# FURBEARER PROGRAM

## STATEWIDE HARVEST & MANAGEMENT REPORT 2011-2012

## MONTANA

Montana Fish, Wildlife & Parks

WILDLIFE RESTORATION

**FURBEARER PROGRAM**

**2011-12 STATEWIDE**

**HARVEST AND MANAGEMENT REPORT**

PERIOD COVERED: July 2011 – June 2012

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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 and bobcat are monitored through a statewide 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 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 license holders. No 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 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 are conducted by biologists following standardized survey protocol and track identification methods in Trapping Districts 1-4 (NW and SW mountainous forest habitats). The numbers of track detections were recorded along selected routes for furbearers, which include marten, fisher, wolverine, lynx, bobcat; prey species such as snowshoe hare and pine squirrel; and lion, weasel and coyote. Standardized forms are used to record species track detections and track identification measurements.

   Snow track surveys are utilized to determine: a) species occurrence/distribution, b) population trend from long-term track detection rates, and c) relative species abundance. A prey index of snowshoe hare numbers is used to predict furbearer population fluctuations and annual recruitment of several furbearer species. This is a continuing activity to further develop route design, survey and track detection methodology, and to further investigate population trend analysis and density estimate techniques.

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 (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. One furbearer program project (otter genetics study) was initiated during the report period and external research projects were either being conducted or completed during this time (lynx and bobcat).

**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 5,053 trapping license sold during the 2011-12 season was an increase of 20% from the previous year of 4,073 licenses and 21% above the 10-year average (Fig. 2). License purchases at the seven regional offices and the Helena headquarters are somewhat mixed each year. In 2011-12 all regional offices had increased sales from the previous year and the Helena headquarters had an increase in sales of 66% (Table 1). Online sales likely account for the increase in Helena based purchases. Again, a general upward trend in statewide license sales is apparently continuing through 2011-12 from the lowest number at any time of the 1,736 licenses sold in 1990-91.

## Annual Harvest Summary

Montana's furbearer harvest for the 2011-12 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 (Gude, pers. comm.). During the most recent year available, trapper survey questionnaires were returned from 35% of the 5,053 people who purchased a trapper's license during the 2011-12 furbearer season. The total number of animals reported being taken during the 2011-12 season increased by 32% over the 2010-11 season (Table 3). This increase may be the result of mild weather conditions, generally stable populations of most furbearing animal species in various portions of the state, and higher than average pelt prices for most species.

## Pelt Prices

Pelt prices continued a general increase for most species during the 2011-12 season, with several species demonstrating large increases in value, particularly beaver, otter, muskrat, mink, fisher, bobcat, and red fox (Table 4). The most significant increases in harvest numbers were reported for beaver, muskrat, marten, bobcat, coyote, fox and raccoon with decreases in the harvest of weasel and skunk, despite slightly higher prices from 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 60). The statewide harvest of most species was generally stable to increasing with a large increase in the muskrat harvest from 2010-11 and slight increases that have continued in marten and bobcat numbers over the past several years. 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 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 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 = # animals harvested/1,000 trap days) which is used to help monitor population trends (Species Harvest Summary (pages 17 to 60). 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 56 and 57 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 60). 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 most recent years may be available for age data, as processing adult teeth can take 1-2 years for results. Marten skull collections were discontinued beginning with the 2008-09 season. Fisher and wolverine sample sizes are very small, so they do not necessarily represent a population trend. Any additional species information from wildlife laboratory analysis will be reported as it becomes available in future reports.

The statewide results from annual snow track surveys conducted in Trapping Districts 1-4, which were initiated in 1990-91, are presented as the most recent 10-year summary in Table 19. Numbers reported indicate total track detections recorded for prey species, selected furbearers and several predators from combined route data. The corresponding indices of track detection rates per 100 miles traveled are provided in Table 20. Long-term trends in species detection rates may indicate changes in relative abundance. Statewide species track detection rates graphed as an index of abundance are presented in Figures 55 to 58. Statewide results through 2011-12 indicate track detection rates increased slightly for snowshoe hare from the previous year but remained below the long-term average. There was also an increase in pine squirrels track detections for this period. An increase in marten detection rates in 2011-12 were also above the 10-year average. Both fisher and wolverine detection rates in 2011-12 were slightly below the 10-year averages of 0.7 and 2.4, respectively. Detection rates declined substantially for lynx with a small reduction in lion track detections.

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. These reports need 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 supported and/or permitted by FWP or the state furbearer program during the report period included a bobcat study and lynx project in northwestern Montana. The bobcat study has been completed while the lynx project is ongoing. Wolverine work conducted from 2002-2010 has been completed and published. A bibliography of most furbearer program related research to date is listed on pages 61 to 67 in this report.

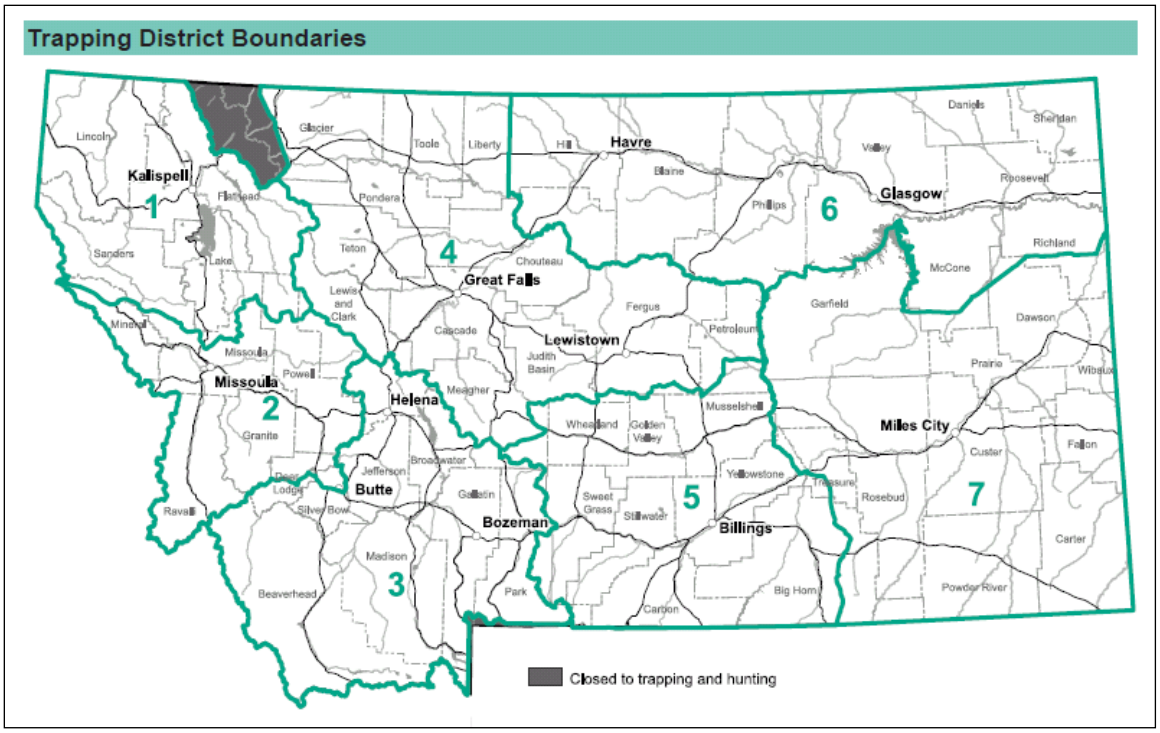


Figure 1. Map of Montana delineating furbearer regulation trapping districts and counties.

