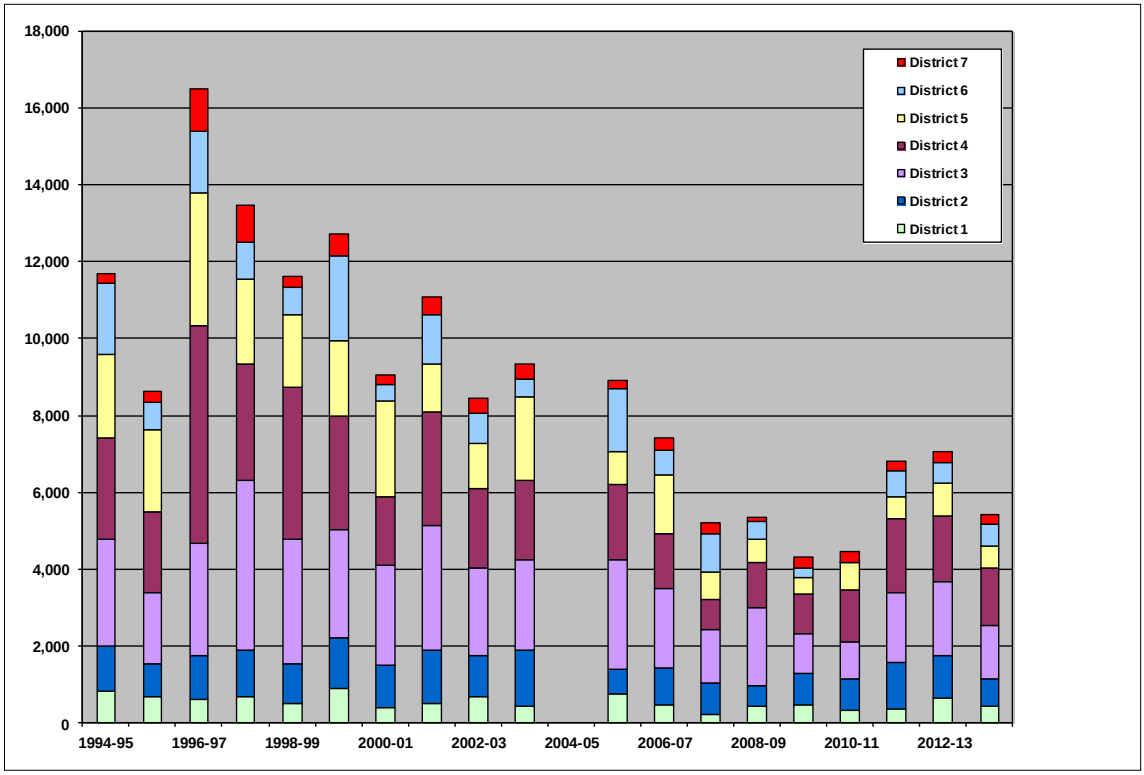

Figure 3. Statewide beaver harvest by trapping district, 1994-95 to 2013-14.

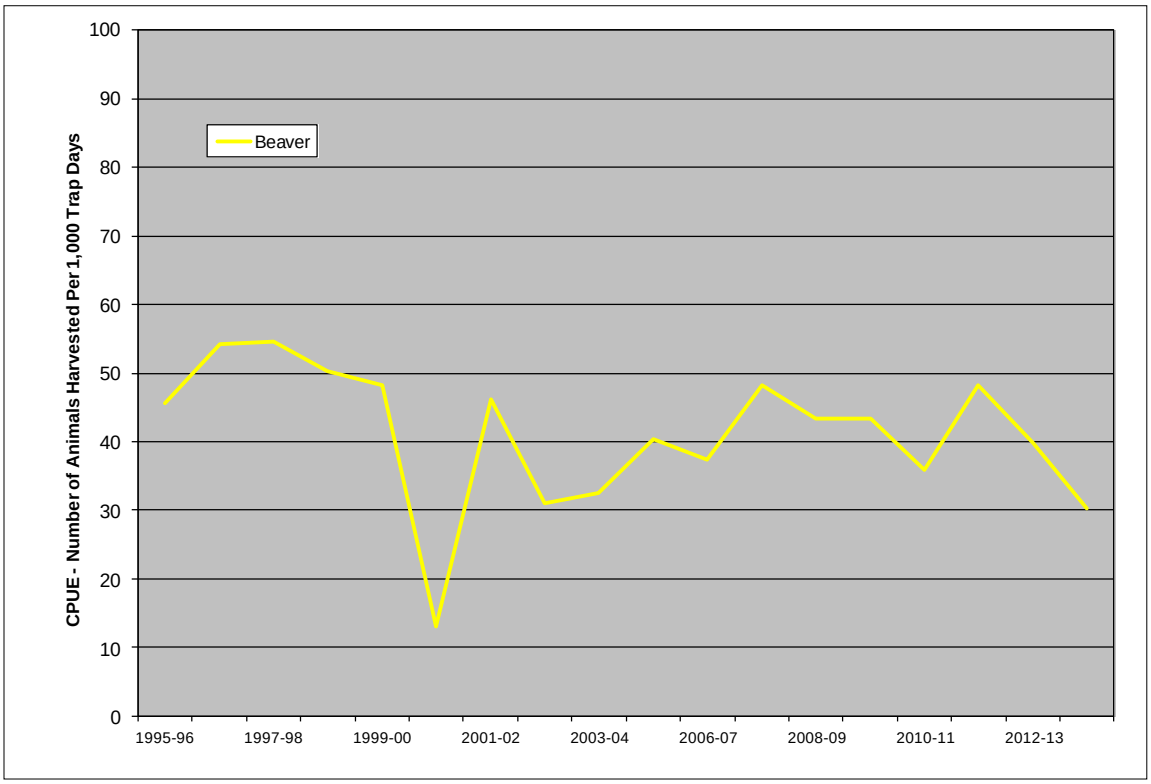

Figure 4. Statewide trend in beaver harvest from CPUE, 1995-96 to 2013-14.

OTTER

Otter are one of five furbearers that are required to be reported, registered and pelt tagged so that the actual number of harvested animals is known. The 2013-14 harvest of 89 otters is about 15% above the 10-year average of 75 otters (Table 6). The otter harvest has always been managed through a trapper limit and since the 2002-03 season, also under TD quotas. Also in 2002-03 the otter limit was increased from one to two per trapper within the TD quota structure. These changes were made in response to healthy otter populations, to reduce surrendered incidental take in beaver sets, and more interest by trappers as pelt prices were increasing at that time. Quotas are now used as a harvest management tool to maintain well distributed and healthy otter populations, while the trapper limit provides more opportunity and flexibility to harvest otter by the trapping community. The total quota for the state has increased from 84 in 2002-03 to 95 in 2007-08, at which level it has remained (Table 6). The statewide otter harvest increased with pelt prices until a peak price and corresponding harvest occurred during the 2005-06 season. Harvest then declined through the 2011-12 season, but has since increased in 2012-13 and 2013-14, probably a result of higher pelt prices prior to 3013-14. However, the long-term harvest level and proportion of the harvest by TD has remained relatively stable (Fig. 5).

The statewide trend in otter harvest CPUE has been relatively stable, however an increase occurred in 2012-13 indicating less effort per otter harvested which may suggest an increasing otter population, however during 2013-14 the CPUE declined (Fig. 6). A comparison of otter CPUE with the other semi-aquatic species is presented in Fig. 47. Population monitoring for otter consists of the collection and analysis of biological data from the harvest sample through mandatory carcass turn-in from trappers through the 2012-13 season. Starting with the 2012-13 season, only otter skulls are being collected. For the report period, however, age data is not yet available from the 2013-14 season so trends in population parameters of juveniles per adult female, age structure, sex ratios, and median ages shown in Fig. 7 to 10 are through 2012-13, but indicate a strong juvenile segment at least on a statewide basis.

Table 6. Otter harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	23	7	23	4	5	0	0	62	30.01	
1995-96	17	8	22	6	7	0	1	61	35.95	
1996-97	17	8	27	7	6	0	0	65	30.98	
1997-98	15	8	41	13	7	0	0	84	20.01	
1998-99	17	4	34	9	3	0	0	67		
1999-00	18	9	26	8	3	0	0	64		
2000-01	13	15	18	1	1	0	0	48	59.17	
2001-02	28	23	39	5	1	0	0	96	47.93	
2002-03	21	13	35	8	4	0	1	83	75.01	84
2003-04	19	18	33	8	2	0	0	80	90.01	84
2004-05	25	19	32	8	3	0	1	88	94.01	92
2005-06	20	22	36	8	5	0	2	93	100.01	93
2006-07	21	17	29	6	5	0	0	78	80.01	93
2007-08	24	14	17	5	2	0	1	67	40.91	95
2008-09	21	14	22	0	3	0	0	60	30.85	95
2009-10	21	20	17	8	2	0	0	68	51.10	95
2010-11	20	14	18	4	3	0	0	59	57.63	95
2011-12	22	19	21	3	3	0	0	68	102.29	95
2012-13	26	16	32	8	3	0	0	85	112.58	95
2013-14	21	20	37	7	4	0	0	89	65.46	95

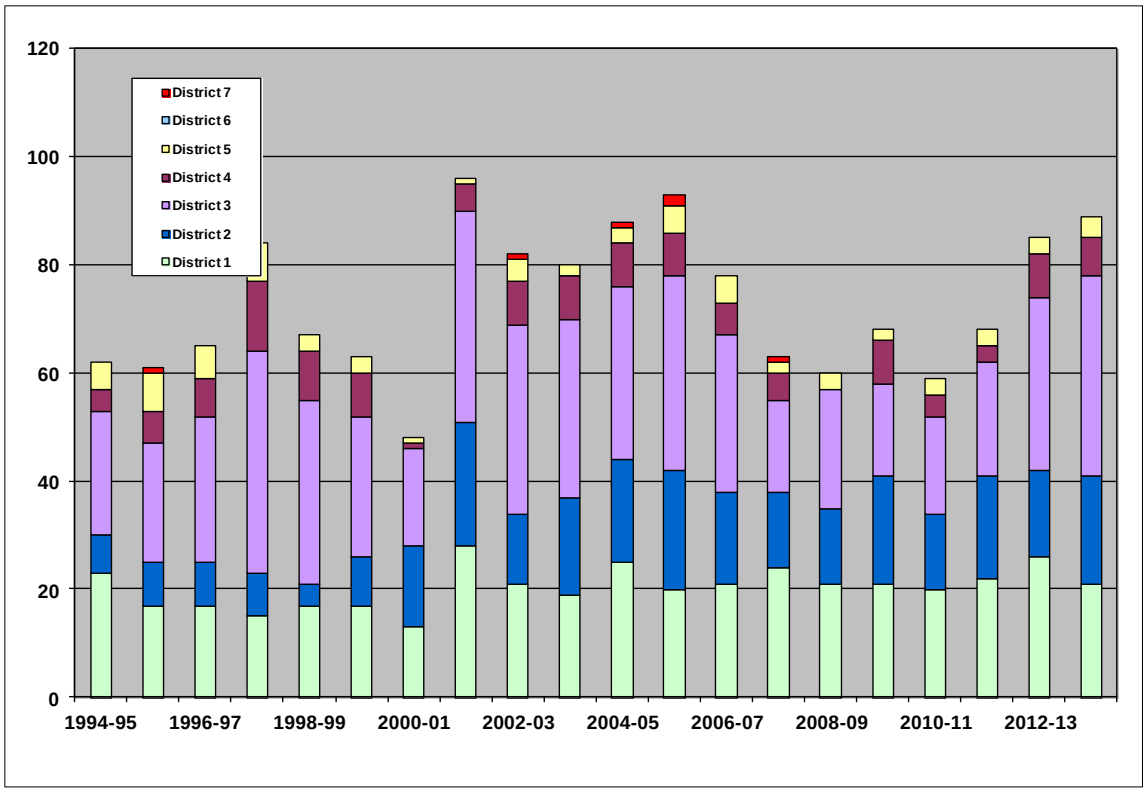

Figure 5. Statewide otter harvest by trapping district, 1994-95 to 2013-14.

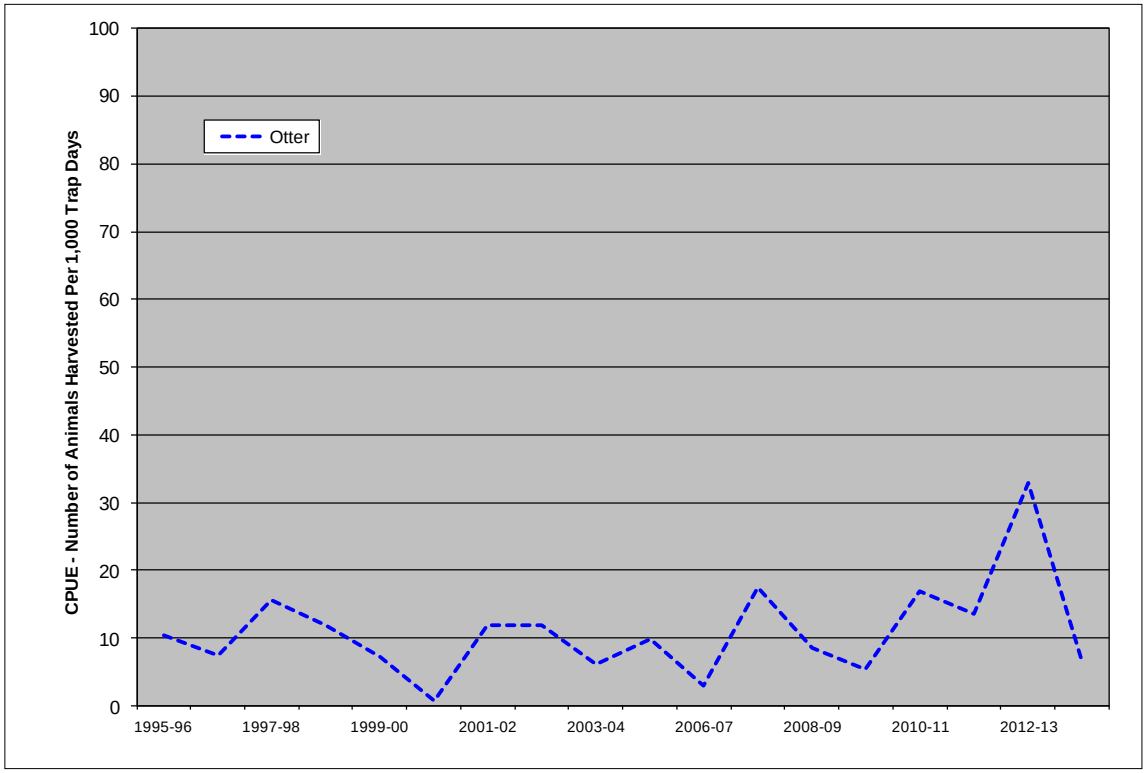

Figure 6. Statewide trend in otter harvest from CPUE, 1995-96 to 2013-14.

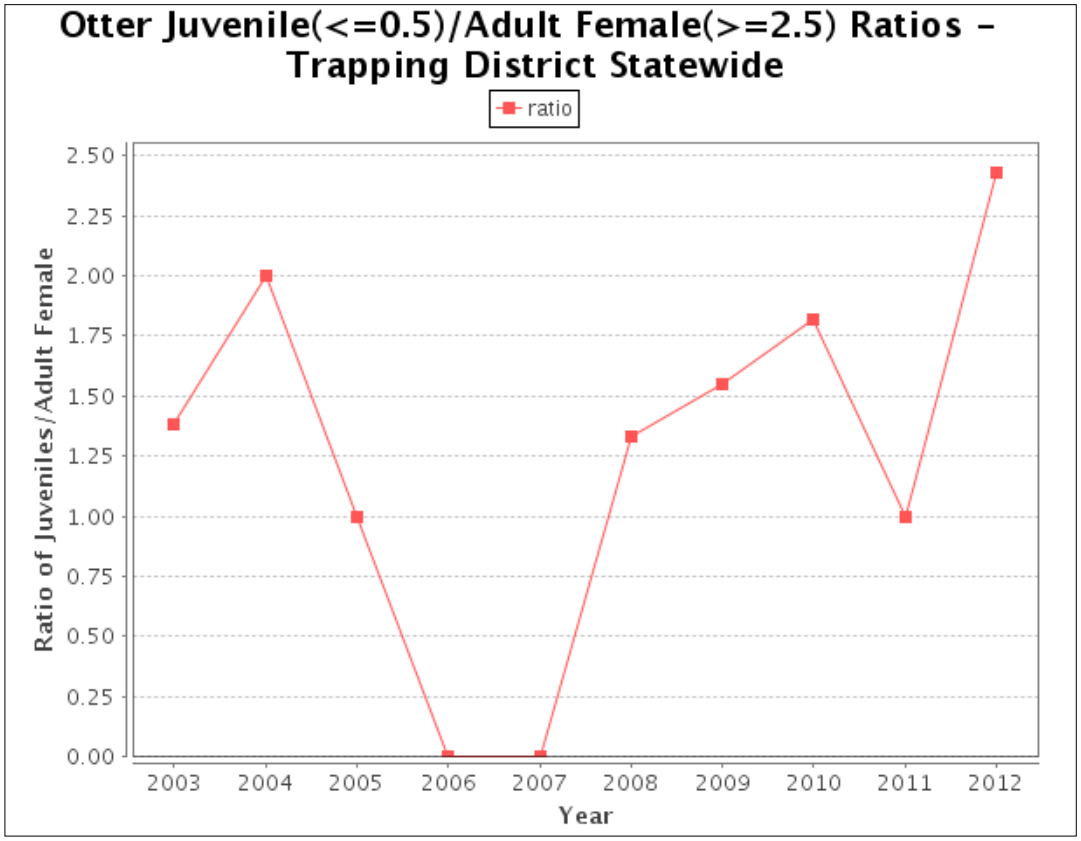

Figure 7. Otter population parameter of juveniles per adult female ratio, 2003-04 to 2012-13.

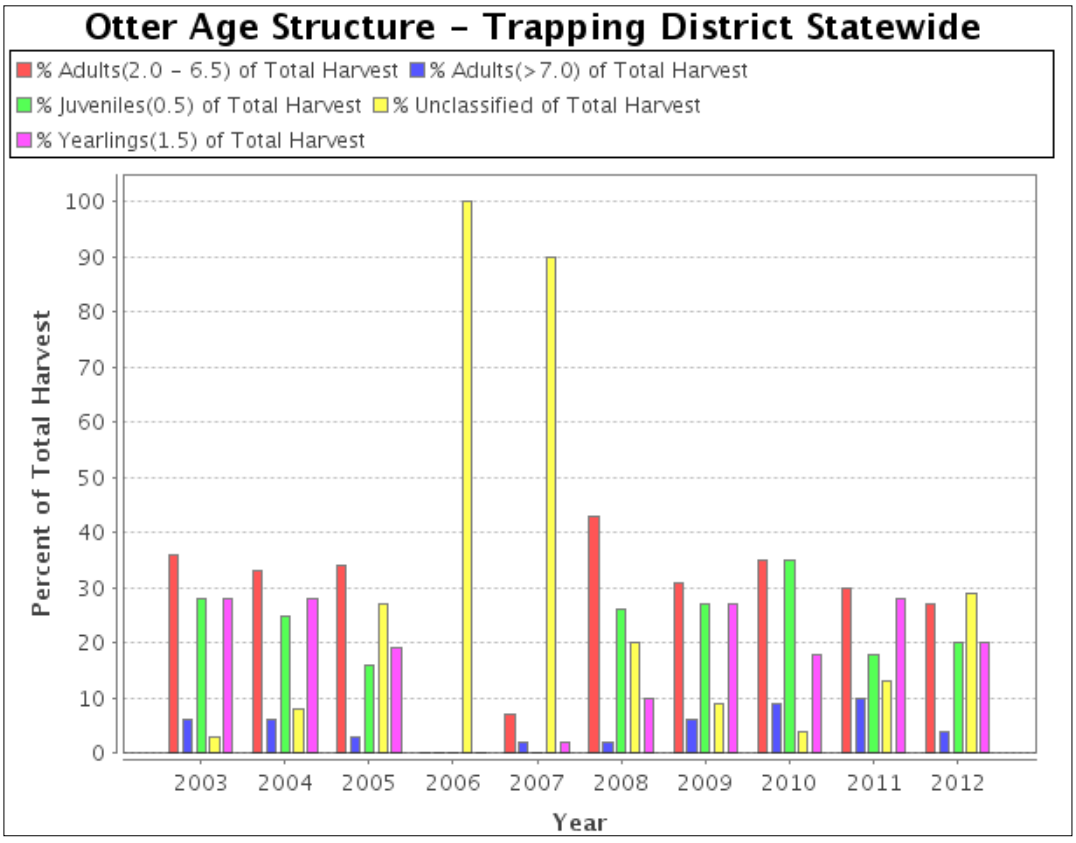

Figure 8. Otter population parameter of age structure, 2003-04 to 2012-13.