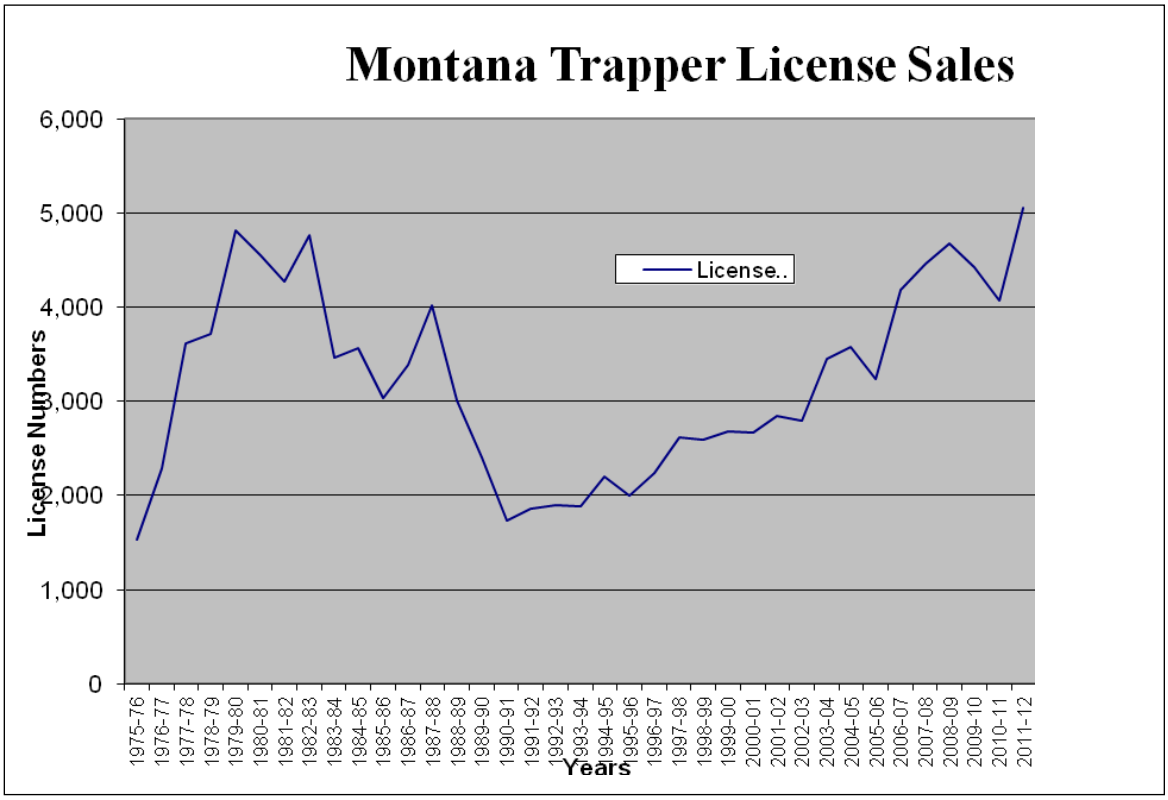


Figure 2. Montana trapper license sales trend, 1975-76 to 2011-12.

Table 1. Montana trapping license sales, 2011-2012.

| License Type | Kalispell | Missoula | Bozeman | Great Falls | Billings | Glasgow | Miles City | Helena | Statewide |
|---|---|---|---|---|---|---|---|---|---|
| General | 610 | 459 | 883 | 541 | 638 | 151 | 427 | 1,171 | 4,506 |
| Youth | 14 | 7 | 8 | 3 | 4 | 1 | 2 | 2 | 41 |
| Landowner | 5 | 2 | 54 | 30 | 26 | 10 | 31 | 5 | 127 |
| Nonresident | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 5 |
| **Total** | 629 (+7%) | 468 (+6%) | 907 (+16%) | 577 (+6%) | 668 (+2%) | 162 (+38%) | 462 (+6%) | 1,178 (+66%) | 5,053 (+20%) |

Table 2. Montana furbearer, predator and nongame species harvest summary, 2011-2012.

| Trapping District | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Total* |
|---|---|---|---|---|---|---|---|---|
| Beaver | 357 | 1,225 | 1,805 | 1,931 | 567 | 696 | 252 | 6,833 |
| Otter | 22 | 19 | 21 | 3 | 3 | 0 | 0 | 68 (7) |
| Muskrat | 1,740 | 6,304 | 11,057 | 3,180 | 705 | 3,452 | 799 | 27,236 |
| Mink | 53 | 190 | 415 | 102 | 58 | 23 | 29 | 872 |
| Marten | 353 | 420 | 308 | 2 | 1 | -- | -- | 1,083 |
| Fisher | 2 | 5 | -- | -- | -- | -- | -- | 7 |
| Wolverine | 0 | 2 | 0 | 0 | 0 | -- | -- | 2 |
| Bobcat | 259 | 104 | 275 | 311 | 308 | 91 | 627 | 1,975 |
| Swift Fox | - | - | - | - | - | 16 | - | 16 |
| Weasel | 199 | 105 | 15 | 6 | 0 | 15 | 3 | 342 |
| Skunk | 32 | 120 | 292 | 140 | 436 | 117 | 597 | 1,735 |
| Coyote | 292 | 6-05 | 1,243 | 4,660 | 1,834 | 3,487 | 4,276 | 16,398 |
| Red Fox | 29 | 541 | 333 | 328 | 450 | 196 | 591 | 2,469 |
| Raccoon | 73 | 322 | 1,141 | 503 | 2,989 | 380 | 1,000 | 6,409 |
| Badger | 3 | 12 | 237 | 714 | 12 | 284 | 213 | 1,474 |
| **Total** | 3,414 | 9,974 | 17,142 | 11,880 | 7,363 | 8,757 | 8,387 | 66,919 |

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

Table 3. Montana furbearer, predator and nongame species 10-year harvest (legal) summary, 2002-2003 to 2011-2012.

| Year | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|---|---|
| Beaver | 8,475 | 9,361 | | 8,918 | 7,421 | 7,219 | 7,124 | 5,795 | 5,445 | 6,833 |
| Otter | 83 | 80 | 88 | 93 | 78 | 67 | 60 | 64 | 58 | 68 |
| Muskrat | 11,448 | 11,915 | | 21,270 | 17,014 | 10,042 | 10,699 | 12,754 | 18,494 | 27,236 |
| Mink | 1,071 | 808 | | 1,306 | 1,348 | 1,018 | 655 | 584 | 760 | 872 |
| Marten | 1,053 | 1,062 | 1,248 | 952 | 856 | 1,141 | 844 | 711 | 932 | 1,083 |
| Fisher | 7 | 8 | 7 | 9 | 7 | 6 | 7 | 6 | 8 | 7 |
| Wolverine | 15 | 10 | 11 | 11 | 9 | 9 | 4 | 3 | 4 | 2 |
| Bobcat | 1,786 | 1,783 | 2,114 | 2,201 | 2,228 | 2,389 | 2,428 | 1,738 | 1,644 | 1,975 |
| Weasel | 405 | 321 | | 243 | 503 | 310 | 175 | 120 | 488 | 342 |
| Skunk | 1,422 | 2,996 | | 2,325 | 1,933 | 2,599 | 1,845 | 2,717 | 3,975 | 1,735 |
| Coyote | 10,725 | 12,286 | | 9,412 | 10,886 | 9,723 | 6,969 | 9,048 | 8,489 | 16,398 |
| Fox | 2,552 | 2,056 | | 2,473 | 3,164 | 1,862 | 1,696 | 1,471 | 1,418 | 2,469 |
| Raccoon | 4,662 | 5,936 | | 4,540 | 4,368 | 4,506 | 4,052 | 4,099 | 2,201 | 6,409 |
| Badger | 1,012 | 1,788 | | 1,166 | 1,330 | 871 | 643 | 450 | 609 | 1,474 |
| **TOTAL** | 44,716 | 50,411 | | 54,939 | 51,145 | 41,762 | 37,201 | 39,110 | 45,531 | 66,919 |

Table 4. Average pelt price reported by species, 1990-91 to 2011-12.

| 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 |

## BEAVER

The statewide beaver harvest has been relatively stable over the last several years, but was higher in 2011-12 than the previous two years and has been at a much lower level since the most recent peak harvests in the late 1990s (Fig.3). The estimated 2011-12 harvest level of 6,833 is below the 10-year average harvest level, despite the highest reported pelt price during the past 18 years (Table 5).

Examining the trend in CPUE it appears harvest effort increased during the 2011-12 season after several years of a general decline, indicating that more beaver are being taken per unit of effort (Fig. 4). Population monitoring activities for beaver are based completely on harvest survey data, with the CPUE considered to indicate relative population trend, which could be considered as increasing, with recent decreases since 2007-08. A comparison of CPUE for beaver with the other semi-aquatic species is shown in Fig. 51.

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. Habitat conditions may also be influencing beaver numbers by expanding water areas and riparian tributaries as a result of good spring moisture conditions, at least in some regional areas of the state, particularly in western and central Montana.

Table 5. Beaver harvest, pelt price, and quota level if applicable, 1994-95 to 2011-12.