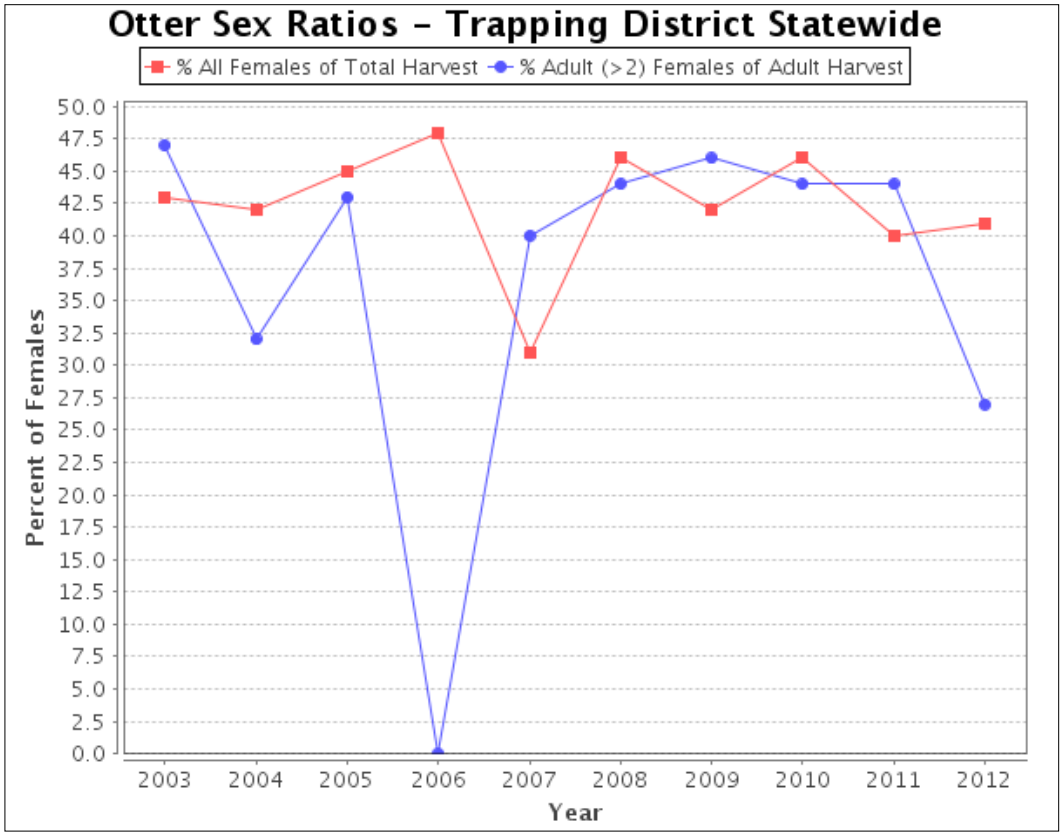

Figure 9. Otter population parameter of sex ratios, 2003-04 to 2012-13

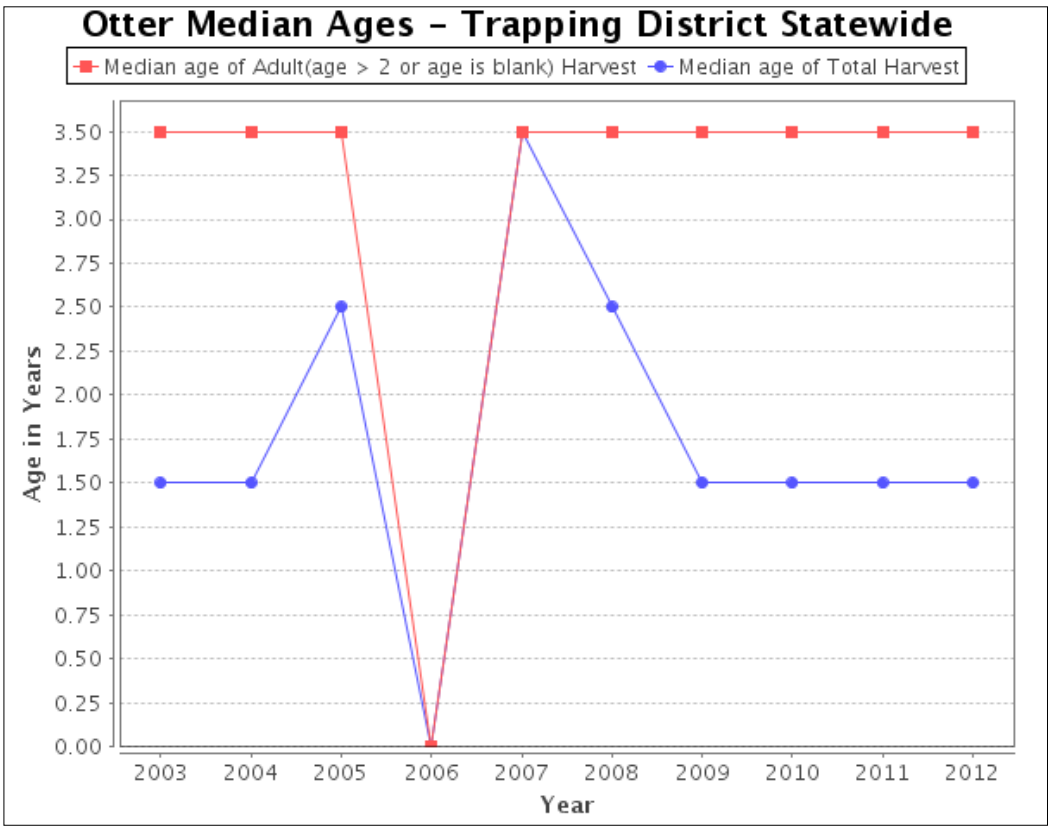

Figure 10. Otter population parameter of median ages, 2003-04 to 2012-13.

MUSKRAT

Although the statewide muskrat harvest has been increasing over the last several years, estimated harvest numbers declined during 2013-14 to 16,248 muskrats from the record high harvest of 27,731 animals in 2012-13 (Table 7). These high harvest numbers during the previous several years was likely influenced by much higher than average pelt prices in the $10.00 to $11.00 range compared to previous year's average pelt price of around $2.00. However, despite an $11.41 average price for 2013-14 the muskrat harvest declined by 41% from the previous year and 6% below the 10-year average harvest of 17,340 animals (Fig. 11) which could indicate a declining population.

Population monitoring activities for muskrat are based completely on trapper harvest survey data, with CPUE from the harvest survey considered to be an indicator of relative population trend, which could be considered as decreasing, with a declining CPUE starting in 2011-12 and through 2013-14 (Fig. 12). Examining this trend it appears catch rates have been decreasing indicating that over the last several years less muskrat are being taken per unit of effort, possibly indicative of much higher harvest numbers and trapping pressure contributing to a declining statewide population (Fig.12). A comparison of CPUE for muskrat with the other semi-aquatic species is shown in Fig. 47.

Table 7. Muskrat harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	1393	4905	4394	2152	925	404	83	14256	1.67	
1995-96	716	4177	3271	1791	1276	181	39	11727	2.82	
1996-97	2980	3992	2732	3712	1799	772	134	16121	3.83	
1997-98	2552	3887	5043	3519	1499	2122	205	18826	1.94	
1998-99	2270	2240	3495	2609	709	811	111	12243		
1999-00	1643	3156	2651	3049	794	763	1191	13247		
2000-01	897	6170	2905	536	2844	129	361	13842	1.71	
2001-02	556	5681	3409	599	596	132	43	11070	2.07	
2002-03	1427	3915	4571	952	308	156	119	11448	2.11	
2003-04	869	3923	5625	864	318	45	270	11915	2.15	
2004-05									2.25	
2005-06	1561	4902	9862	2203	888	1217	637	21270	3.51	
2006-07	1850	4821	5210	2418	1868	728	117	17014	3.21	
2007-08	510	806	1188	761	522	442	146	10042	3.23	
2008-09	485	1131	2037	801	567	0	0	10699	2.55	
2009-10	852	2564	3054	1953	546	404	48	12754	4.23	
2010-11	949	1977	4452	4684	628	822	51	18494	6.66	
2011-12	1740	6304	11057	3180	705	3452	799	27236	10.19	
2012-13	4352	8247	8548	3089	1437	1727	330	27731	11.51	
2013-14	2256	4277	6163	1549	670	1011	319	16248	11.41	

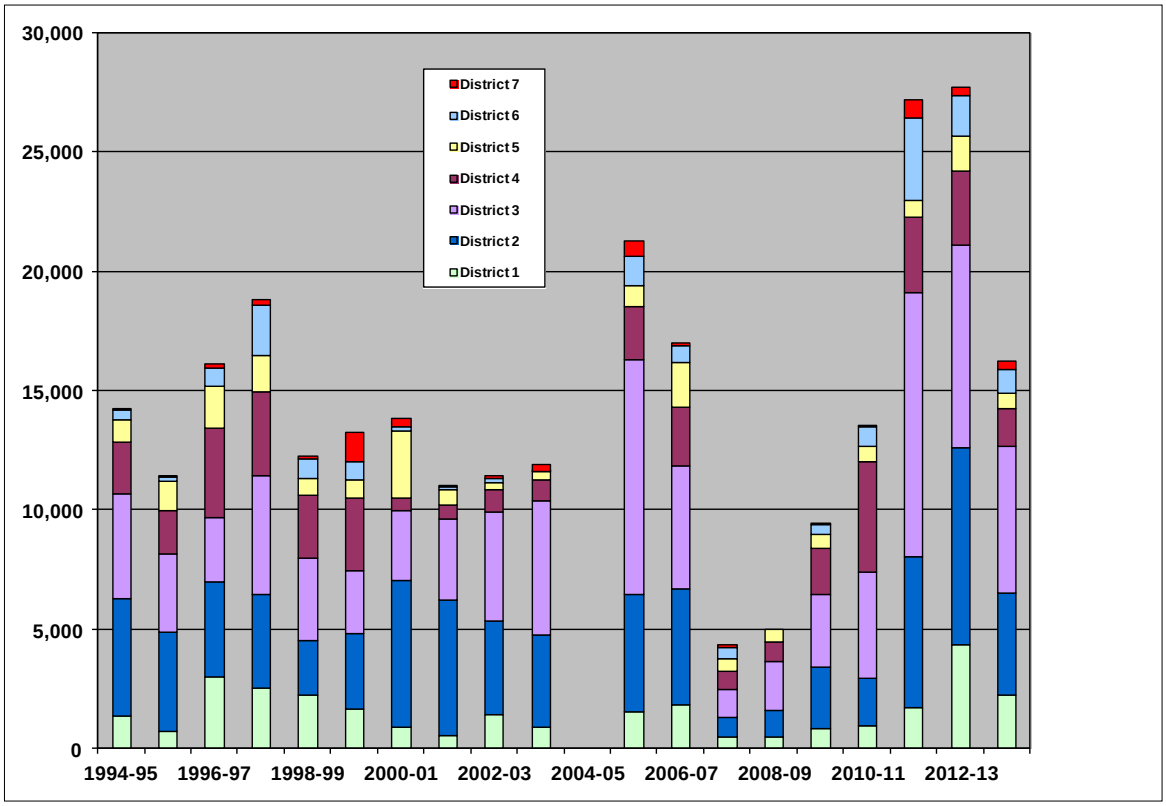

Figure 11. Statewide muskrat harvest by trapping district, 1994-95 to 2013-14.

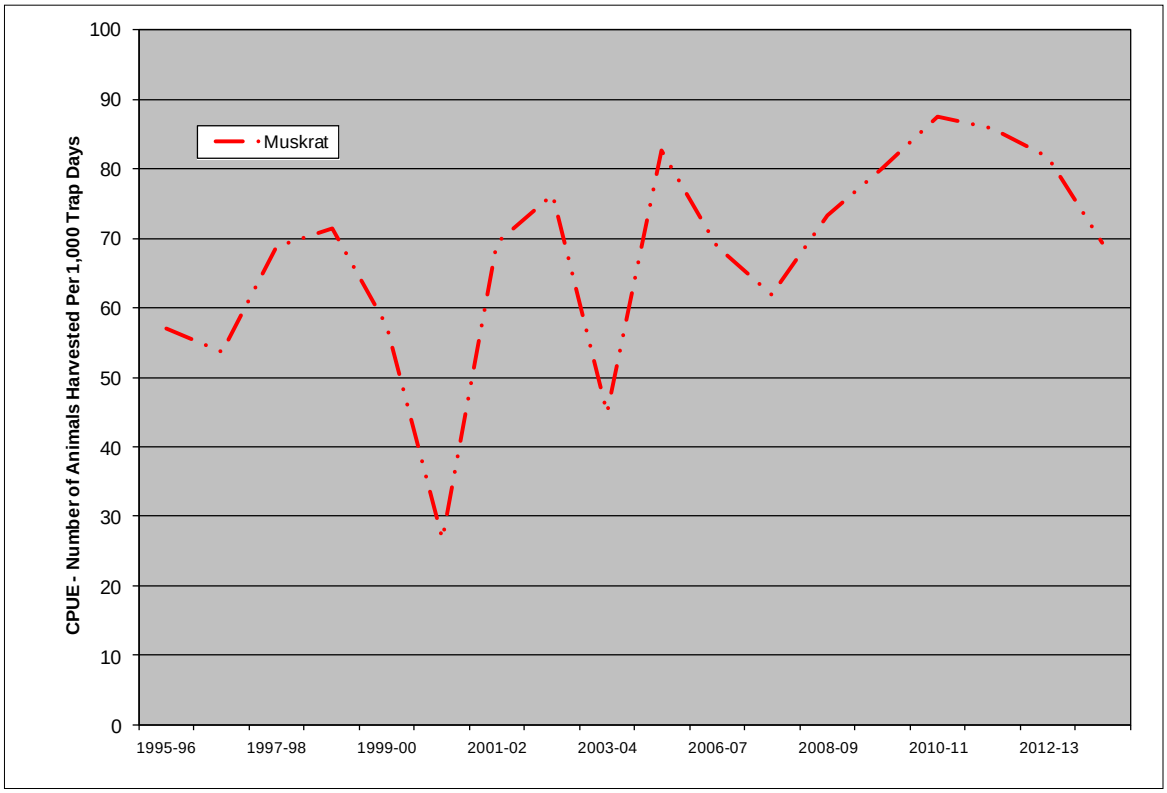

Figure 12. Statewide trend in muskrat harvest from CPUE, 1995-96 to 2013-14.

MINK

The statewide mink harvest has been steadily increasing over the past several years, but declined during the 2013-14 season to an estimated 1,024 animals (Table 8). Mink harvest is considered to be somewhat correlated to interest in muskrat trapping, which appears to be the case with the large decrease in 2013-14 muskrat harvest numbers. The estimated 2013-14 mink harvest was 4% above the 10-year harvest average (Fig. 13), along with above average pelt prices. The average value of mink pelts was the fourth highest level in the 10 year period (Table 8). Mink harvest levels are likely tied to landownership patterns and trapper access to streams and wetlands, and where muskrat can be found on public wetlands.

Population monitoring activities for mink are based completely on trapper harvest survey data, with the CPUE considered to be an indicator of relative population trend, which could be considered as stable, despite the estimated above average harvest during the 2012-13 season. When examining the trend in CPUE for mink, it appears harvest effort has generally remained stable, with some small changes in harvest effort that may be related to a corresponding interest in muskrat trapping, indicating that mink are being harvested at about a similar scale per unit of effort, at least through the 2013-14 season (Fig.14). A comparison of CPUE for mink with the other semi-aquatic species is shown in Fig. 47.

Table 8. Mink harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	187	215	274	234	97	121	17	1145	9.31	
1995-96	140	290	111	126	128	87	34	919	9.16	
1996-97	252	134	339	488	126	280	20	1638	14.48	
1997-98	220	174	381	248	289	133	49	1493	9.54	
1998-99	285	162	309	171	120	27	3	1078		
1999-00	218	183	428	325	38	476	41	1709		
2000-01	95	198	1038	103	57	15	30	1536	8.37	
2001-02	111	300	307	89	61	43	32	959	10.05	
2002-03	92	229	564	94	13	38	40	1071	10.51	
2003-04	43	290	331	71	45	3	25	808	11.01	
2004-05									2.25	
2005-06	62	151	563	92	92	340	6	1306	15.01	
2006-07	94	269	678	129	158	18	3	1348	12.88	
2007-08	122	101	80	51	86	182	98	1018	15.22	
2008-09	62	85	127	20	28	0	0	655	11.53	
2009-10	40	62	118	171	35	13	5	584	17.39	
2010-11	57	154	175	129	27	3	21	760	17.48	
2011-12	53	190	415	102	58	23	29	872	23.14	
2012-13	183	255	486	153	102	298	13	1491	20.05	
2013-14	70	148	448	169	36	131	22	1024	21.10	

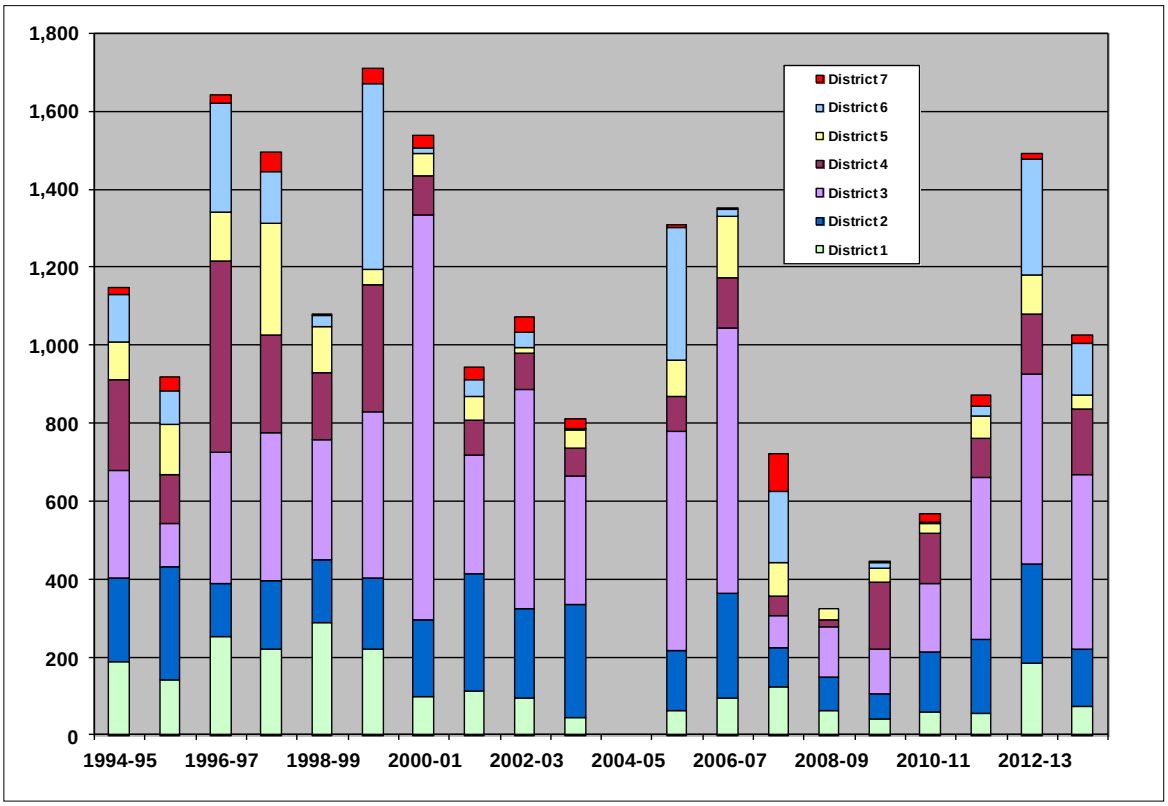

Figure 13. Statewide mink harvest by trapping district, 1994-95 to 2013-14.

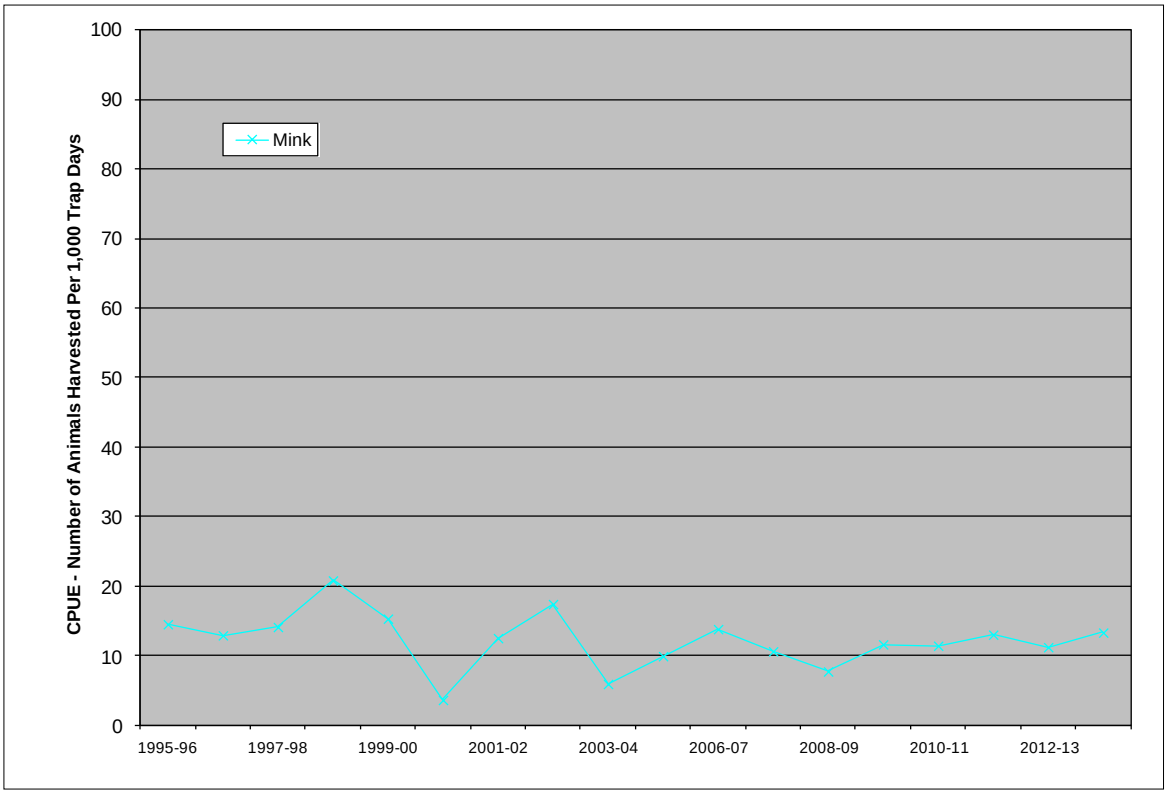

Figure 14. Statewide trend in mink harvest from CPUE, 1995-96 to 2013-14.