| 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 | |

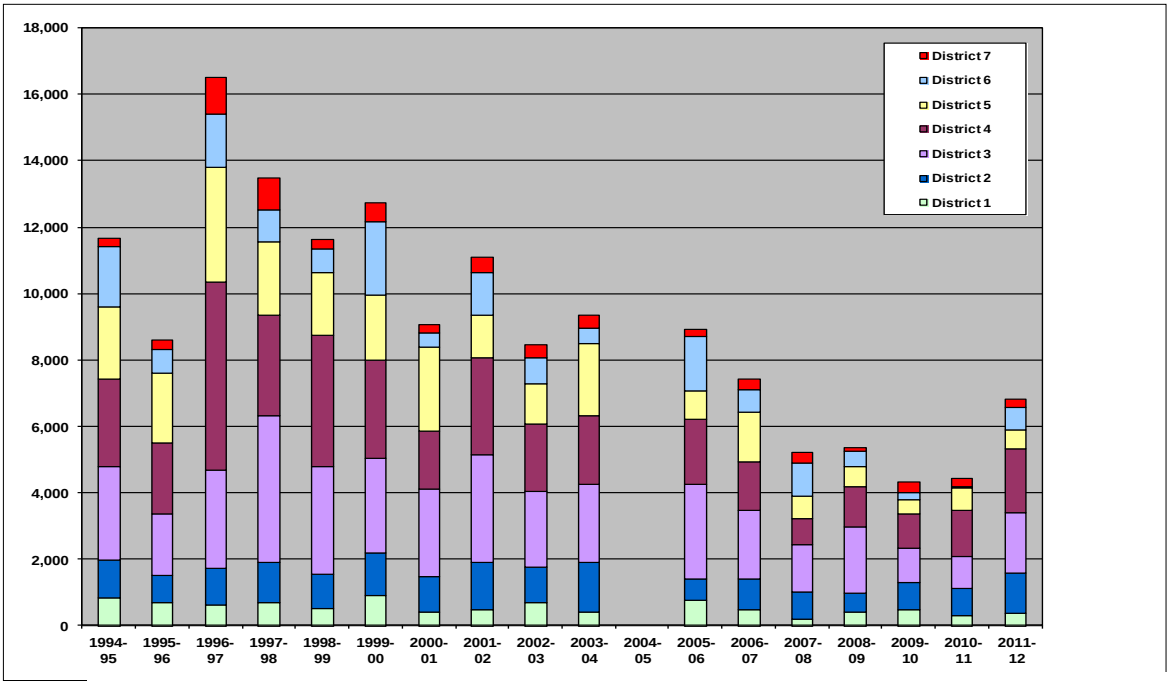


**Figure 3. Statewide beaver harvest by trapping district, 1994-95 to 2011-12.**

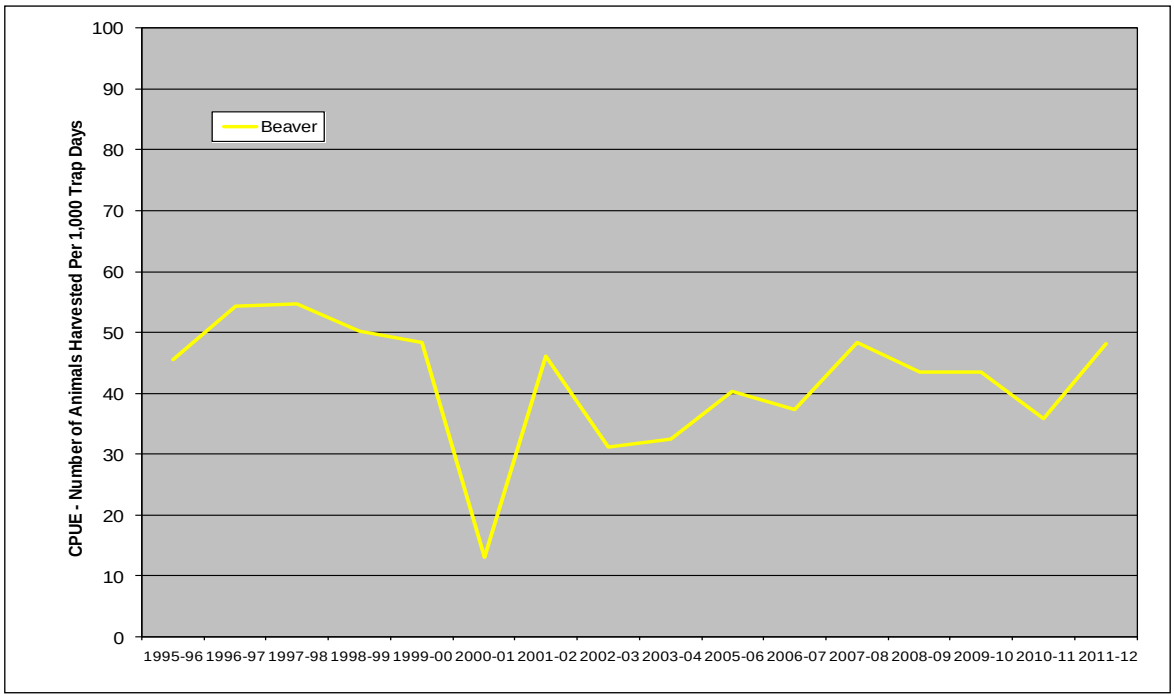


**Figure 4. Statewide trend in beaver harvest from CPUE, 1995-96 to 2011-12.**

## OTTER

Otter 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. The 2011-12 harvest of 68 otters is about 8% below the 10-year average of 74 otters (Table 6). The otter harvest has always been managed through a trapper limit and then since the 2002-03 season also under trapping district (TD) quotas. Up through the 2001-02 season a one otter per trapper limit was in place, which was also changed in 2002-03 to a two otter limit per trapper under the regulated quota in each of the seven TD's. The two otter limit and quota changes were made in response to healthy populations, to reduce incidental take in beaver sets, and more interest by trappers as pelt prices were increasing at that time. Quotas were used as a harvest management tool to maintain well distributed and healthy otter populations, while providing 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 in 2005-06. Harvest has since declined through the 2011-12 season, despite a higher pelt price similar to the 2005-06 pelt value. 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 is relatively stable (Fig. 6) and a comparison of otter CPUE with the other semi- aquatic species is presented in Fig. 51. 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 2011-12 season. Although not all data is not available for some years, trends in population parameters that show juveniles per adult female, age structure, sex ratios, and median ages shown in Fig. 7 to 10 indicate a relatively stable population on a statewide basis.