MARTEN

Marten are one of the five furbearers that are required to be pelt registered and pelt tagged so that the actual number of harvested animals is known. The statewide marten harvest continued to increase, with an increasing harvest trend during the past several years including 2013-14 (Fig. 15). The 2013-14 harvest of 1,828 marten was 40% above the 10-year average and at the highest harvest level over the past 20 years. The higher harvest in 2013-14 most likely corresponds to a similar above average pelt price value (Table 9). Examining the trend in CPUE it appears harvest effort has remained relatively stable or slightly declined on a statewide basis, indicating less marten are being taken per unit of effort (Fig.16). Also, the 2013-14 distribution of the marten harvest is apparently stronger in TD 2 in the west central part of the state and in TD 3 in southwestern Montana (Fig. 15). Primary marten habitat is exclusively on public forest lands.

Population monitoring for marten previously consisted of analyzing harvest data and using the collection and analysis of biological data from the harvest sample through mandatory skull turn-in from trappers. However, marten skull collections were discontinued beginning with the 2008-09 season because of the difficulty in reconciling individual skulls to male/female categories for classifying age data, therefore this information is no longer available. However, the sex of marten is collected so the 10-year average percentage of females in the harvest is 33% which seems to be remaining constant through 2013-14. The statewide harvest trend for marten using CPUE from the trapper harvest survey appears to indicate a stable to recently declining trend (Fig.16) and a comparison of marten CPUE with the other terrestrial species is presented in Fig. 48.

Table 9. Marten harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	868	315	131	4	5			1323	15.01	
1995-96	433	167	202	0	0			802	19.17	
1996-97	513	172	143	0	2			830	25.01	
1997-98	403	291	192	9	5			900	17.25	
1998-99	473	172	61	3	7			716		
1999-00	313	183	149	1	7			653	19.33	
2000-01	560	326	174	1	3			1064	19.95	
2001-02	359	220	266	0	0			845	18.71	
2002-03	419	241	390	3	0			1053	19.51	
2003-04	459	339	259	2	3			1062	20.51	
2004-05	290	374	560	3	21			1248	19.51	
2005-06	280	265	370	1	36			952	45.51	
2006-07	143	268	418	2	25			856	61.57	
2007-08	245	446	441	0	9			1141	77.29	
2008-09	170	366	282	0	26			844	37.58	
2009-10	99	402	192	0	18			711	47.76	
2010-11	184	363	333	0	52			932	61.98	
2011-12	353	420	308	2	1			1083	55.94	
2012-13	293	656	459	8	27			1443	84.70	
2013-14	399	709	667	4	49			1828	85.92	

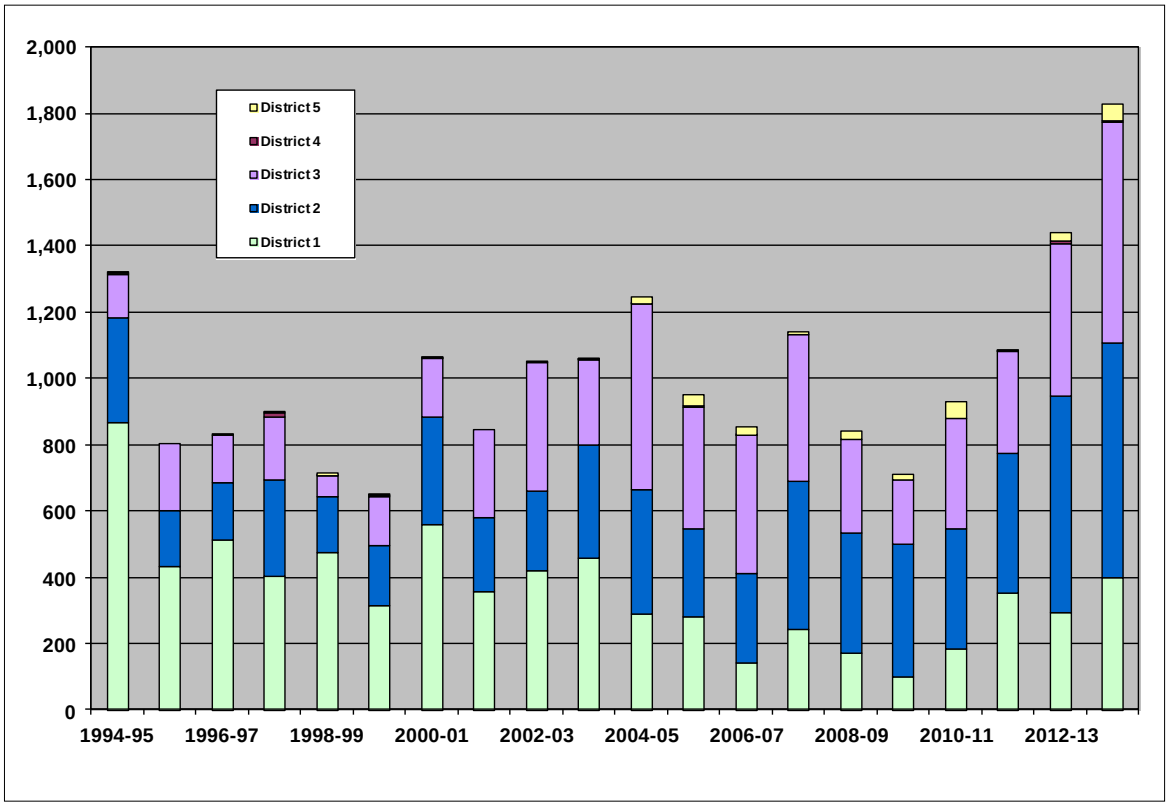

Figure 15. Statewide marten harvest by trapping district, 1994-95 to 2013-14.

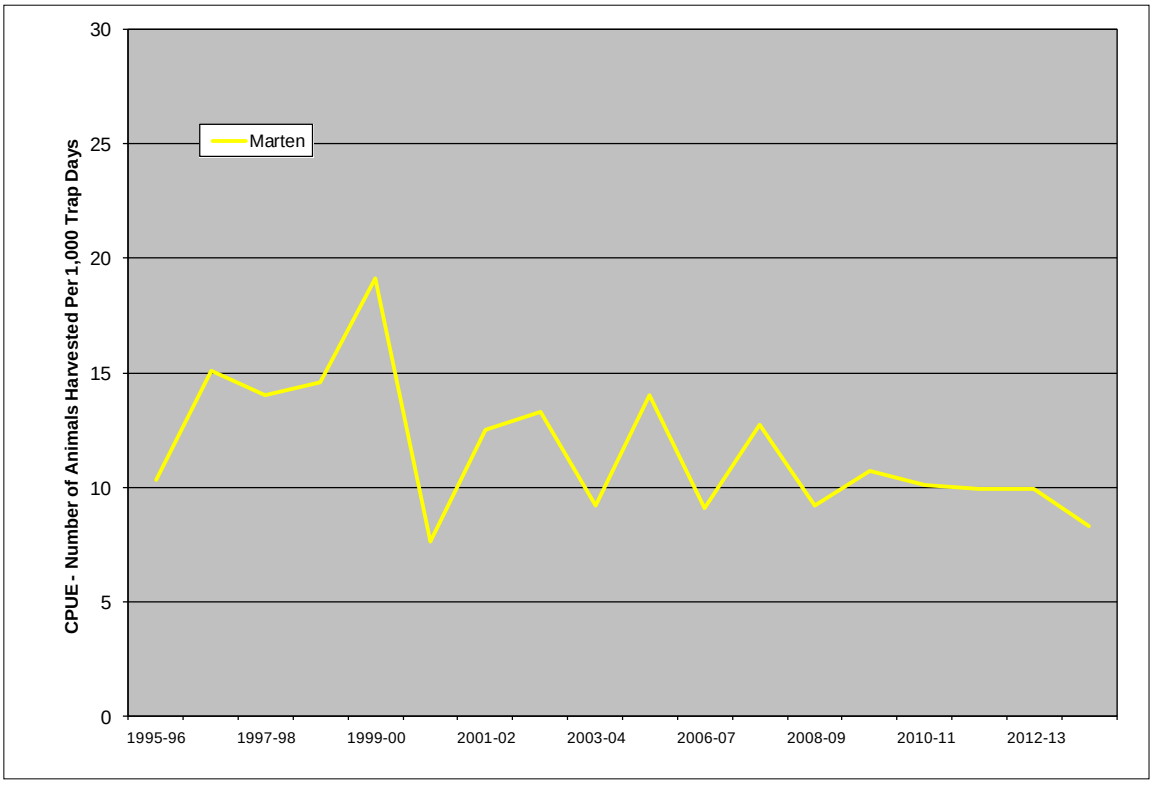

Figure 16. Statewide trend in marten harvest from CPUE, 1995-96 to 2013-14.

FISHER

The fisher harvest has been managed through a trapper limit of one with quotas in TD 1 and 2. Quotas have provided a sustainable trapper harvest that is conservatively matched with maintenance of the current fisher population size and distribution relative to available habitats. A predictive habitat model indicates that moderate to high suitability fisher habitats comprise approximately 6,504 mi^2 in west central and northwestern Montana, with TD 2 having over 50% more high suitability habitat than TD 1. A female sub-quota is also in place of two females to add an additional measure of protection for the reproductive segment of the population, to further insure harvest has no influence on statewide population status. Given fisher distribution relative to habitat availability, fisher habitat capacity appears to be correlated with similar levels of occupancy that is not impacted by a history of highly managed harvest. Fisher are one of the five furbearers that are required to be reported, registered and pelt tagged so the actual number of harvested animals is known. The fisher harvest continues to remain stable under the current quota system (Fig. 17), despite higher pelt prices (Table 10). The 2013-14 harvest of 7 fishers is near the 10-year average harvest.

Population monitoring for fisher consists of analyzing harvest data and using the collection and analysis of biological data from the harvested animals through mandatory carcass turn-in from trappers. The trend in fisher harvest effort using CPUE has been a relatively stable trend (Fig.18). A comparison of fisher CPUE with the other terrestrial species is presented in Fig. 48. Harvested fishers provide an extremely small sample size, so population parameters do not allow a lot of interpretation, and age data is not yet available from the 2013-14 season. However, the small amount of data that is available through 2012-13 appears to show that the population trend from these parameters is about two juveniles per adult female (Fig. 19), a mixed age structure with a good representation of juveniles in most years (Fig. 20), a low female sex ratio in most years (Fig. 21), with a higher than expected median age of adults and expected median age of the total harvest (Fig. 22).

Table 10. Fisher harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	3	5						8		10
1995-96	0	2						2		10
1996-97	2	4						6		7
1997-98	1	6						7		7
1998-99	2	6						8		7
1999-00	0	5						5		7
2000-01	0	7						7	28.62	7
2001-02	2	5						7	25.12	7
2002-03	2	5						7	25.01	7
2003-04	2	6						8	28.11	7
2004-05	0	7						7	28.25	7
2005-06	3	6						9	35.01	7
2006-07	2	5						7	74.31	7
2007-08	1	5						6	87.51	7
2008-09	1	6						7	42.83	7
2009-10	1	5						6	50.08	7
2010-11	1	7						8	47.58	7
2011-12	2	5						7	74.99	7
2012-13	3	3						6	145.30	7
2013-14	2	5						7	104.52	7

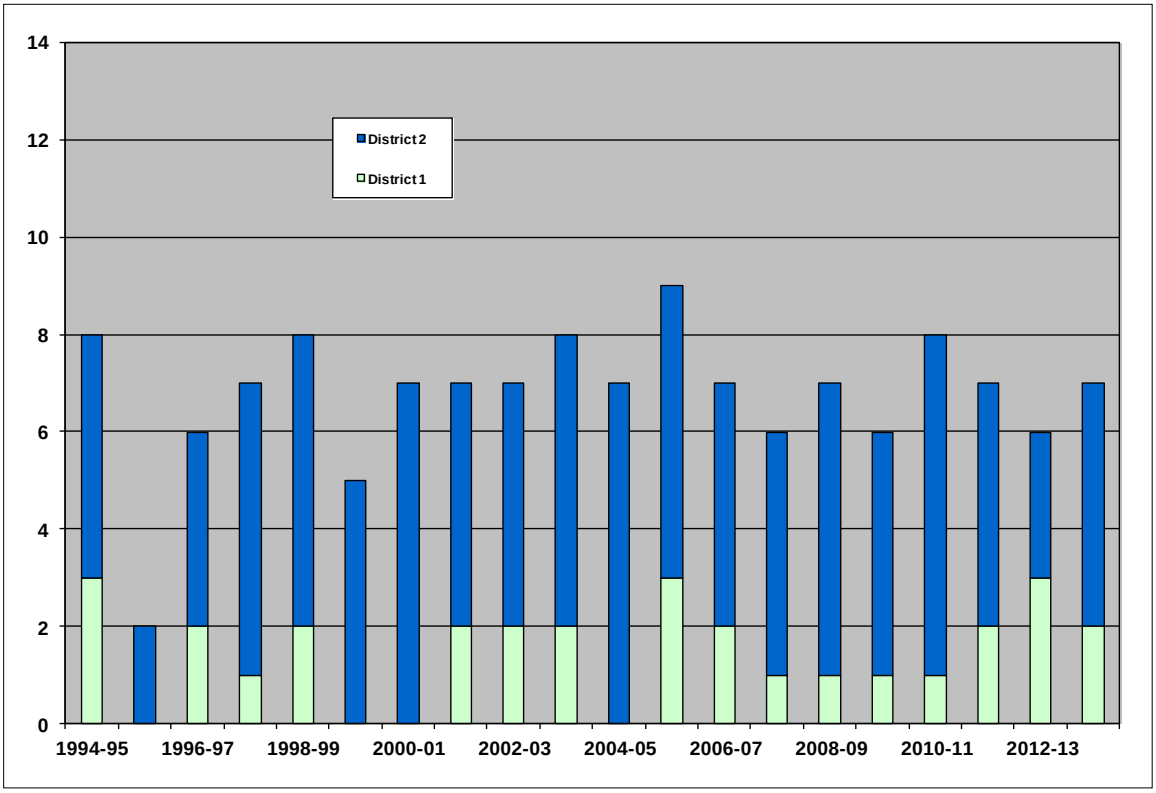

Figure 17. Statewide fisher harvest by trapping district, 1994-95 to 2013-14.

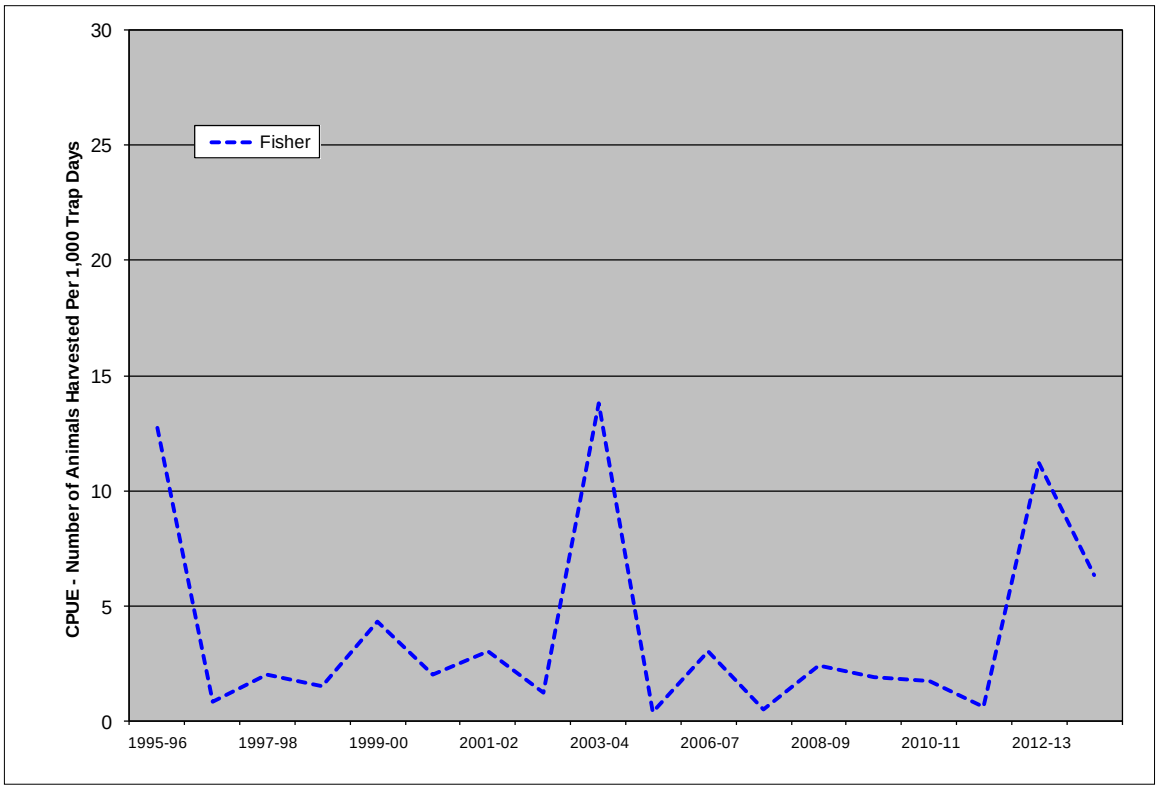

Figure 18. Statewide trend in fisher harvest from CPUE, 1995-96 to 2013-14.

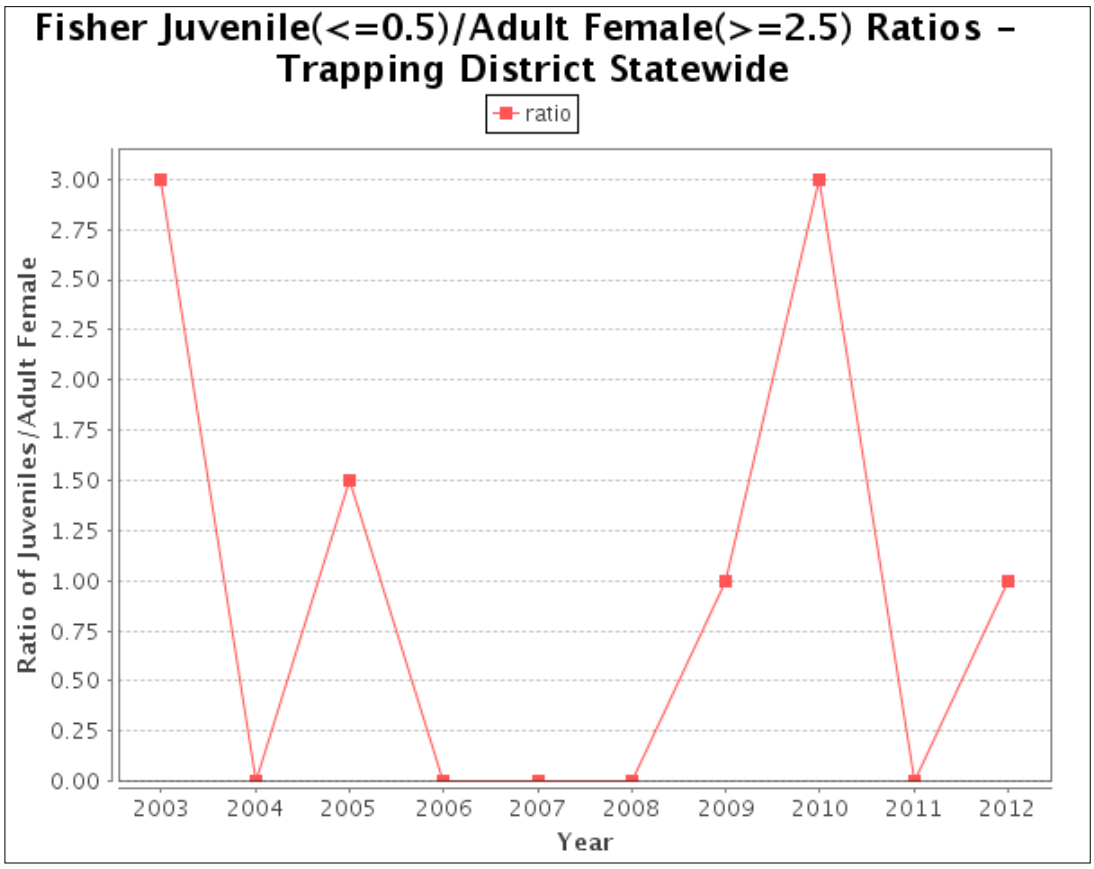

Figure 19. Fisher population parameters of juveniles per adult female ratio, 2003-04 to 2012-13.