Table 6. Otter harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 |

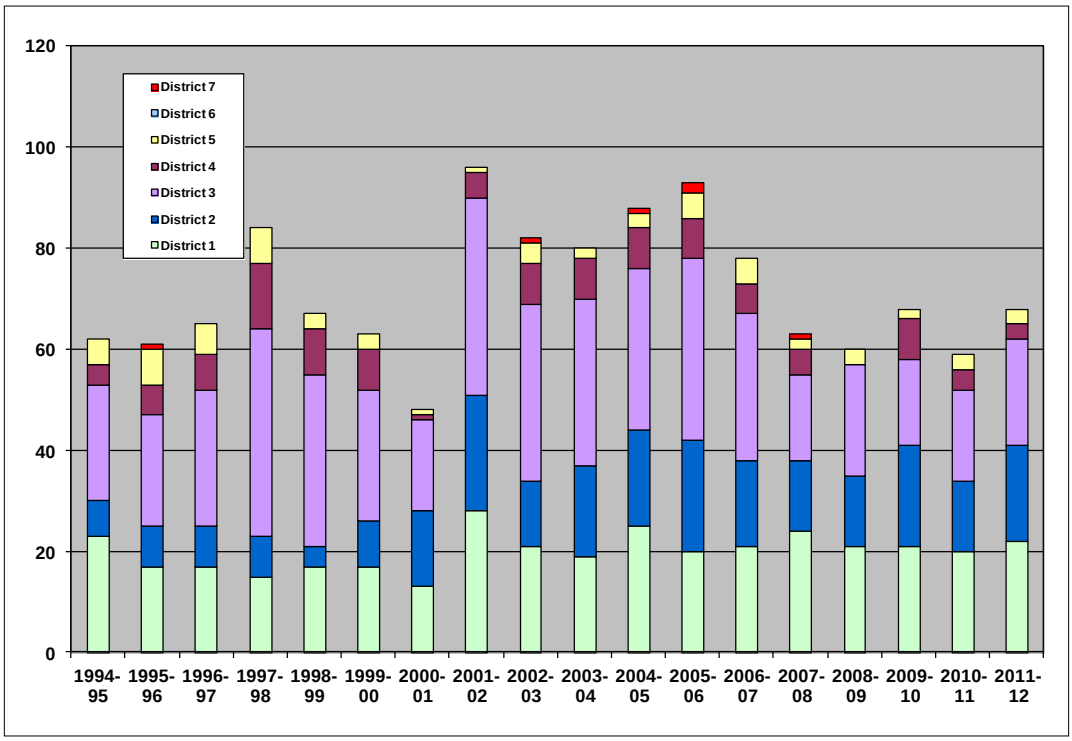


**Figure 5. Statewide otter harvest by trapping district, 1994-95 to 2011-12.**

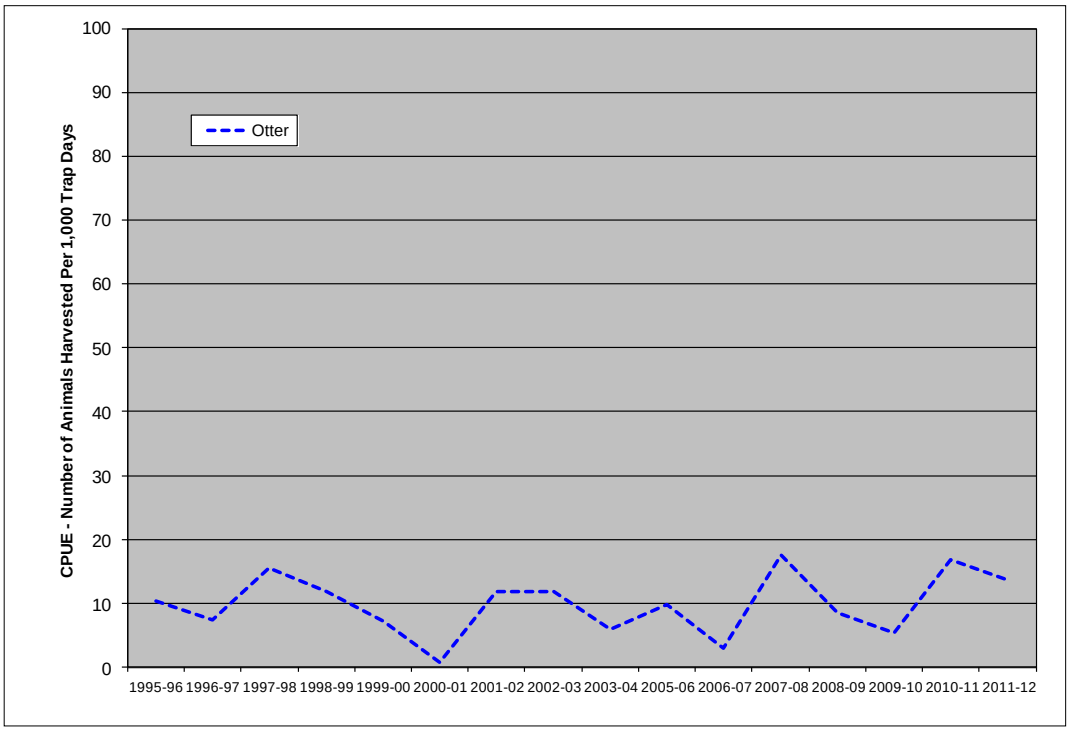


**Figure 6. Statewide trend in otter harvest from CPUE, 1995-96 to 2011-12.**

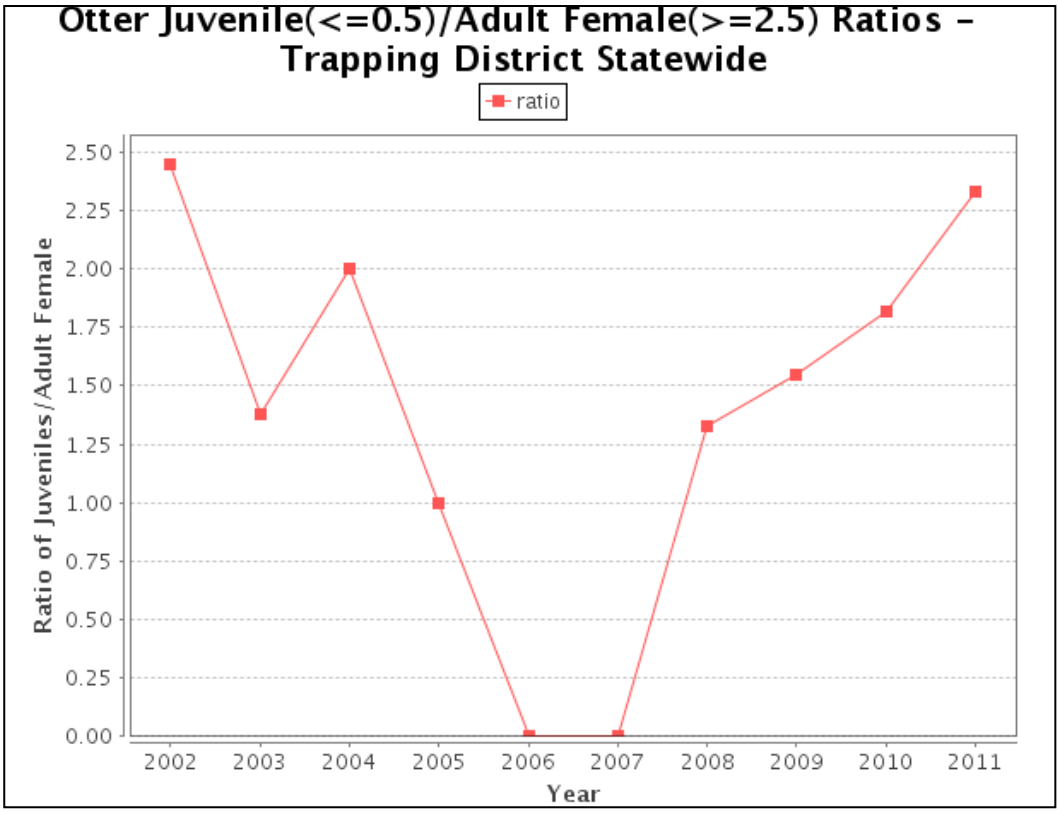


**Figure 7. Otter population parameter of juveniles per adult female ratio, 2002-03 to 2011-12.**

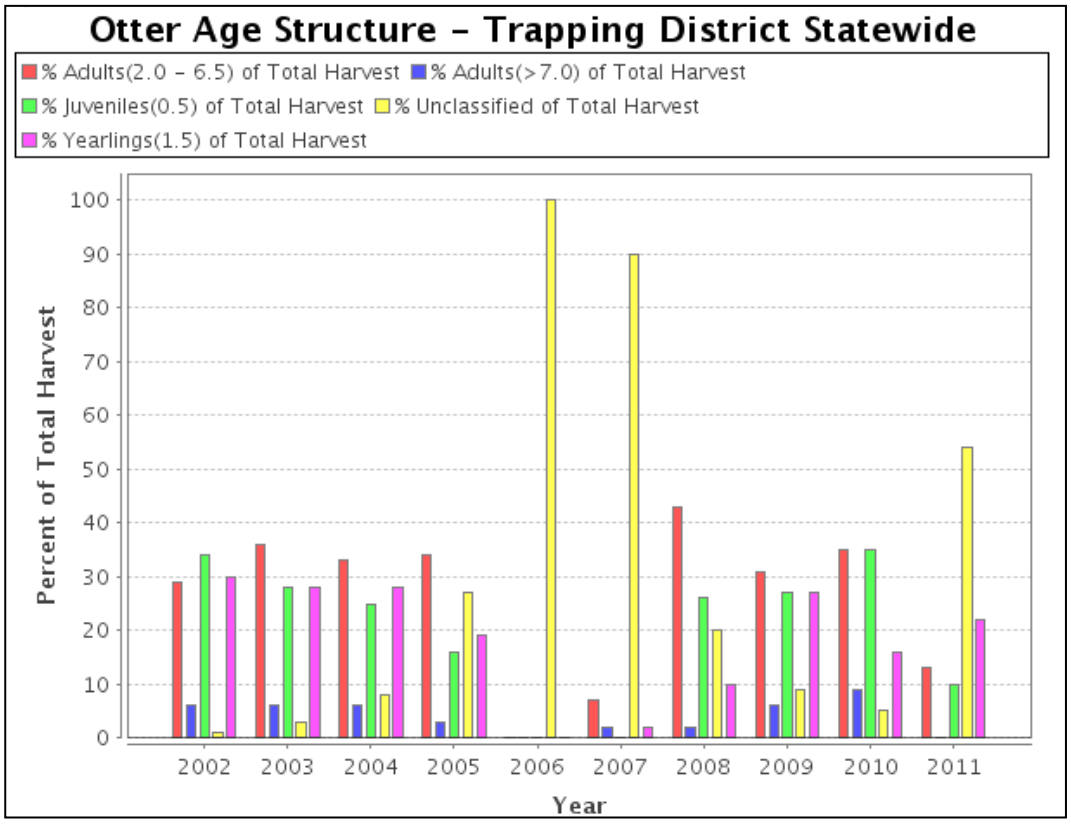


**Figure 8. Otter population parameter of age structure, 2002-03 to 2011-12.**

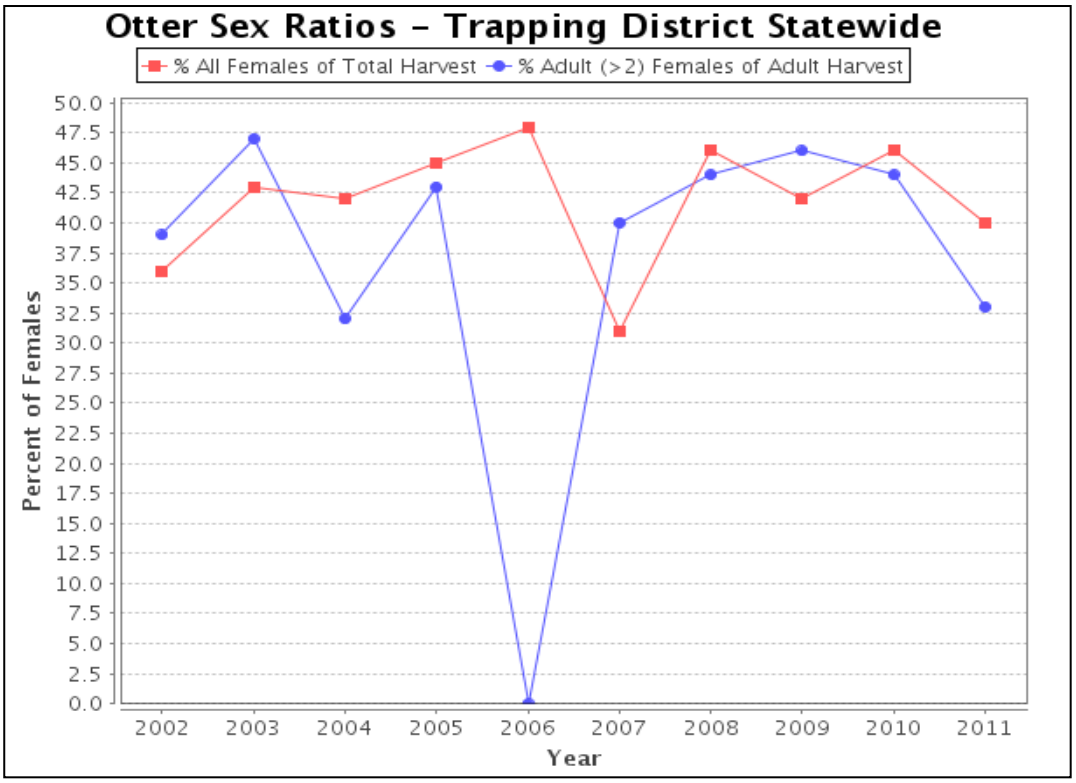