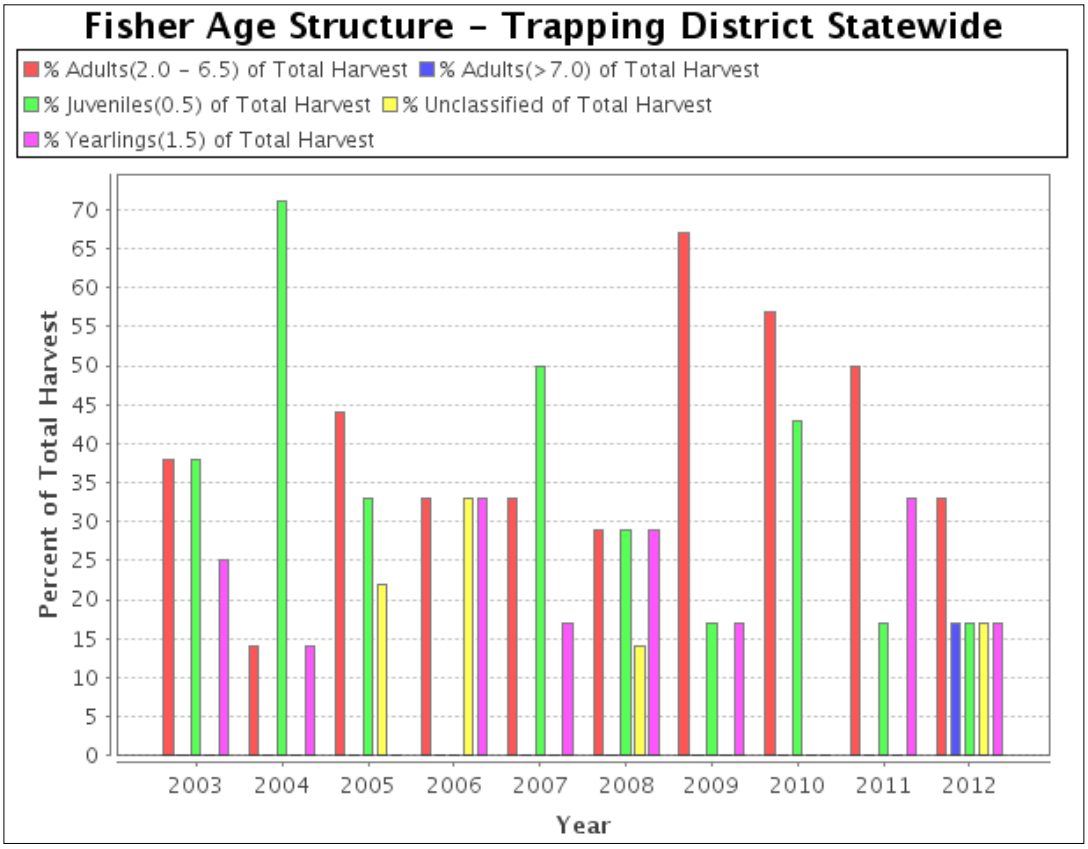

Figure20. Fisher population parameter of age structure, 2003-04 to 2012-13.

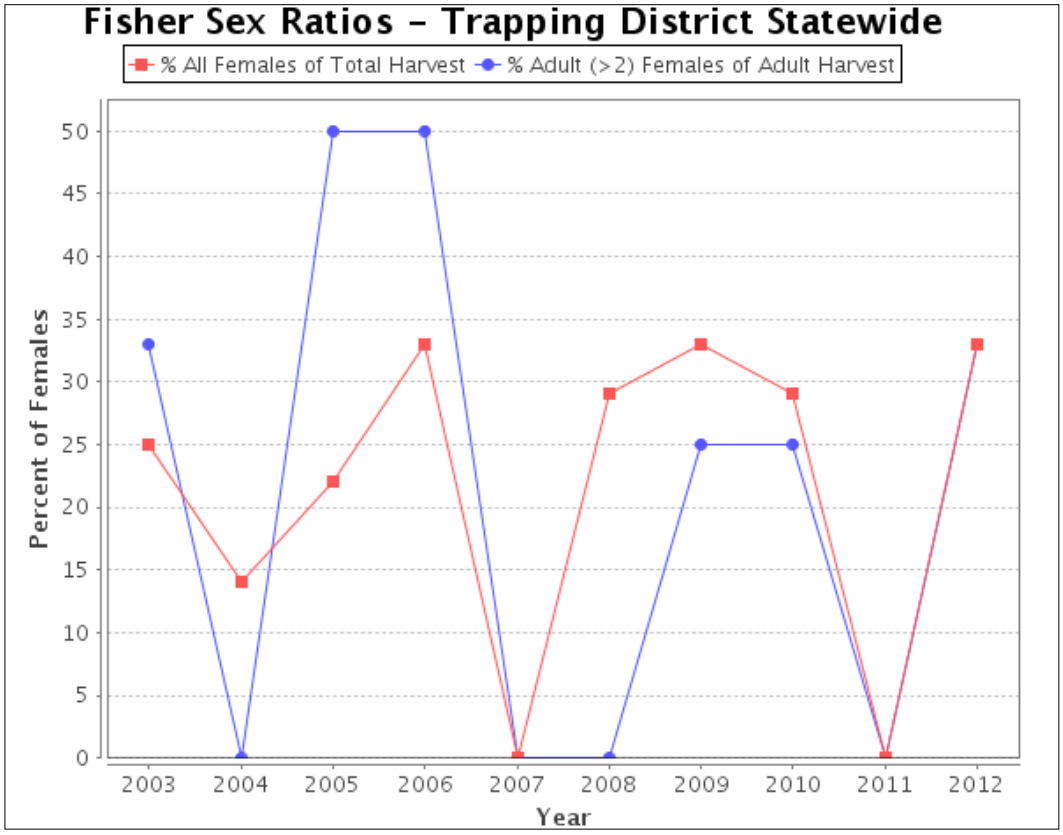

Figure 21. Fisher population parameter of sex ratios, 2003-04 to 2012-13.

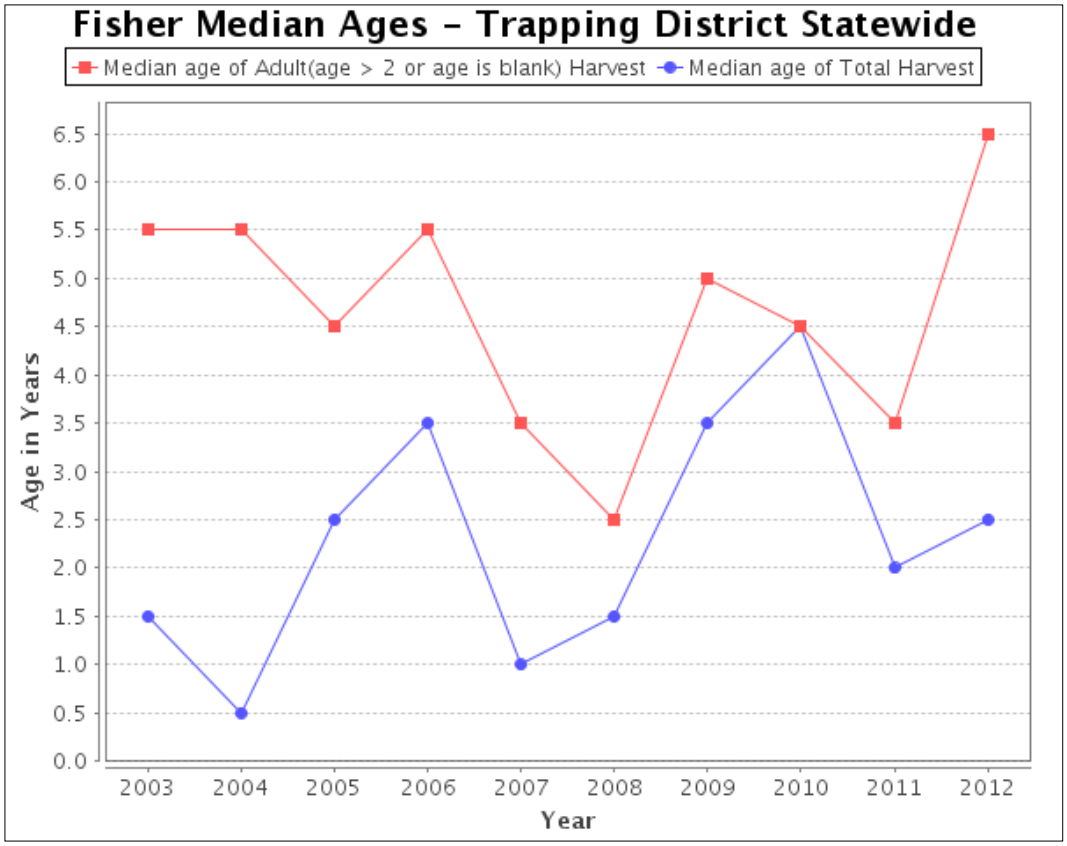

Figure 22. Fisher population parameter of median ages, 2003—04 to 2012-13.

WOLVERINE

Since wolverines were first classified as a state furbearer in the late 1970s, harvest was regulated by a one wolverine per trapper limit. Wolverines were considered to be recovered in Montana from a low point in the 1930s and now occupy the western half of the state. Statewide harvest during a 30-year period was considered stable and somewhat self-regulating with an average of 10.5 wolverine harvested annually (range 2 - 22 per year) during the period (Table 11). However, recent research on the species has provided new information regarding wolverine ecology, better defined wolverine habitat, examined genetic relationships, survival, and landscape connectivity. FWP's furbearer program provided funds and logistical support to these studies. Research results were used to develop a habitat model for Montana with corresponding population numbers and estimated sustainable harvest rates which were considered sustainable at a more regulated level (Fig.23). Therefore, FWP changed trapping regulations to reflect emerging information and additional data from wolverine research that suggested conservative quota levels were appropriate. Between 2008-09 and 12011-12 management units were established and quotas adjusted to associate harvest levels with the three largest intact ecosystems in the state (Northern Continental Divide, Bitterroot-Idaho and Greater Yellowstone) and to recognize the lower population sizes in insular mountain ranges in the central portion of Montana.. Further analysis tied to genetic make-up of the state's wolverine population, the issue of maintaining population connectivity, and recognizing the core population areas of the three major ecosystems led to additional regulation changes. These most recent adjustments included delineating four wolverine management units (WMUs) with the three major ecosystems having reduced quotas for a statewide total of 5 animals and a central Montana WMU with a quota of zero to promote population connectivity between the three major ecosystems in the state where harvest is allowed. Managing the WMU /quota system has maintained biologically sound harvest opportunity for resident trappers that does not jeopardize conservation of the species. However, with the pending decision by the USFWS to list wolverine under the ESA, the quota was reduced to zero during the 2012-13 season and that continued for the 2013-14 season, so no harvest has occurred to be include in this report period. Past population parameters prior to 2012-13 are presented Figs 25-28.

Table 11. Wolverine harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	2	1	5	1	0			9		
1995-96	5	2	4	1	0			12	200.01	
1996-97	6	0	3	2	1			12		
1997-98	1	5	6	3	0			15		
1998-99	0	2	2	5	0			9		
1999-00	0	0	3	1	0			4		
2000-01	1	6	4	2	0			14	212.94	
2001-02	1	0	9	0	0			10	225.01	
2002-03	2	2	8	2	1			15	225.01	
2003-04	1	2	3	2	2			10	275.01	
2004-05	3	1	6	1	0			11	275.01	12
2005-06	0	4	4	2	1			11	300.01	12
2006-07	2	0	5	2	0			9	217.85	12
2007-08	2	1	5	1	0			9	280.35	10
2008-09	2	0	0	2	0			4	254.67	5
2009-10	1	1	1	0	0			3	211.42	5
2010-11	0	3	1	0	0			4	253.15	5
2011-12	0	2	0	0	0			2	319.67	5
2012-13	0	0	0	0	0			0	235.74	0
2013-14	0	0	0	0	0			0	232.43	0

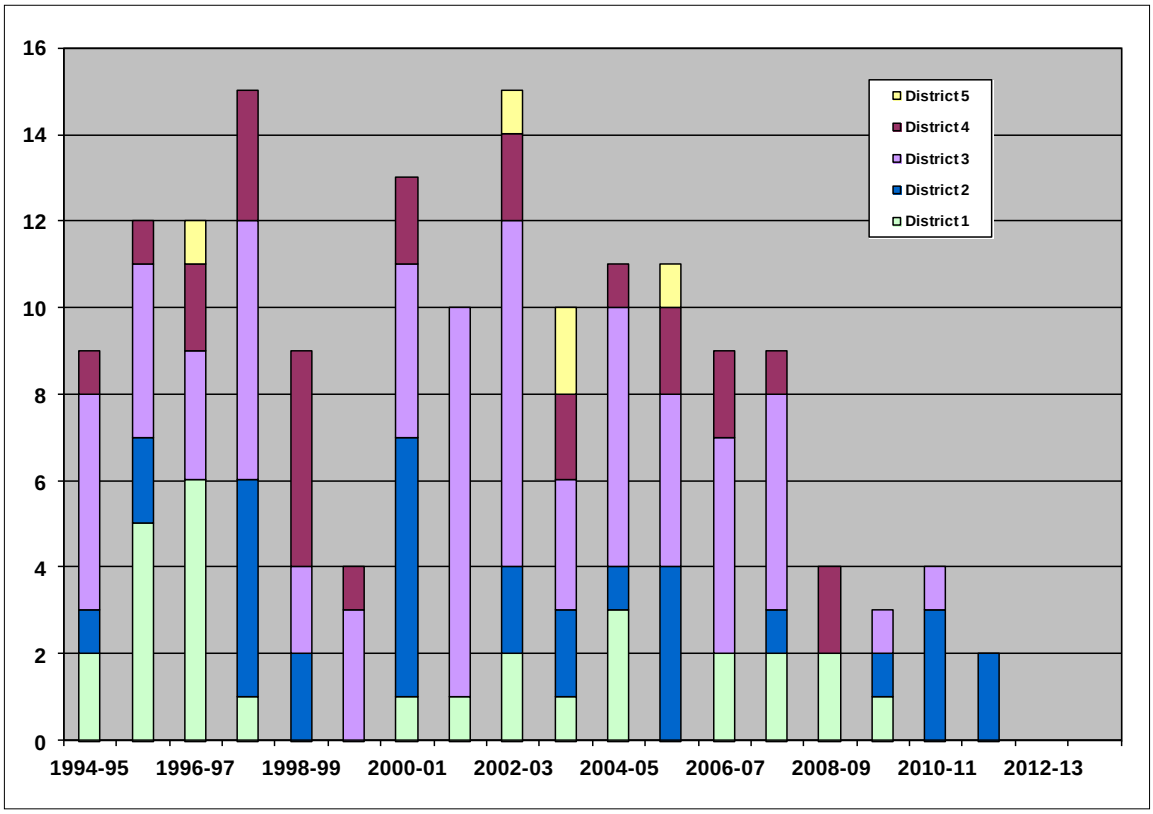

Figure 23. Statewide wolverine harvest by trapping district, 1994-95 to 2013-14.

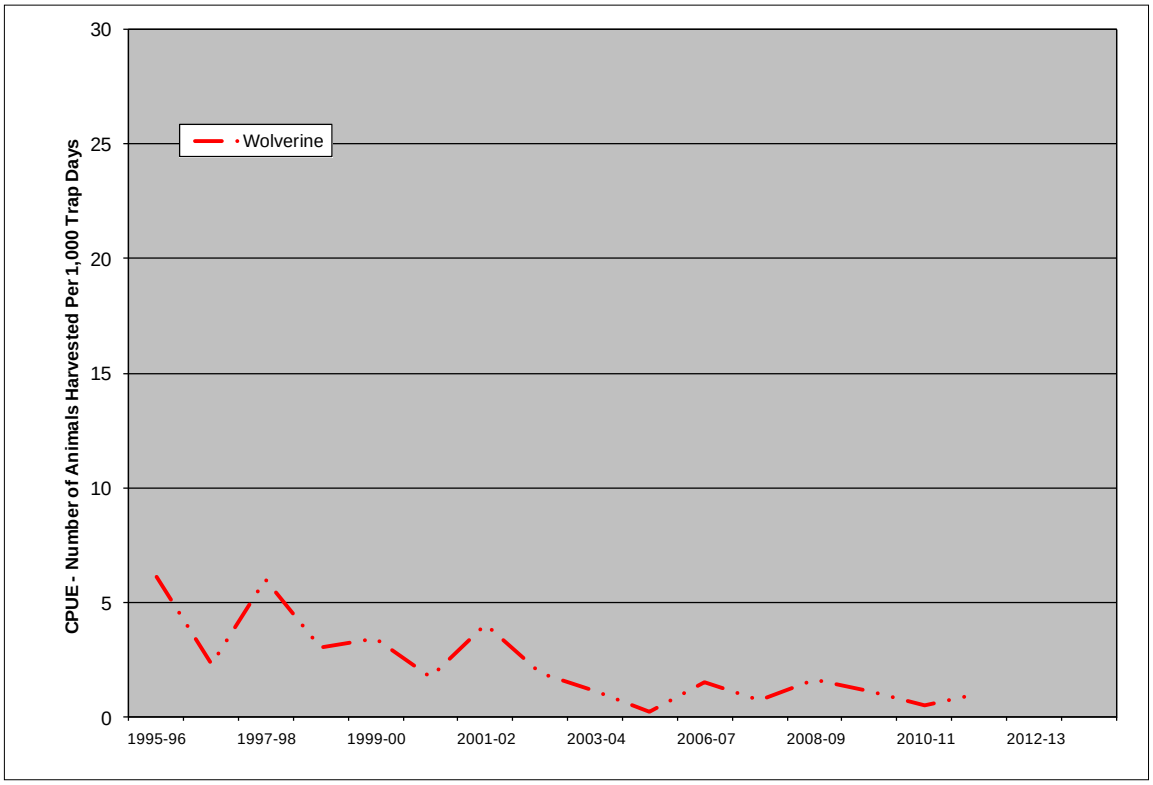

Figure 24. Statewide trend in wolverine harvest from CPUE, 1995-96 to 2013-14.

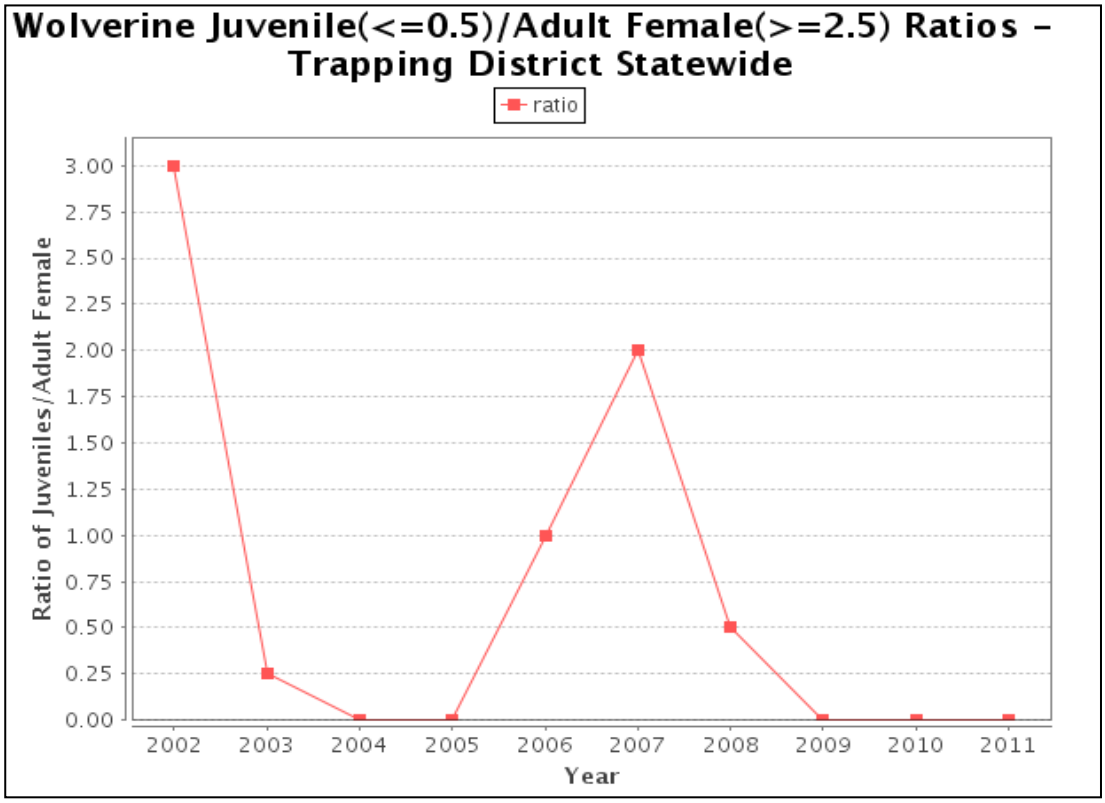

Figure 25. Wolverine population parameter of juveniles per adult female ratio, 2002-03 to 2011-12.

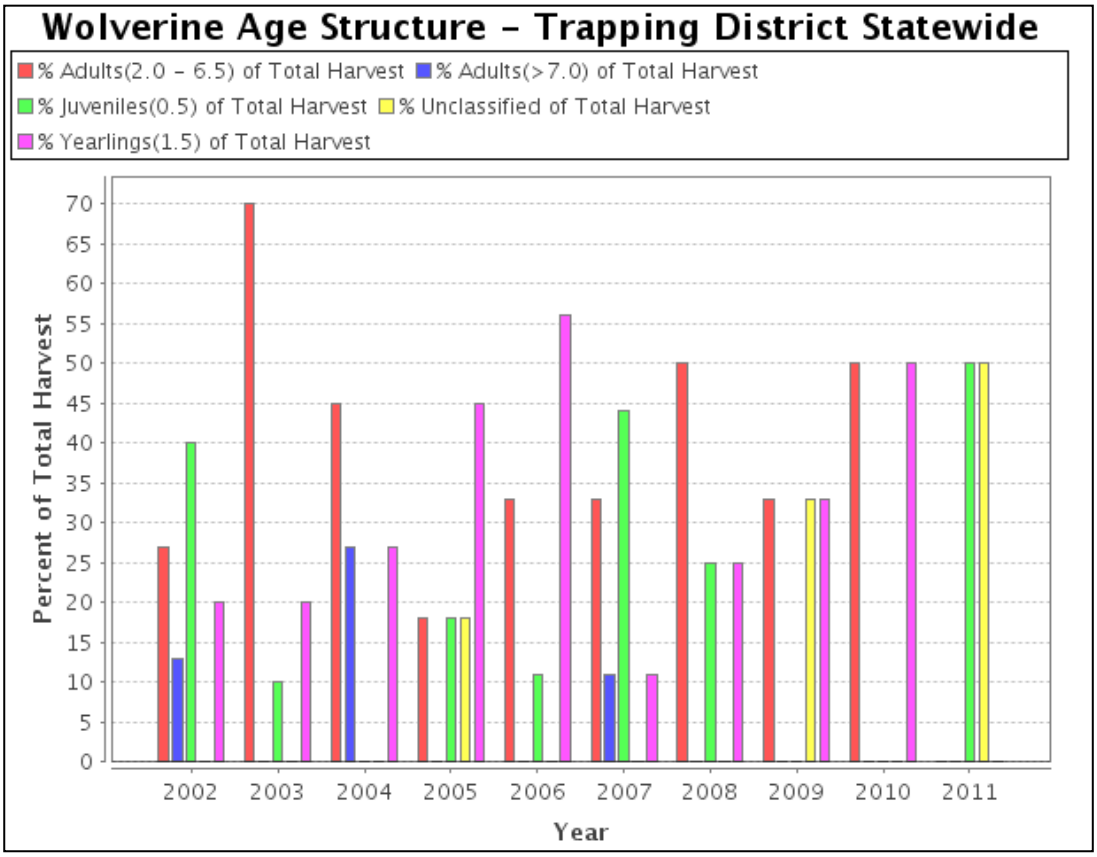

Figure 26. Wolverine population parameter of age structure, 2002-03 to 2011-12.

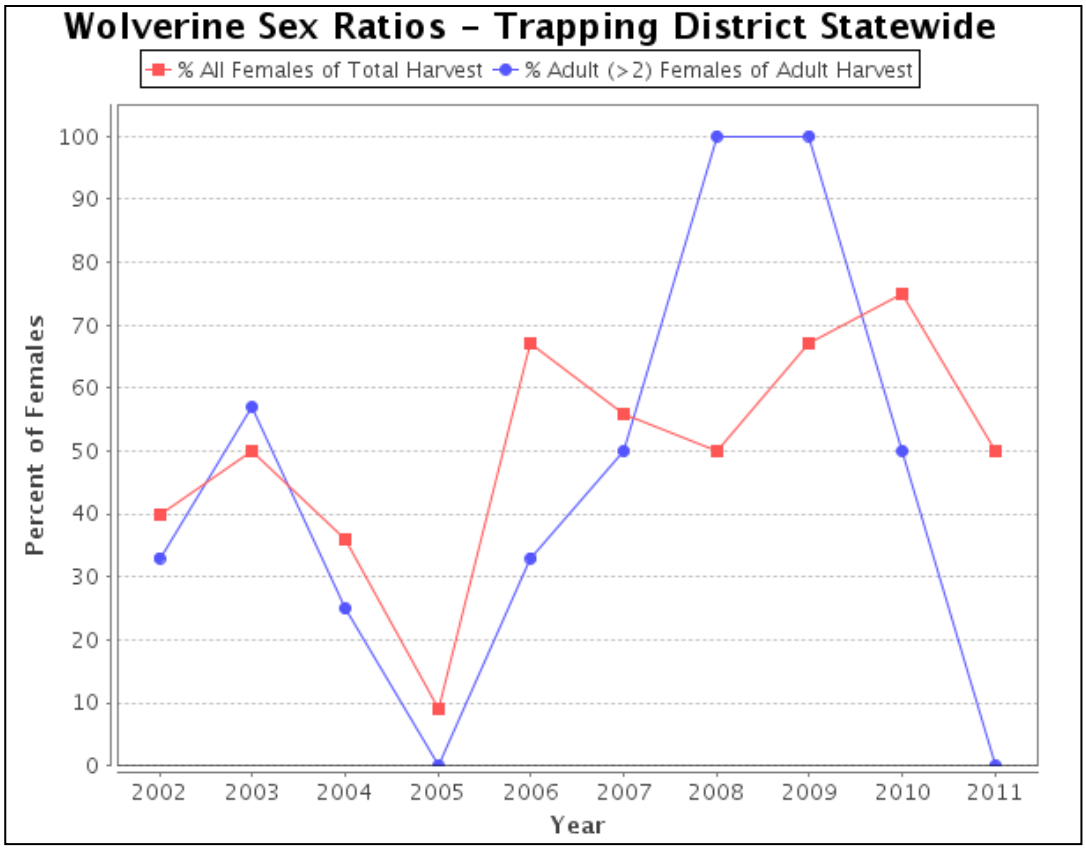

Figure 27. Wolverine population parameter of sex ratios, 2002-03 to 2011-12.

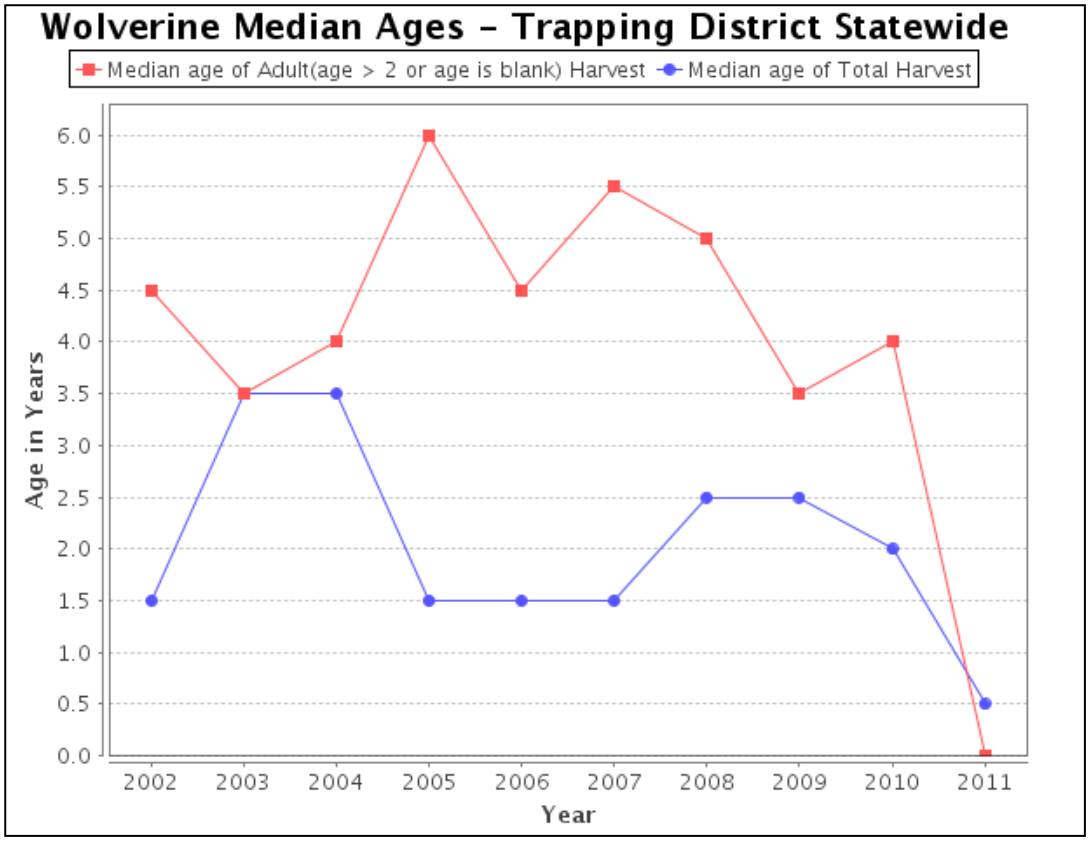

Figure 28. Wolverine population parameter of median ages, 2002-03 to 2011-12.

BOBCAT

Bobcats are one of the five furbearers that are required to be reported, registered and pelt tagged so that the actual number of harvested animals is known (Table 12). The bobcat harvest has always been managed through TD quotas with various trapper limits or no trapper limits. In the late 1990s trapper limits were increased in response to low trapper interest in bobcats because of relatively low pelt prices (Table 12) and later removed altogether in the eastern districts (TD 4 – 7). Adjustments in bobcat quotas have been used as a management tool to maintain healthy bobcat populations, while providing opportunity and flexibility to harvest bobcat by the trapping community. As bobcat populations in the state have increased over time, along with trapper interest, TD quotas have generally increased proportionately. The statewide quota has increased from 1,415 in 1994-95 to 2,480 in 2008-09 and 1,945 during the 2013-14 season (Table 12). The bobcat harvest has increased from 1,052 in 1994-95 to 2,428 in 2008-09 and 1,895 in 2013-14 (Fig. 29). Pelt prices have jumped dramatically beginning with the 2003-04 season and continue to remain at a high level through 2013-14 (Table 12). Examining the trend in CPUE it appears harvest effort has been stable to declining, indicating that fewer bobcat are being taken per unit of effort (Fig.30).

The statewide trend in bobcat using CPUE is declining slightly (Fig.30) and a comparison of bobcat CPUE with the other terrestrial species is presented in Fig 48. Population monitoring for bobcat consists of analyzing harvest data and the collection and analysis of biological data from the harvest sample through mandatory skull turn-in from trappers to extract a tooth to determine age. However, age data for the 2013-14 report period are not yet available for current analysis of population trend. Population parameters for the statewide bobcat population through 2012-13 is shown in Figs 31-34.

Table 12. Bobcat harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	148	117	121	145	157	75	289	1052	81.75	1415
1995-96	169	113	105	105	109	12	149	762	75.42	1440
1996-97	166	108	133	174	165	45	250	1041	124.05	1440
1997-98	167	158	139	163	191	40	348	1206	95.25	1490
1998-99	173	159	134	133	197	68	229	1093	85.51	1490
1999-00	199	170	145	184	212	91	410	1411	98.67	1510
2000-01	222	168	128	173	230	86	391	1398	106.05	1630
2001-02	244	178	173	177	267	121	542	1702	135.25	1730
2002-03	201	146	199	193	315	135	597	1786	203.01	1805
2003-04	210	182	229	211	356	88	507	1783	280.25	1880
2004-05	225	172	218	312	424	135	628	2114	325.01	2030
2005-06	230	158	291	287	392	122	721	2201	345.01	2255
2006-07	243	177	294	320	426	91	677	2228	257.33	2255
2007-08	264	182	314	316	489	100	724	2389	449.45	2355
2008-09	258	184	292	298	503	71	822	2428	281.35	2480
2009-10	248	108	203	214	487	42	465	1767	346.54	2275
2010-11	278	113	216	245	406	26	360	1644	411.84	2175
2011-12	259	104	275	311	308	91	627	1975	426.31	1925
2012-13	280	196	273	281	299	53	557	1939	589.08	1970
2013-14	302	195	271	173	307	57	334	1639	393.49	1895

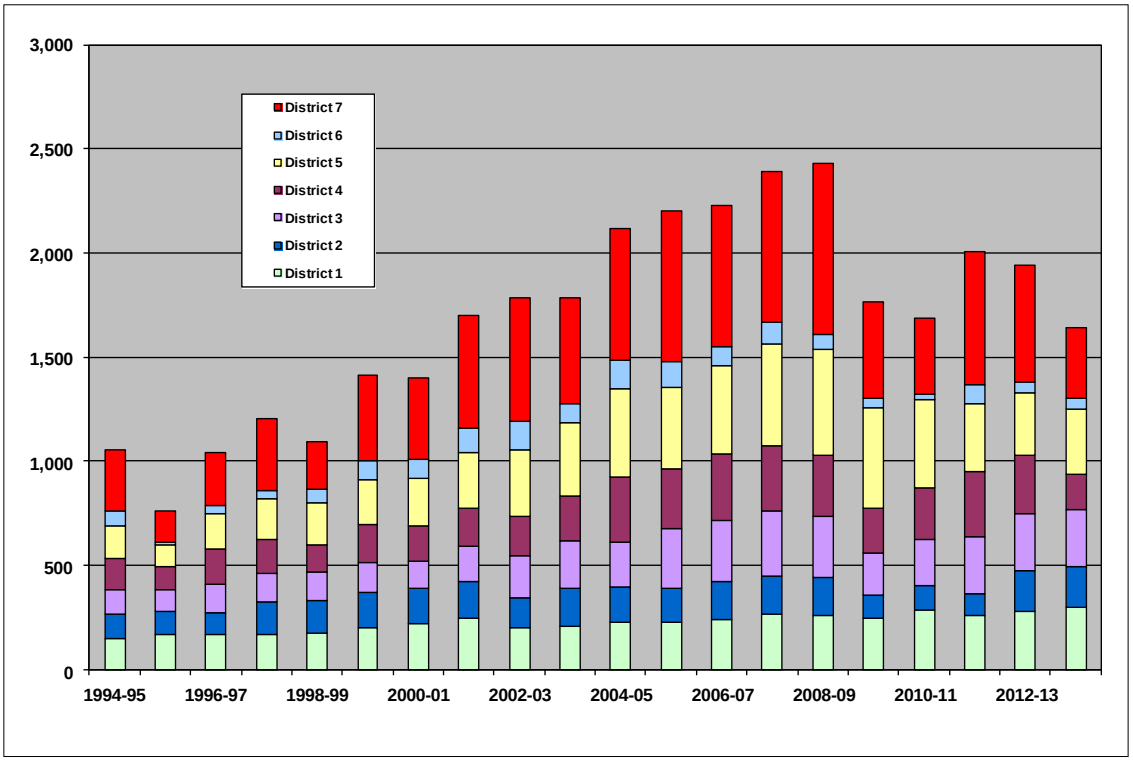

Figure 29. Statewide bobcat harvest by trapping district, 1994-95 to 2013-14

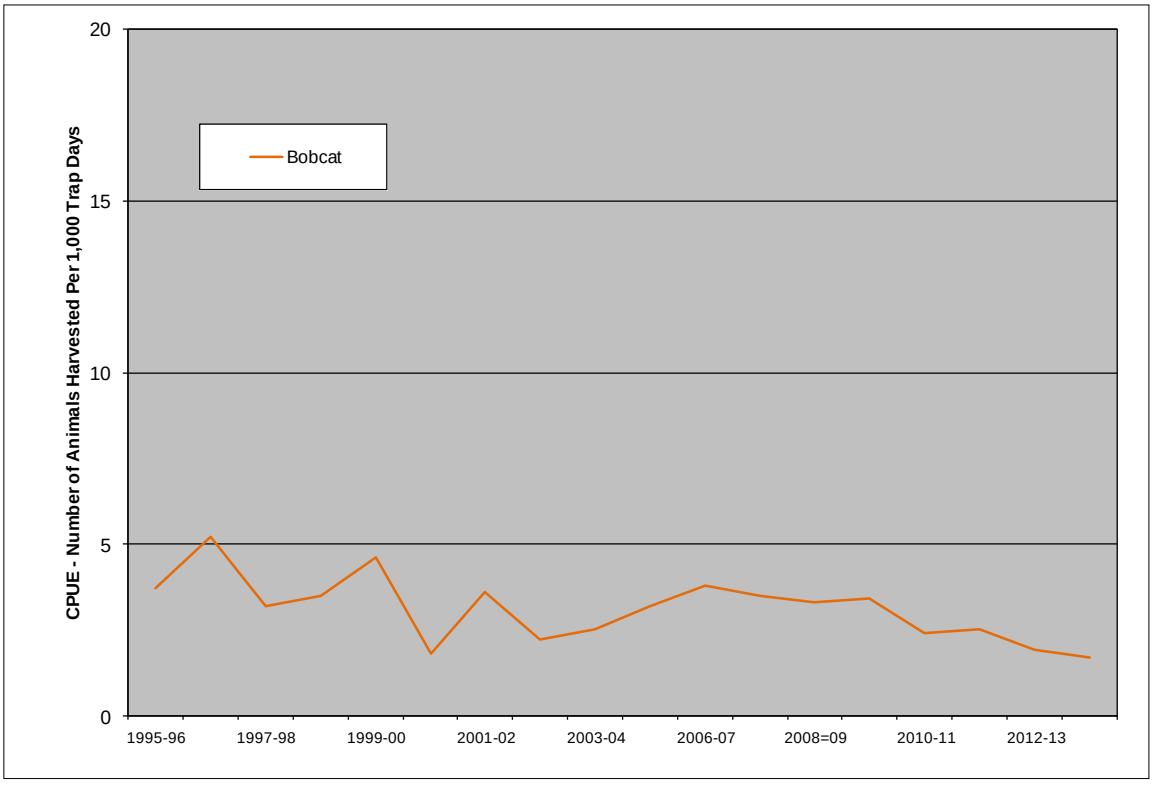

Figure 30. Statewide trend in bobcat harvest from CPUE, 1995-96 to 2013-14.

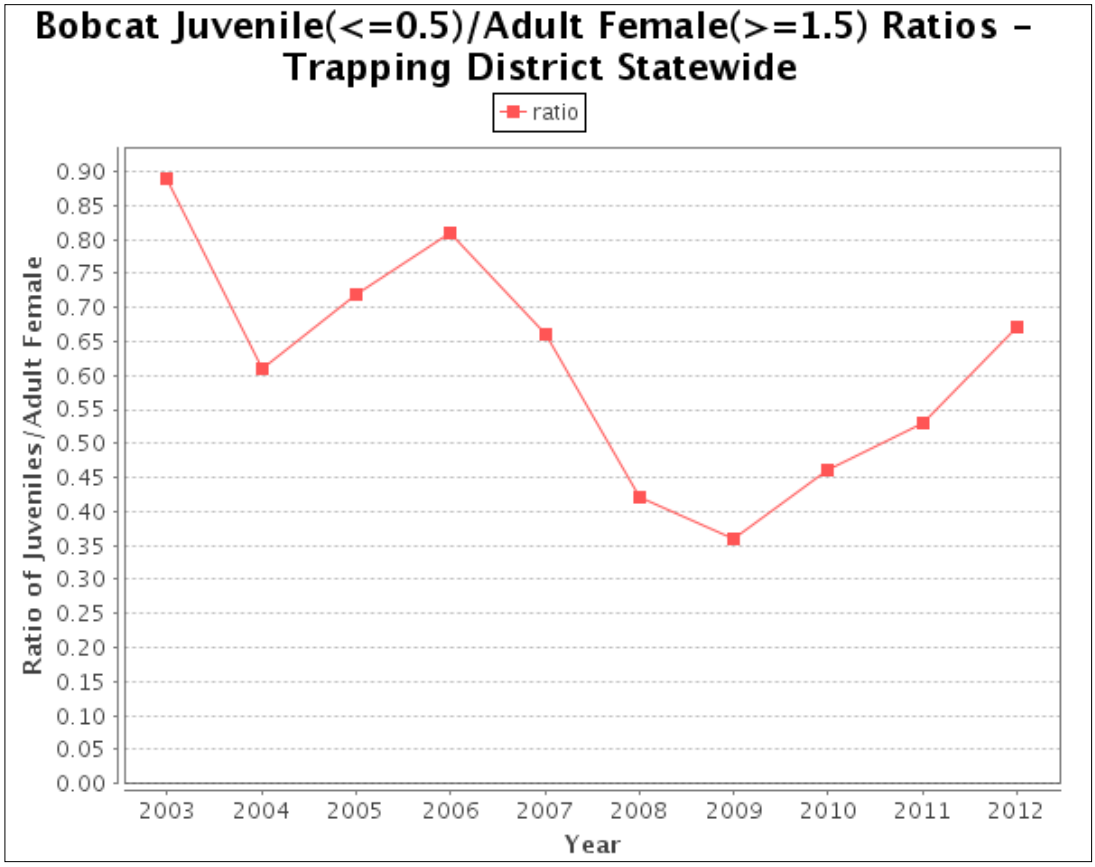

Figure 31. Bobcat population parameter of juvenile per adult female ratios, 2003-04 to 2012-13.

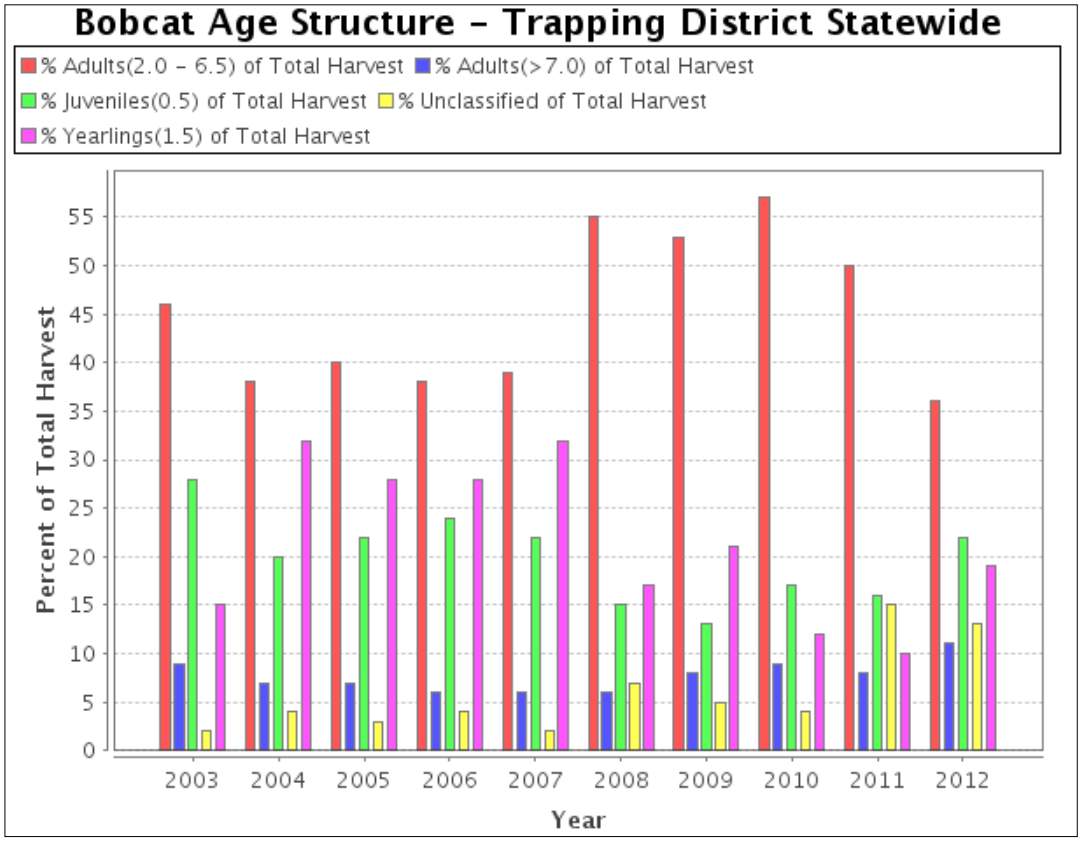

Figure 32. Bobcat population parameter of age structure, 2003-04 to 2012-13.