**Figure 9. Otter population parameter of sex ratios, 2002-03 to 2011-12**

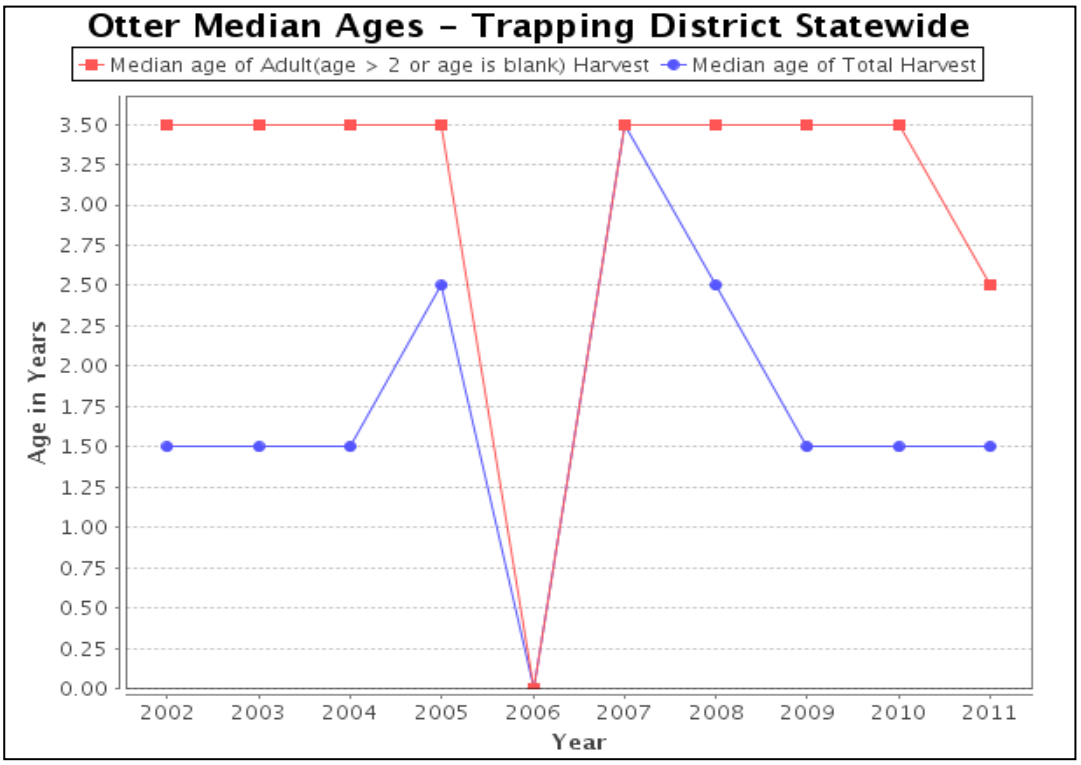


**Figure 10. Otter population parameter of median ages, 2002-03 to 2011-12.**

## MUSKRAT

The statewide muskrat harvest has continually increased during the past five years with a significant peak harvest of 27,236 animals during the 2011-12 season, that was 32% more harvested muskrats than the estimated numbers for the previous year (Table 7). This was accompanied by higher than average pelt prices of $10.19 compared to the previous 10-yeara average pelt price of $3.20. In addition, the estimated 2011-12 muskrat harvest was 48% above the 10-year average harvest of 14,087 animals (Fig. 11).