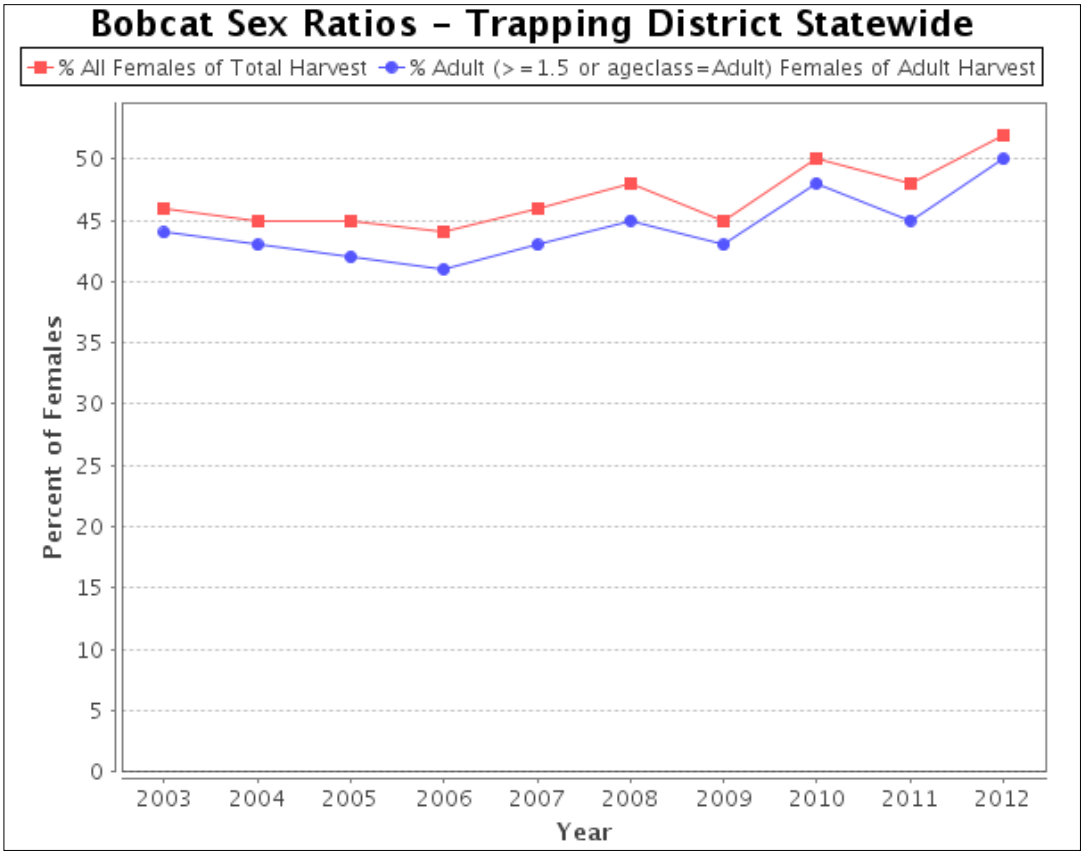

Figure 33. Bobcat population parameter of sex ratios, 2003-04 to 2012-13.

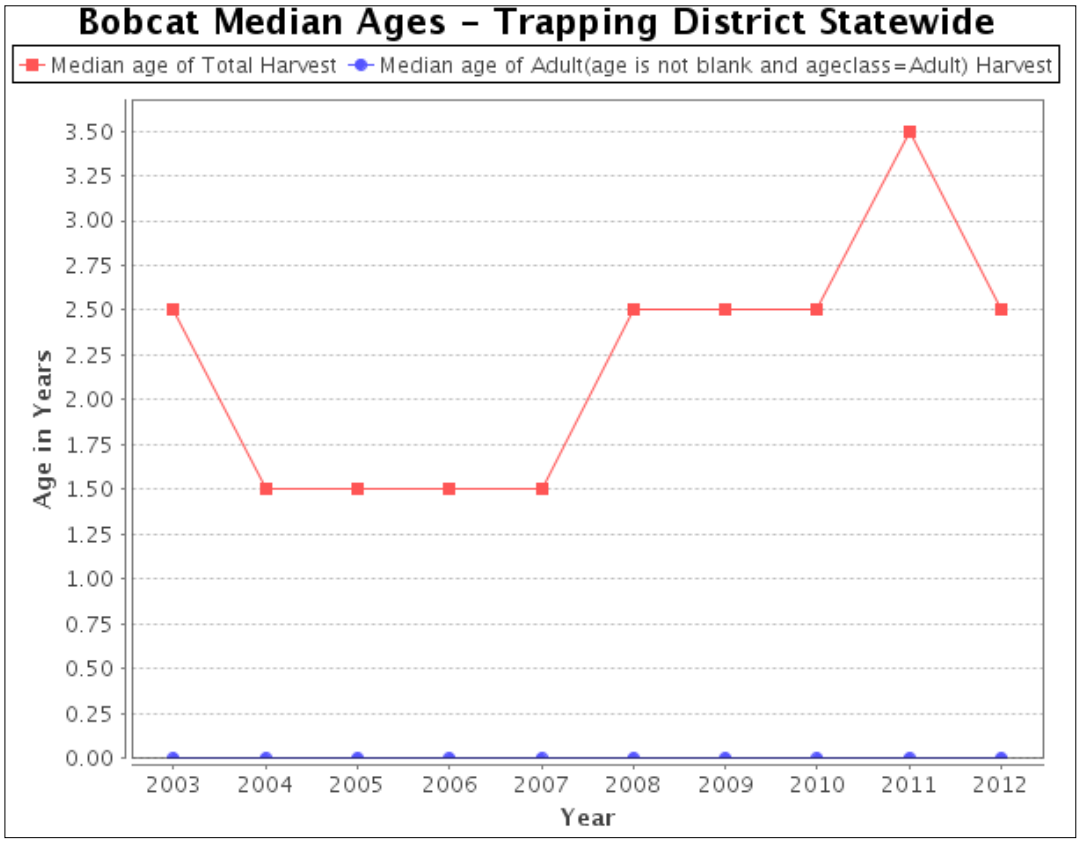

Figure 34. Bobcat population parameter of median ages, 2003-04 to 2012-13.

WEASEL

The statewide weasel harvest continues to remain relatively stable in recent years, although generally at a lower level during the past decade within a range of 200 to 500 animals with some years below this level (Table 13). The majority of weasels taken over most years is in northwestern Montana's TD 1 (Fig. 35). The estimated 2013-14 statewide harvest of 363 animals was slightly above the 10-year average harvest, along with an average pelt price (Table 13). Despite the moderate harvest, average pelt prices offered for 2013-14 were higher than a decade ago.

Examining the trend in CPUE it appears harvest effort has generally increased over the past several years, indicating that more weasels are being taken per unit of effort (Fig.36). Population monitoring activities for weasel are based completely on trapper harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered stable, despite the slight decline in 2013-14. The comparison of CPUE for weasel with the other classified predator species is shown in Fig. 49.

Table 13. Weasel harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	286	222	161	109	5	19	0	802	2.66	
1995-96	264	53	24	0	2	0	0	343	1.75	
1996-97	217	16	154	618	8	4	79	1094	1.83	
1997-98	123	54	153	56	0	0	0	386	1.01	
1998-99	144	48	9	42	3	0	0	246		
1999-00	211	86	24	155	0	0	3	480		
2000-01	87	11	19	42	0	0	8	167	1.51	
2001-02	75	7	14	4	0	0	0	100	2.01	
2002-03	248	124	32	0	0	0	0	405	3.01	
2003-04	88	164	51	13	3	0	3	321	3.01	
2004-05									3.01	
2005-06	118	77	9	27	12	0	0	243	3.01	
2006-07	213	161	79	35	12	0	3	503	4.96	
2007-08	185	45	21	12	3	0	0	310	5.69	
2008-09	45	76	6	0	0	0	0	175	4.02	
2009-10	54	24	8	13	0	3	0	121	4.07	
2010-11	164	84	181	13	3	3	3	488	3.13	
2011-12	199	105	15	6	0	15	3	342	3.16	
2012-13	172	70	24	13	3	8	11	301	3.13	
2013-14	131	133	82	7	7	0	2	363	3.20	

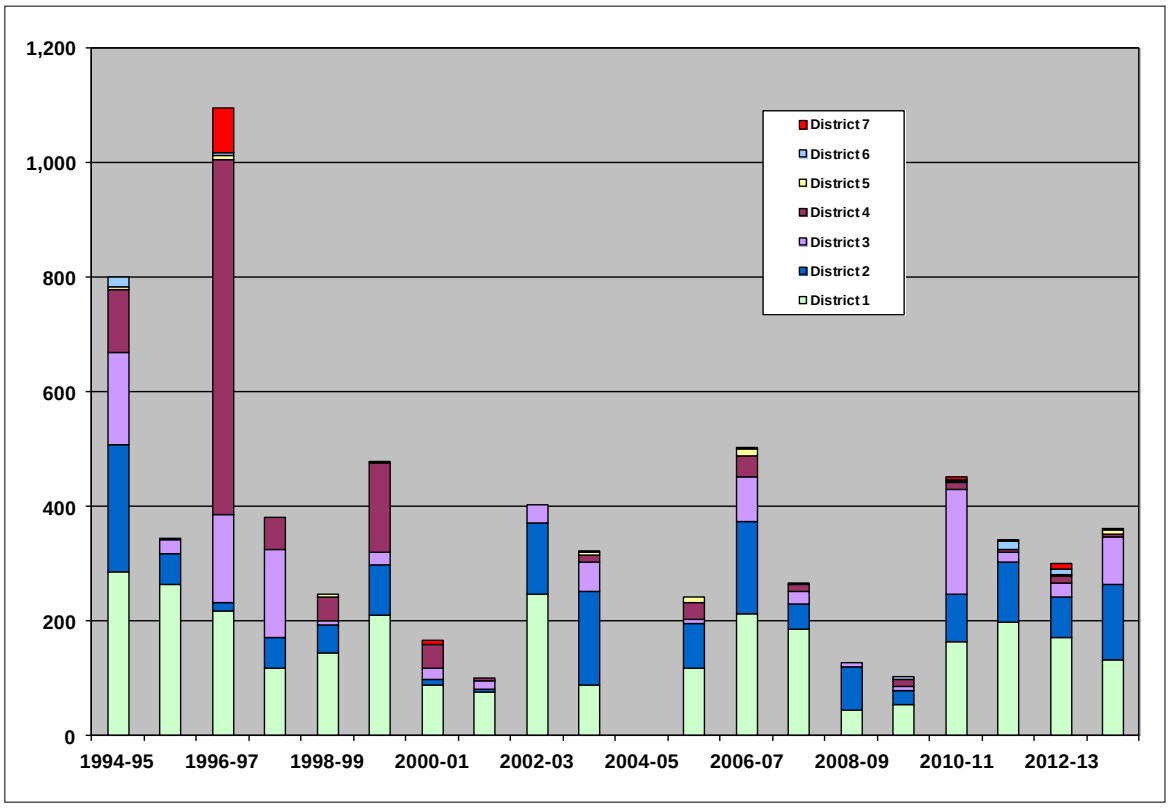

Figure 35. Statewide weasel harvest by trapping district, 1994-95 to 2013-14.

Figure 36. Statewide trend in weasel harvest from CPUE, 1995-96 to 2013-14.

SKUNK

The statewide skunk harvest continues to remain relatively stable, and within a general range of 1,500 to 3,000 animals with some years below or above this level (Table 14). The majority of skunks taken over most years come from the central and southern portions of Montana in TD 4 and TD 5 (Fig. 37). The estimated 2013-14 statewide harvest of 1,554 animals was 34% below the 10-year average harvest, with a slightly below average pelt price (Table 14). A lower harvest than previous years may be a result of the pelt price offered for 2013-14 of $4.26 that was lower than average over the last decade.

Examining the trend in CPUE it appears harvest effort remained about the same as during the previous 2012-13 season, indicating that in 2013-14 a similar number of skunks are being taken per unit of effort (Fig.38). Population monitoring activities for skunk are based completely on trapper harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered to be somewhat declining trend over the previous several years. A comparison of CPUE for skunk with the other classified predator species is shown in Fig.49.

Table 14. Skunk harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	69	194	336	222	532	579	1287	3219	3.41	
1995-96	75	198	167	89	401	162	619	1784	6.15	
1996-97	142	169	638	260	705	539	929	3382	3.86	
1997-98	102	138	573	394	445	281	749	2682	2.85	
1998-99	84	246	345	342	306	15	228	1567		
1999-00	7	90	238	780	1015	0	632	2762		
2000-01	72	213	445	175	361	163	141	1570	3.73	
2001-02	46	182	578	442	71	150	146	1616	5.01	
2002-03	40	224	421	248	154	100	235	1422	7.01	
2003-04	167	177	616	397	493	937	210	2996	5.51	
2004-05									7.01	
2005-06	195	145	652	492	252	296	293	2325	6.51	
2006-07	99	187	251	503	477	44	371	1933	4.04	
2007-08	27	209	161	442	152	510	471	2599	5.27	
2008-09	48	113	180	361	643	0	299	1845	4.02	
2009-10	107	53	212	1407	447	27	112	2717	2.34	
2010-11	51	294	267	2567	464	48	113	3975	2.11	
2011-12	32	120	292	140	436	117	597	1735	7.30	
2012-13	115	102	140	244	626	201	2	1711	4.26	
2013-14	152	70	128	419	465	196	123	1554	4.26	

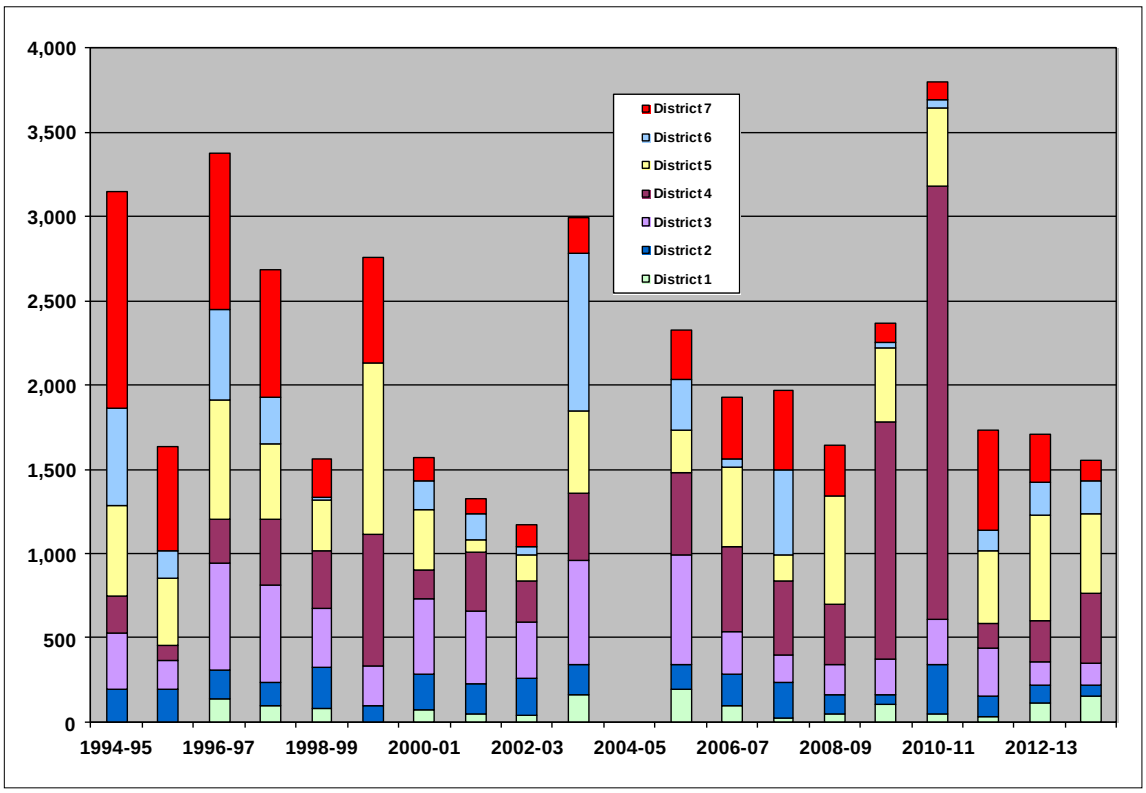

Figure 37. Statewide skunk harvest by trapping district, 1994-95 to 2013-14.

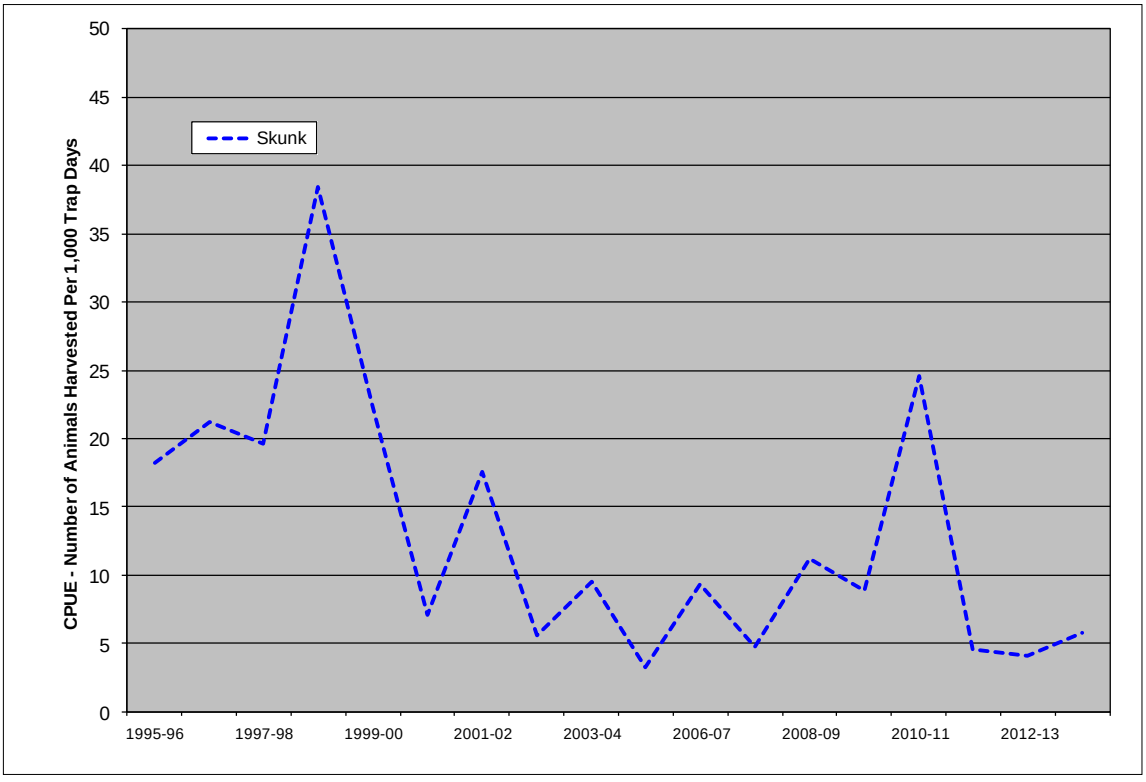

Figure 38. Statewide trend in skunk harvest from CPUE, 1995-96 to 2013-14.

COYOTE

The statewide coyote harvest increased dramatically during the 2011-12 and again in the 2012-13 seasons and remained relative high in 2013-14, from both trapping and hunting (Table 15). The majority of coyotes taken over most years are in the northcentral and eastern Montana TDs 4, 6 and 7 (Fig. 39). The estimated 2013-14 statewide harvest of 15,652 animals was nearly 25% above the 10-year average harvest, along with the second highest average pelt price of $90.67 (Table 15). This average coyote pelt prices offered for 2013-14 was the second highest reported in the past 20 years.

Examining the trend in CPUE it appears that harvest effort has generally remained the same, indicating an increasing coyote population and/or that there is a dramatic increase in the number of successful trappers and hunters during the past several years (Fig. 40). Population monitoring activities for coyote are based completely on trapper harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered stable. A comparison of CPUE for coyote with the other classified predator species is shown in Fig. 49.

Table 15. Coyote harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

1994-95	284	851	1774	2112	1227	788	3034	10079	20.61	
1995-96	312	728	991	1216	1197	389	624	5495	19.46	
1996-97	189	1193	1594	2953	1445	925	1055	9354	24.68	
1997-98	524	1424	2163	2496	1493	821	1588	10510	17.15	
1998-99	267	874	1387	1486	688	453	904	6059		
1999-00	514	798	1429	3142	1526	1060	2651	11134	22.06	
2000-01	167	593	1483	1836	1563	559	2988	9303	18.93	
2001-02	114	745	2086	2211	774	1783	2004	9726	23.71	
2002-03	175	971	1452	1357	567	3386	2817	10725	30.71	
2003-04	306	1046	2311	3198	1485	1632	2309	12286	28.51	
2004-05									30.71	
2005-06	278	823	1291	1650	569	2431	2346	9412	38.51	
2006-07	433	789	1485	2269	1058	2713	2137	10886	43.36	
2007-08	197	546	1200	1716	451	2286	1946	9723	37.91	
2008-09	387	437	494	1453	494	827	1780	6969	30.71	
2009-10	193	396	544	651	571	153	1112	9048	35.29	
2010-11	485	661	464	1764	1135	677	2203	8489	73.16	
2011-12	292	605	1243	4660	1834	3487	4276	16398	77.3	
2012-13	655	894	1335	3919	2334	5093	5899	20131	93.98	
2013-14	583	620	1237	4118	2501	3568	3026	15652	90.67	

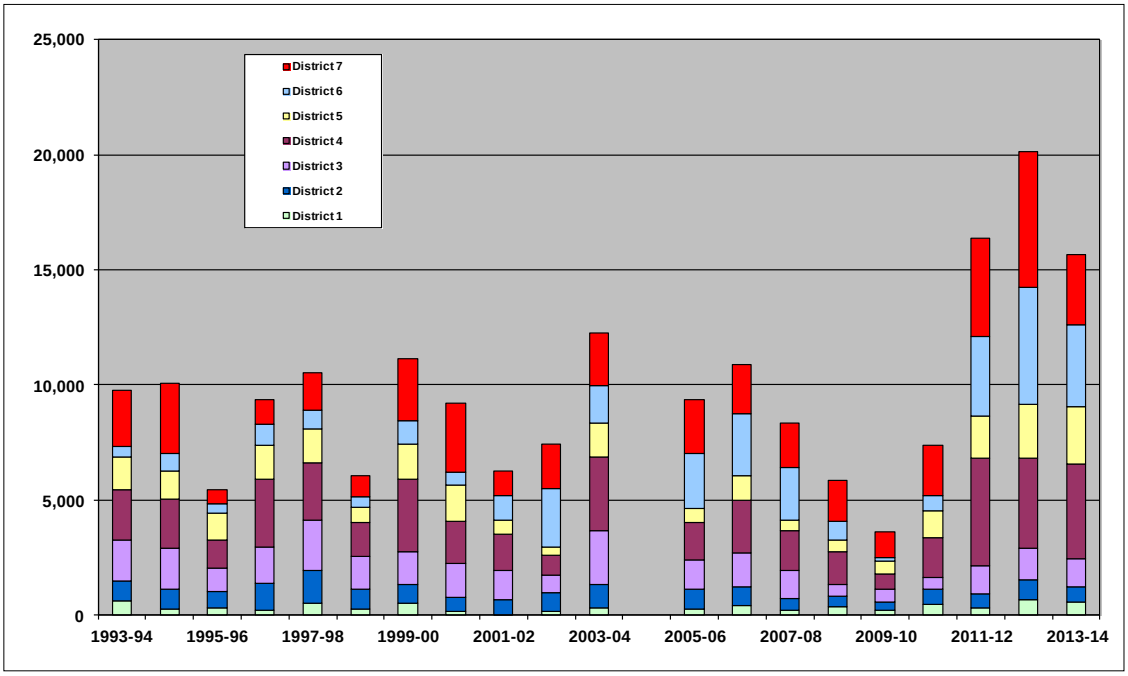

Figure 39. Statewide coyote harvest by trapping district, 1994-95 to 2013-14.

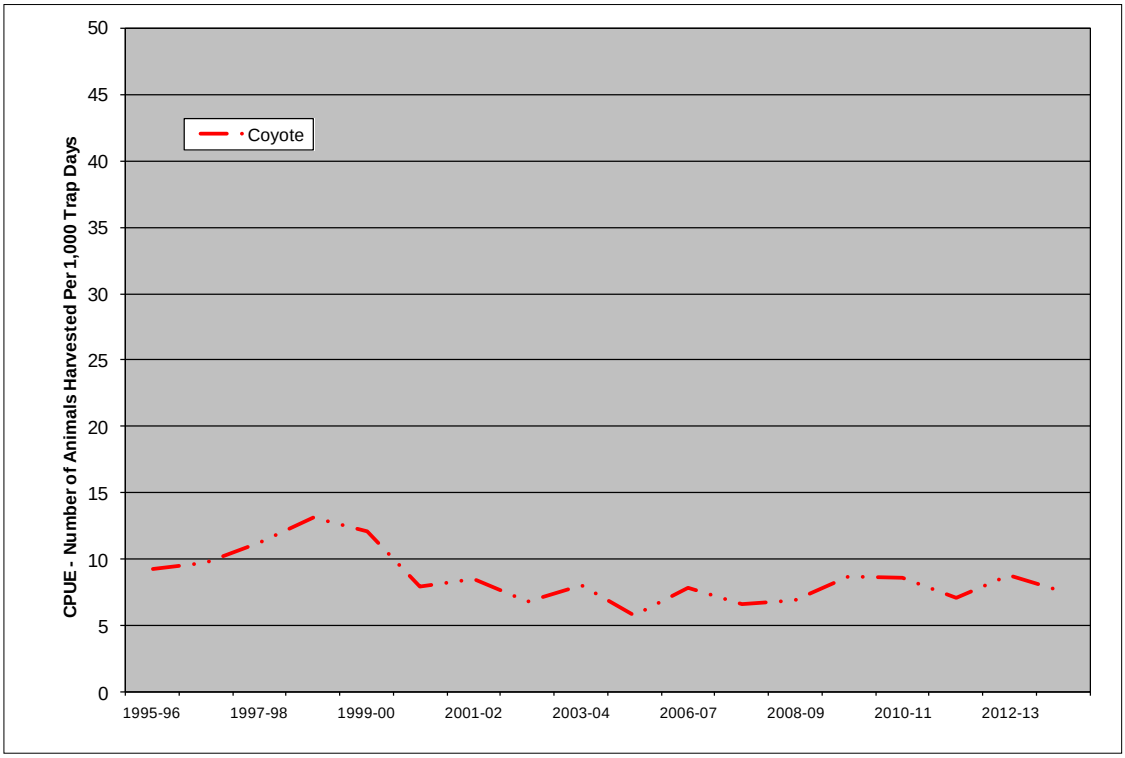

Figure 40. Statewide trend in coyote harvest from CPUE, 1995-96 to 2013-14.

RED FOX

The statewide red fox harvest decreased during the 2013-14 season following a general increasing harvest since 2009-10 after a declining trend in harvest over the prior 15 years (Table 16). The majority of the red fox taken over most years is across all trapping districts except TD 1 (Fig. 41). The estimated 2013-14 statewide harvest of 2,041 animals was 5% below the 10-year average harvest level, despite the higher than average pelt price of $47.29 (Table 16).

Examining the trend in CPUE it appears harvest effort has generally been stable with a decrease during 2011-12 that remained constant in 2012-13 and continued through 2013-14, indicating that fewer fox are being taken per unit of effort (Fig.42). Population monitoring activities for red fox are based completely on trapper harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as having declined. A comparison of CPUE for red fox with the other unclassified nongame species is shown in Fig. 50.

Table 16. Fox harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	19	284	1133	738	2039	691	1963	6872	15.33	
1995-96	73	280	498	411	1267	181	790	3573	18.58	
1996-97	87	402	898	1795	909	677	996	5764	17.74	
1997-98	54	355	1327	795	898	307	1074	4810	12.72	
1998-99	27	210	321	495	438	129	534	2156		
1999-00	10	414	701	842	483	494	684	3629		
2000-01	19	243	521	608	293	270	240	2201	16.24	
2001-02	7	478	770	735	364	435	285	3074	22.65	
2002-03	8	483	523	380	216	364	577	2552	24.01	
2003-04	23	465	434	523	296	68	248	2056	20.01	
2004-05									21.51	
2005-06	38	358	178	509	145	569	670	2473	25.01	
2006-07	55	380	465	409	441	757	655	3164	20.84	
2007-08	45	164	248	266	227	155	277	1862	22.49	
2008-09	20	234	130	367	265	56	299	1695	21.59	
2009-10	16	195	166	80	335	16	129	1471	22.34	
2010-11	113	377	167	162	232	59	156	1418	24.37	
2011-12	29	541	333	328	450	196	591	2469	57.49	
2012-13	223	596	290	309	440	207	771	2837	65.78	
2013-14	157	407	281	436	329	191	240	2041	47.29	

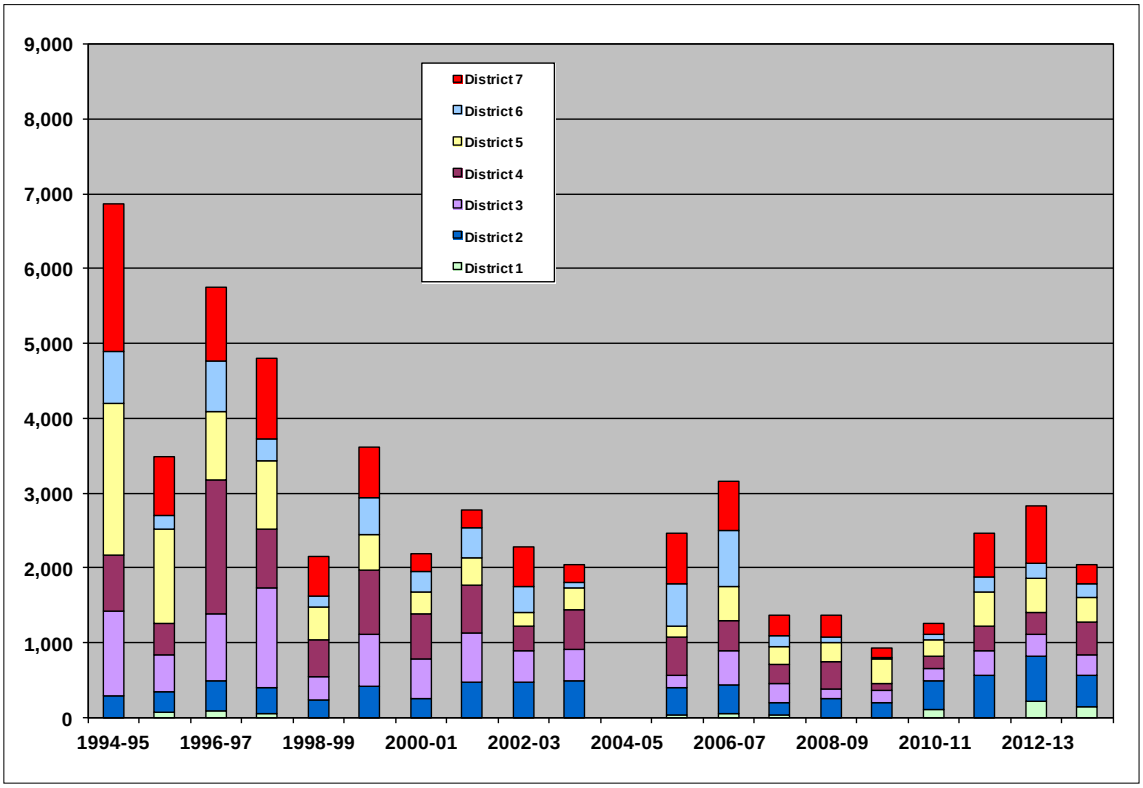

Figure 41. Statewide red fox harvest by trapping district, 1994-95 to 2013-14.

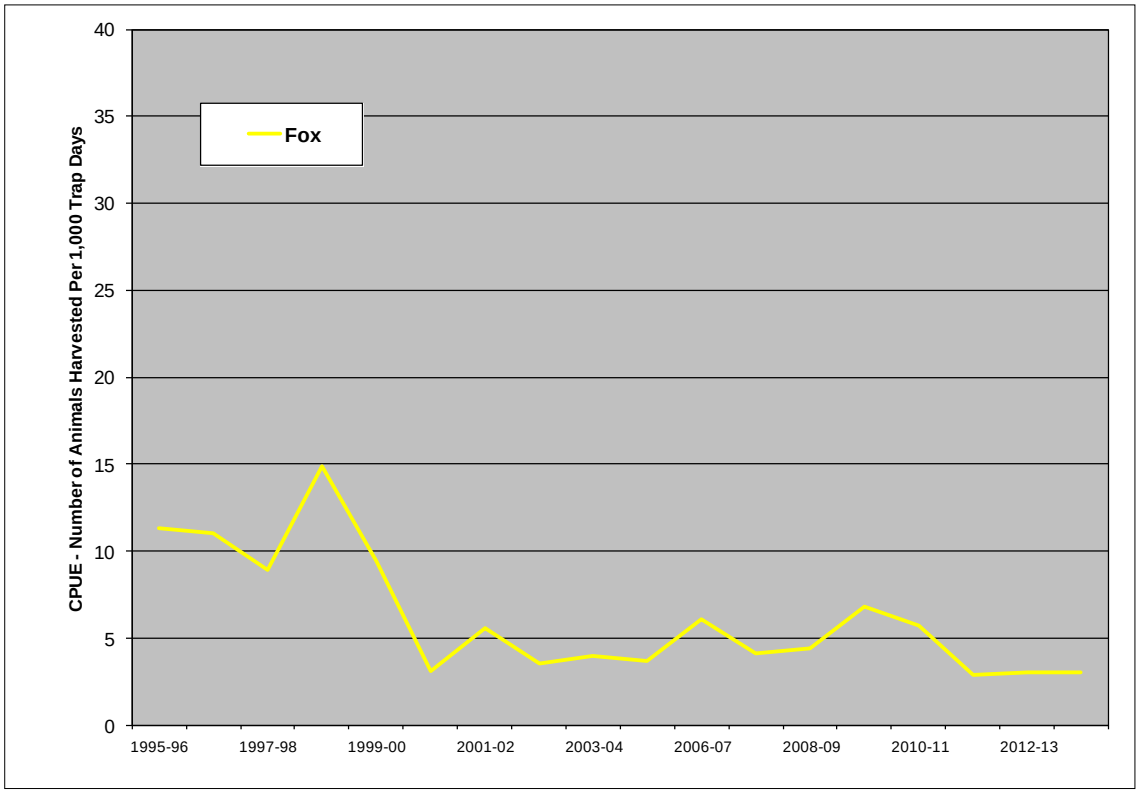

Figure 42. Statewide trend in red fox harvest from CPUE. 1995-96 to 2013-14.

RACCOON

The statewide raccoon harvest had been declining but has increased in recent years, and jumped substantially during the 2011-12 through 2013-14 seasons relative to previous years (Table 17). The majority of raccoon harvested by trapping or hunting over most years has been in southern Montana's TD 3 and 5 and to a lesser degree TD 7 (Fig. 43). The estimated 2013-14 statewide harvest of 6,001 animals is the fifth highest in 20 years and was 18% above the 10-year average harvest. This high harvest was accompanied by an above average pelt price of $21.61 compared to the previous year of $27.56 (Table 17).

Examining the trend in CPUE it appears harvest effort has declined in the past several years, indicating that fewer raccoon are being taken per unit of effort (Fig.44). Population monitoring activities for raccoon are based completely on trapper harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as declining. However, with the higher raccoon harvest levels from 2011-12 through 2013-14 and higher pelt prices, this could be an indication of increased interest in trapping and/or hunting for raccoons. A comparison of CPUE for raccoon with the other unclassified nongame species is shown in Fig. 50.

Table 17. Raccoon harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	64	220	627	520	1724	272	965	4392	9.31	
1995-96	41	111	205	728	2335	471	795	4687	10.97	
1996-97	220	189	1012	1807	3547	976	1465	9216	15.26	
1997-98	61	338	1146	1422	2363	706	921	6956	14.67	
1998-99	144	198	871	736	1855	129	267	4200		
1999-00	69	200	977	908	1661	394	735	4944		
2000-01	11	205	1057	342	2091	281	399	4387	10.02	
2001-02	29	307	1484	485	1337	289	1273	5203	19.31	
2002-03	62	283	939	410	1160	380	1427	4662	11.01	
2003-04	78	258	1008	371	1869	904	1447	5936	11.51	
2004-05									11.01	
2005-06	121	154	1146	524	1125	500	814	4540	11.51	
2006-07	108	240	889	532	1517	266	816	4368	22.05	
2007-08	60	161	421	555	1277	358	651	4506	33.22	
2008-09	39	99	711	717	1343	70	307	4052	17.86	
2009-10	37	155	268	171	1037	145	137	4099	18.02	
2010-11	75	285	359	372	1294	89	218	3201	18.5	
2011-12	73	322	1141	503	2989	380	1000	6409	19.45	
2012-13	83	274	964	588	2557	763	1327	6557	27.56	
2013-14	82	157	680	714	2551	758	58	6001	21.61	

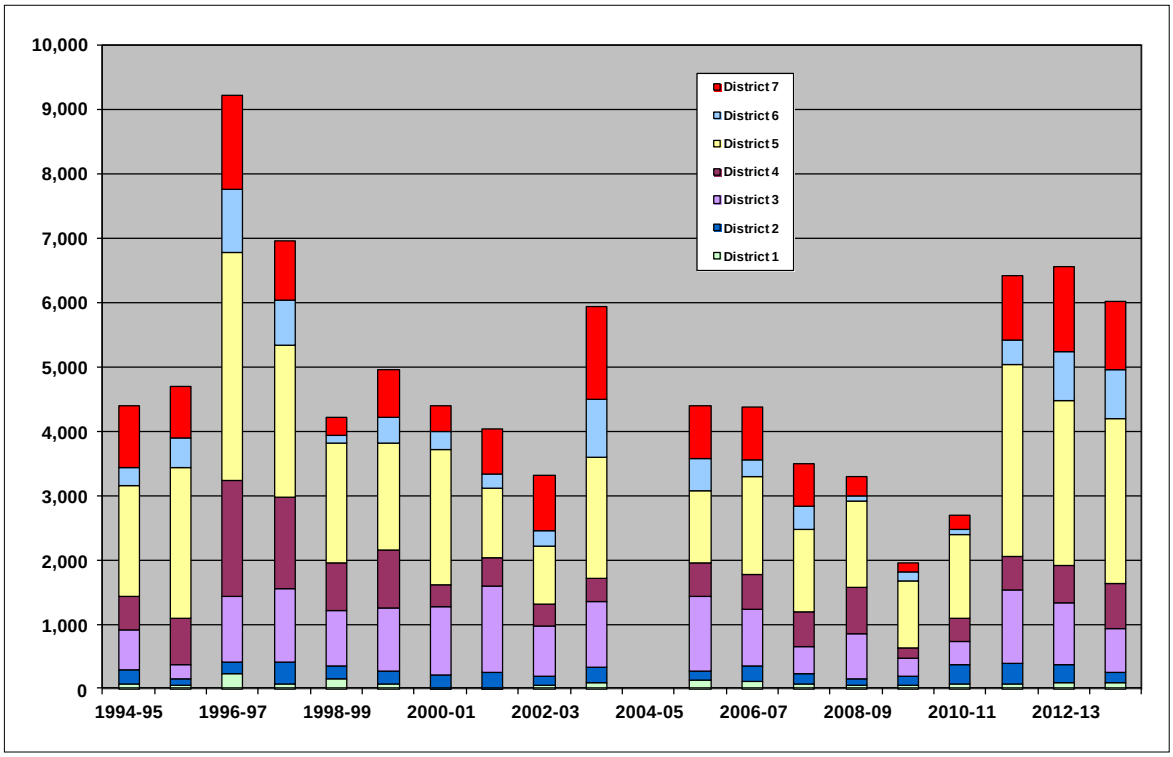

Figure 43. Statewide raccoon harvest by trapping district, 1994-95 to 2013-14.