Population monitoring activities for muskrat are based completely on harvest survey data, with CPUE from the harvest survey considered to be an indicator of relative population trend, which could be considered as stable to increasing, with a recent increase until the 2011-12 season. Examining the trend in CPUE it appears harvest effort has generally increased, indicating that more muskrat are being taken per unit of effort until leveling off somewhat during the 2011-12 season (Fig.12). A comparison of CPUE for muskrat with the other semi-aquatic species is shown in Fig. 51.

Table 7. Muskrat harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 | |

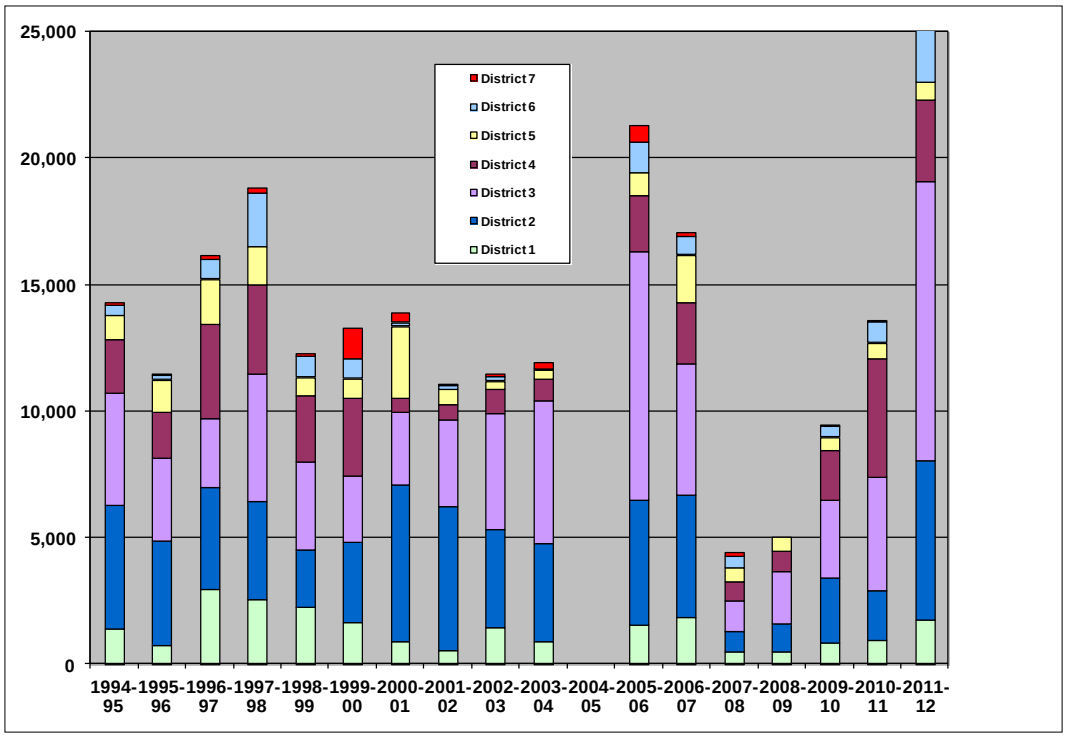


**Figure 11. Statewide muskrat harvest by trapping district, 1994-95 to 2011-12.**

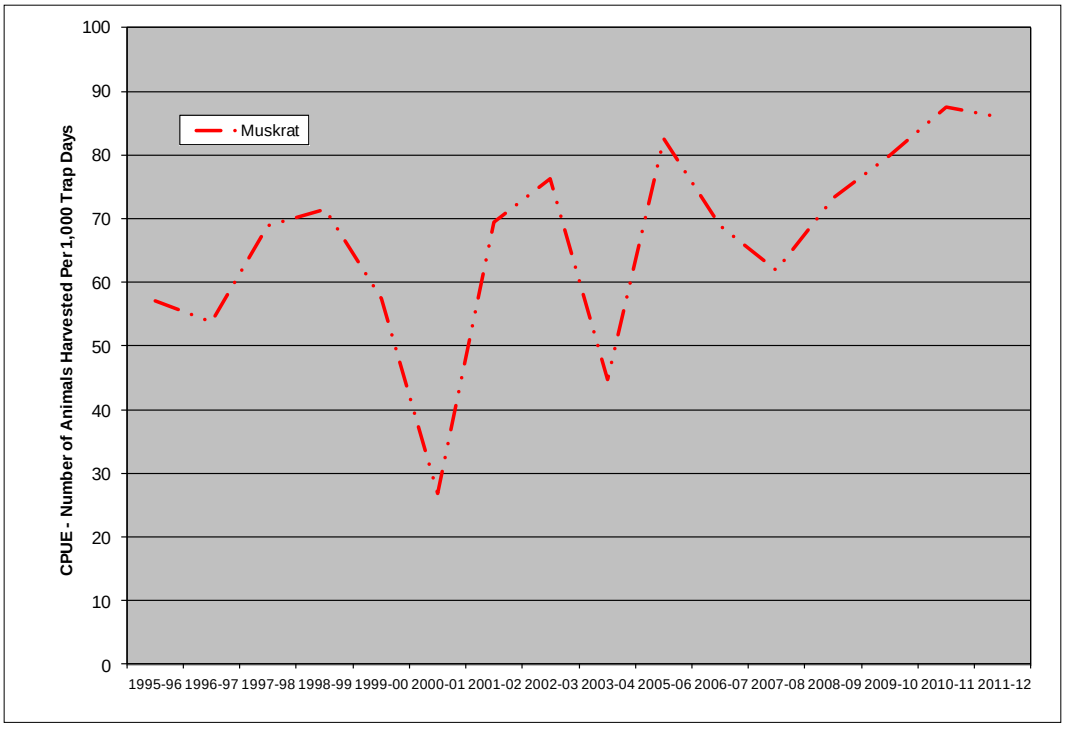


**Figure 12. Statewide trend in muskrat harvest from CPUE, 1995-96 to 2011-12.**

## MINK

The statewide mink harvest continues to remain somewhat stable and has increased over the past several years. The 2011-12 estimated harvest of 872 mink is the highest in four years (Table 8). Mink harvest is considered to be somewhat correlated to interest in muskrat trapping, however this does not appear to be the case with the 2011-12 peak in muskrat harvest numbers. The estimated 2011-12 mink harvest was only 4% above the 10-year harvest average (Fig. 13), despite good pelt prices. The average value of mink pelts was the highest level in at least 18 years (Table 8). This average mink harvest may be a consequence of changing private ownership that precludes traditional access to small streams and wetlands, while muskrat can be found on public land wetlands.