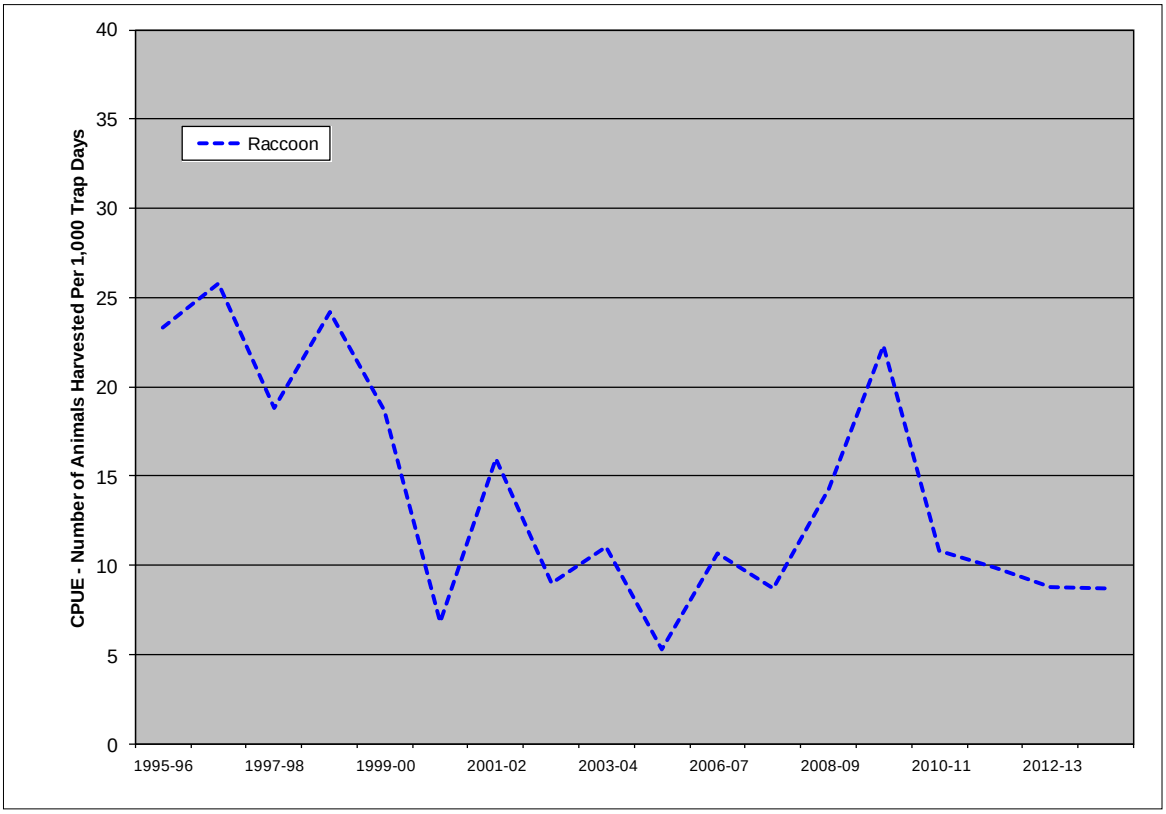

Figure 44. Statewide trend in raccoon harvest from CPUE, 1995-96 to 2013-14.

BADGER

The statewide badger harvest has been relatively inconsistent over the years, with low harvest numbers during several previous years, and then a significant increase beginning with the 2011-12 season and through the 2013-14 season (Table 18). The majority of the badgers taken over most years are in north central and northheastern Montana's TD 4 and 6 (Fig. 45). The estimated 2013-14 statewide harvest of 1,034 animals was 3% below the 10-year average harvest, along with a below average pelt price of $24.38 (Table 18). Several years of higher harvest levels following previous years of below average harvests occurred despite generally lower than average pelt prices. This may indicate badgers are taken opportunistically based on population size.

Examining the trend in CPUE it appears harvest effort has been stable to slightly declining through 2013-14, indicating that a relatively a similar number of badger are being taken per unit of effort (Fig. 46). Population monitoring activities for badger are based completely on trapper harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as stable. A comparison of CPUE for badger with the other unclassified nongame species is shown in Fig. 50.

Table 18. Badger harvest, pelt price, and harvest quota if applicable, 1994-95 to 2013-14.

Year	TD 1	TD 2	TD 3	TD 4	TD 5	TD 6	TD 7	State	Pelt Price	Quota
1994-95	12	17	114	289	26	135	338	931	11.87	
1995-96	2	2	85	280	29	5	85	491	10.01	
1996-97	4	4	102	1260	24	157	268	1819	11.19	
1997-98	0	5	174	563	38	146	146	1071	11.73	
1998-99	0	3	51	87	9	42	69	261		
1999-00	7	3	166	400	21	41	352	991		
2000-01	8	15	114	209	30	84	38	498	15.98	
2001-02	4	4	160	360	57	82	75	742	18.51	
2002-03	13	24	229	378	27	116	224	1012	21.51	
2003-04	8	20	361	765	336	66	232	1788	23.01	
2004-05									23.51	
2005-06	3	39	187	394	122	113	308	1166	27.51	
2006-07	0	32	269	178	190	324	336	1330	27.57	
2007-08	3	27	72	173	54	95	286	871	42.61	
2008-09	0	6	42	51	25	0	169	643	24.81	
2009-10	5	24	5	27	16	27	45	450	72.56	
2010-11	5	48	40	65	48	51	151	609	24.12	
2011-12	3	12	237	714	12	284	213	1474	38.61	
2012-13	29	0	91	497	72	293	309	1292	25.45	
2013-14	17	48	111	581	22	160	94	1034	24.38	

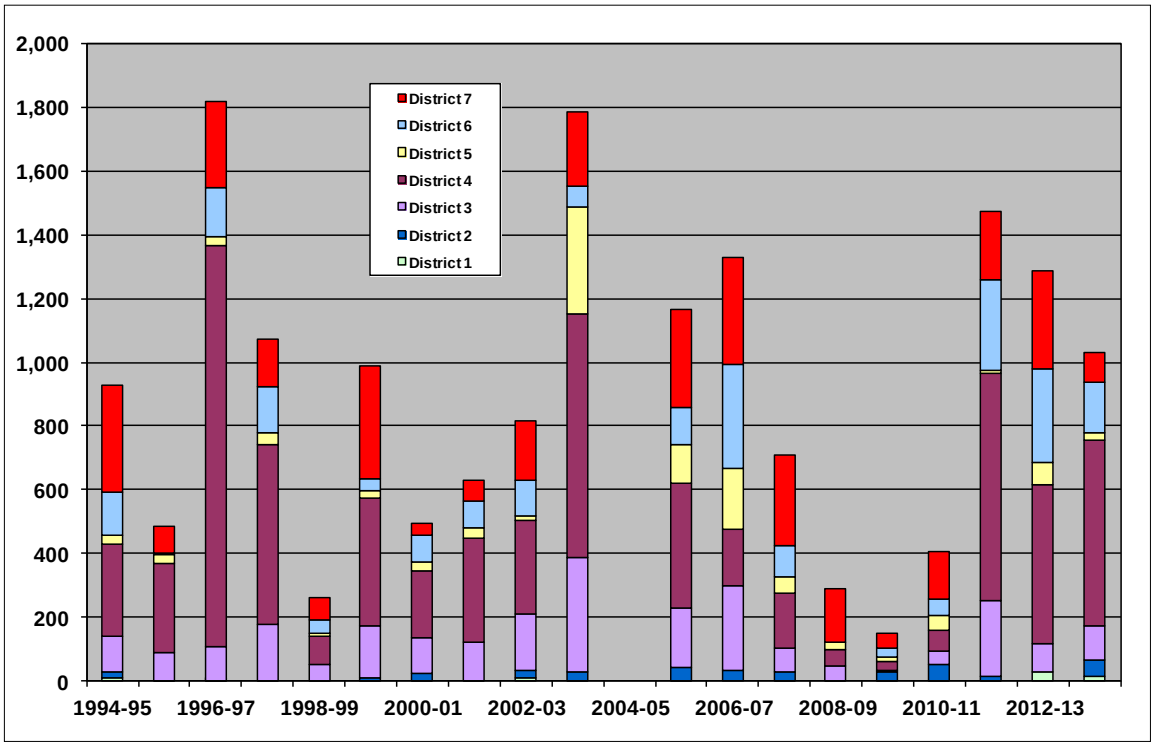

Figure 45. Statewide badger harvest by trapping district, 1994-95 to 2013-14.

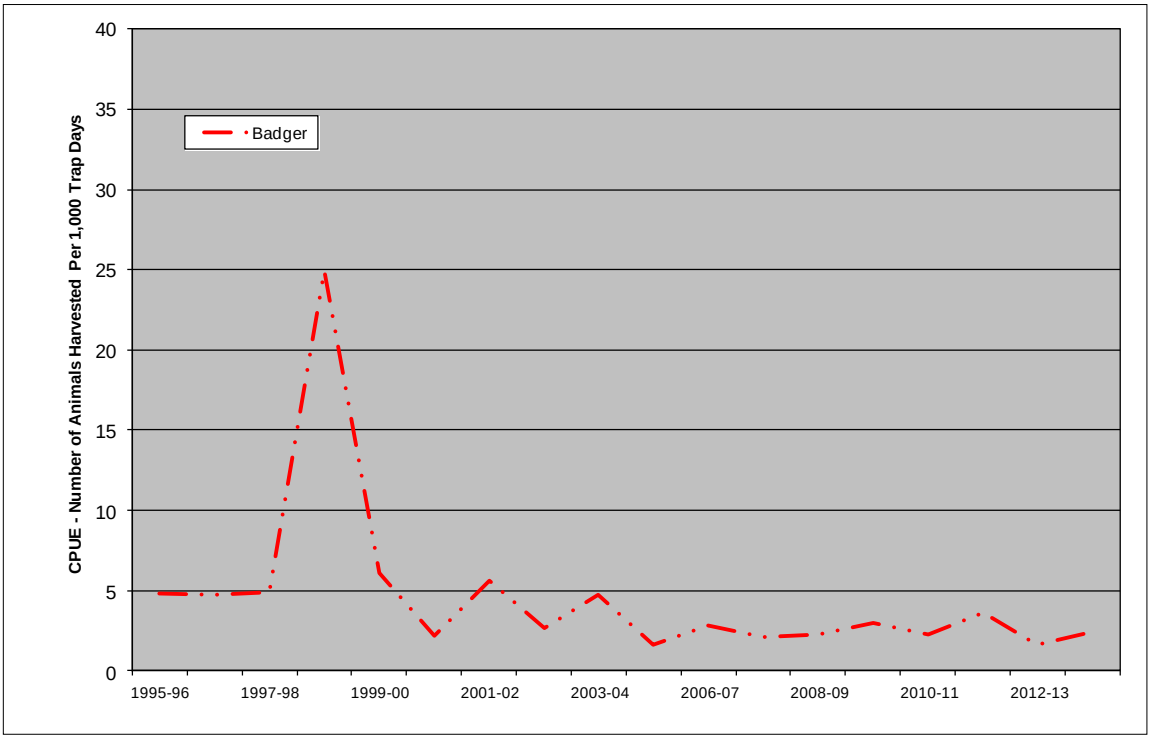

Figure 46. Statewide trend in badger harvest from CPUE, 1995-96 to 2013-14.

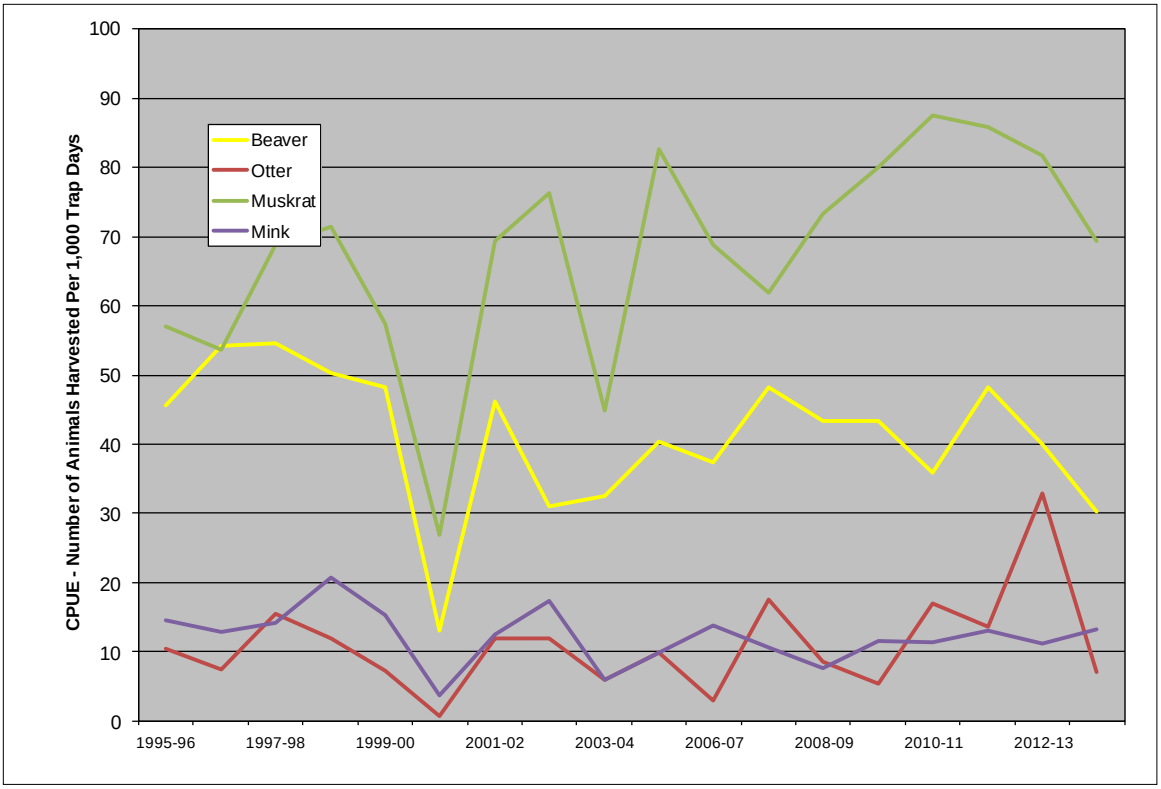

Figure 47. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2013-14.

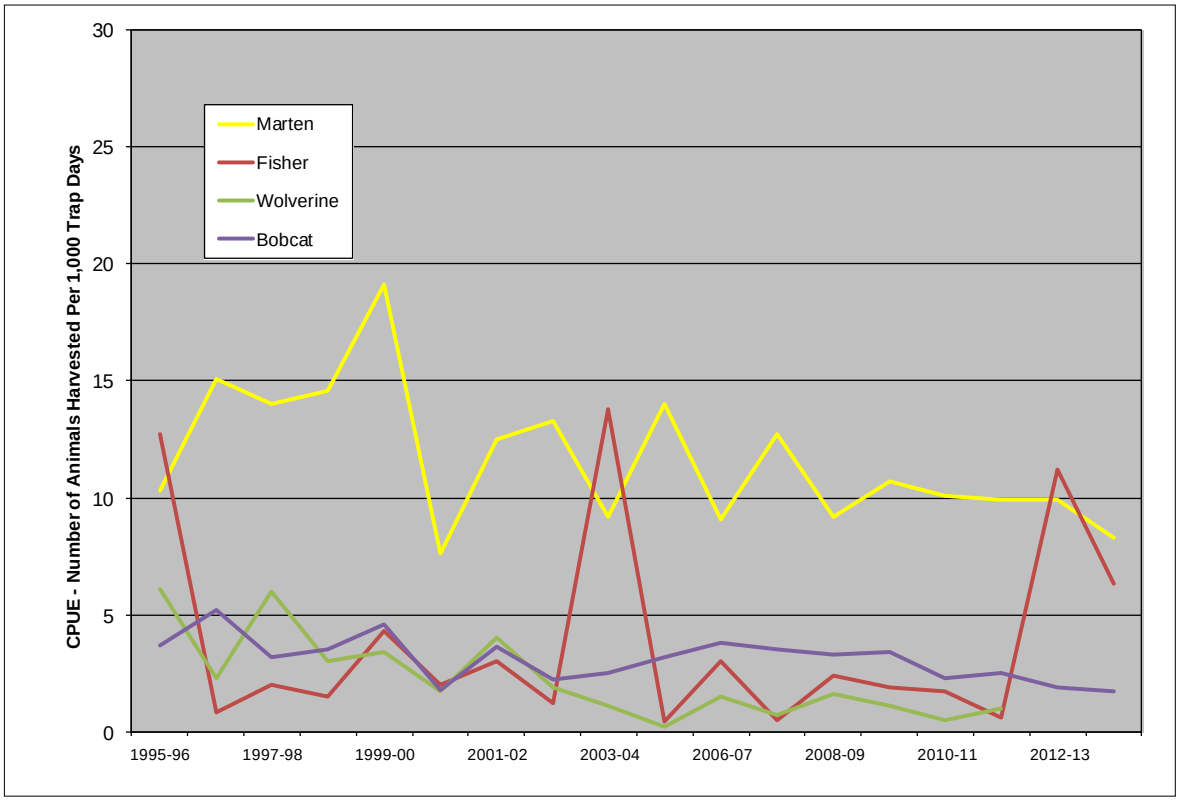

Figure 48. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2013-14.

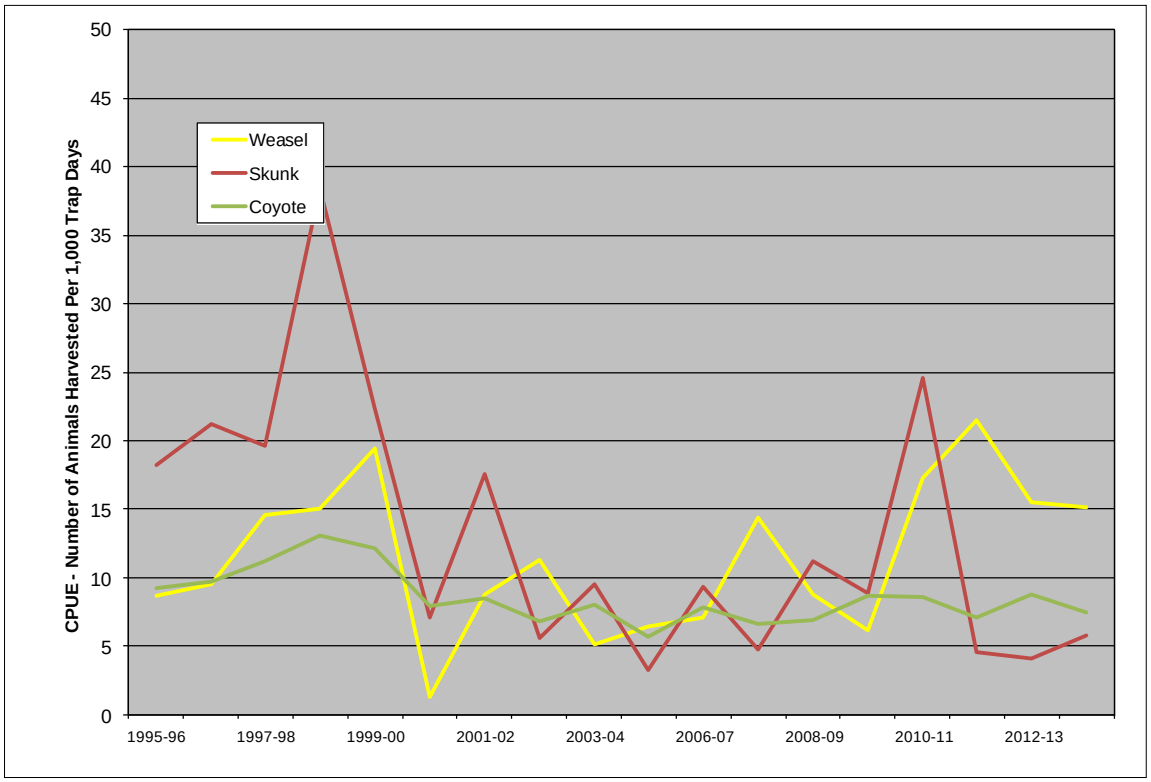

Figure 49. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2013-14.

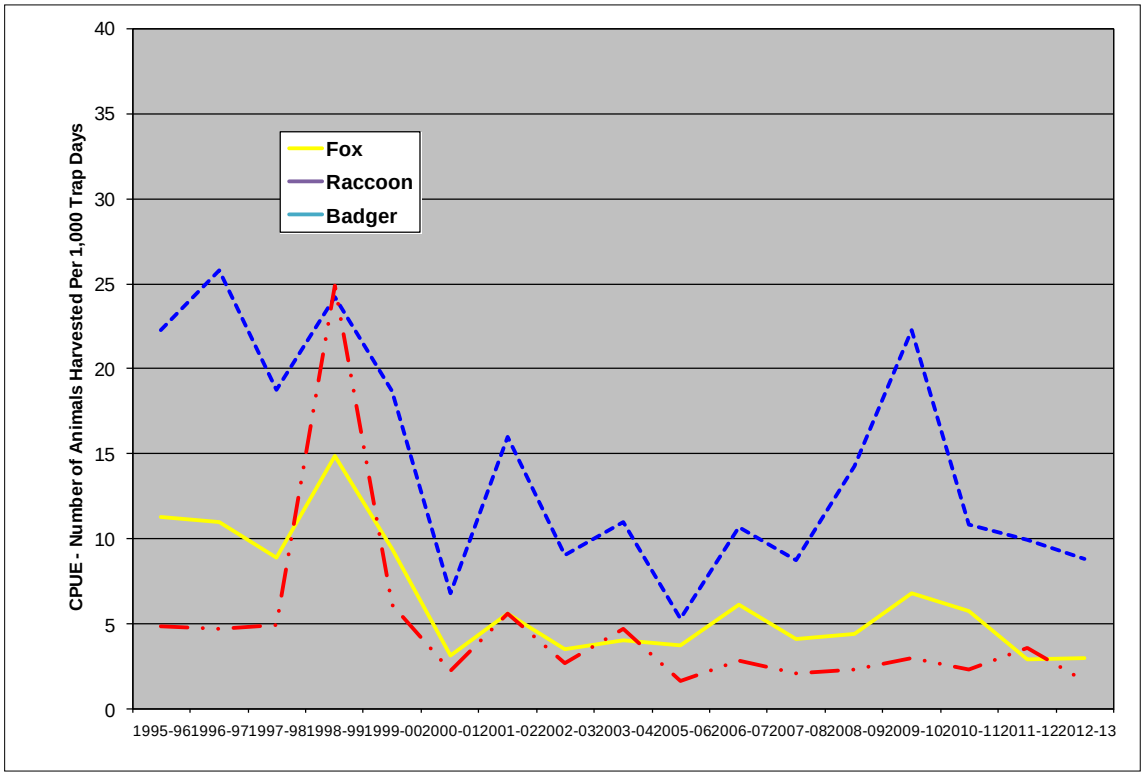

Figure 50. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2013-14.

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