Population monitoring activities for muskrat are based completely on harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as stable, despite the average estimated harvest during the 2011-12 season. When examining the trend in CPUE for mink, it appears harvest effort has generally remained stable, with some changes in harvest effort that may be related over time to interest in muskrat trapping, indicating that mink are being harvested at about a similar rate per unit of effort, at least until the until the 2011-12 season (Fig.14). A comparison of CPUE for mink with the other semi-aquatic species is shown in Fig. 51.

Table 8. Mink harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 | |

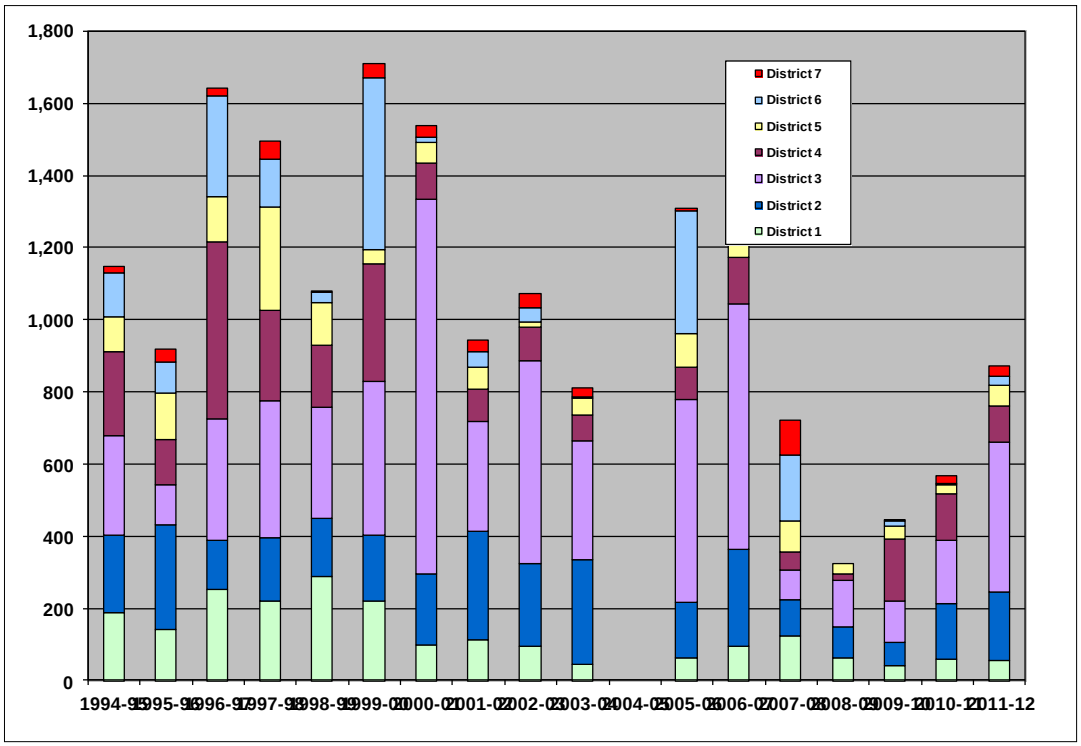


**Figure 13. Statewide mink harvest by trapping district, 1994-95 to 2011-12.**

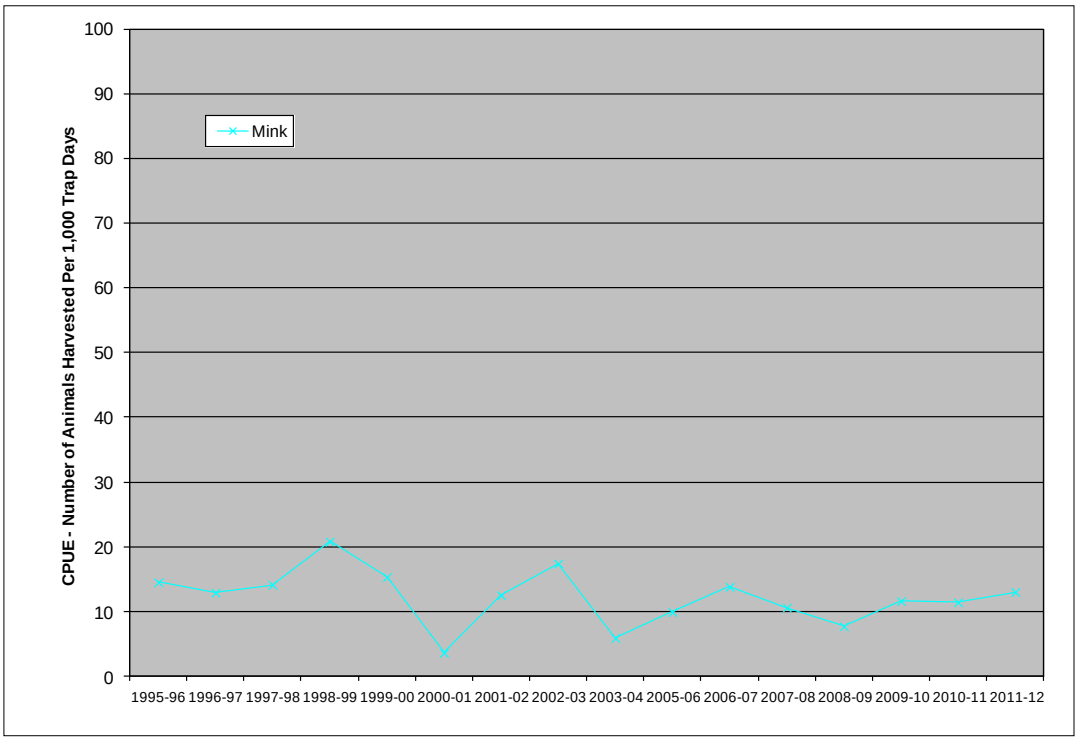


**Figure 14. Statewide trend in mink harvest from CPUE, 1995-96 to 2011-12.**

## MARTEN

Marten 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. The statewide marten harvest continues to remain relatively stable, with an increasing harvest trend during the past several years including 2011-12 (Fig. 15). The 2011-12 harvest level of 1,083 marten was 9% above the 10-year average harvest and within the range of 711 to 1,141 over the past 10 years. The higher harvest in 2011-12 may correspond to a similar increase in pelt prices from the previous year (Table 9). Examining the trend in CPUE it appears harvest effort has decreased slightly on a statewide basis, indicating that fewer marten are being taken per unit of effort (Fig.16). Also, the distribution of the marten harvest is apparently shifting somewhat back to TD 1 in northwestern Montana as TD 2 and TD 3 in west central and southwestern Montana, respectively, remain similar to previous years (Fig. 15). Primary marten habitat is located almost exclusively on public lands.

Population monitoring for marten has 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 collection was discontinued beginning with the 2008-09 season because of the difficulty in reconciling individual skulls to male/female categories for age data. The statewide trend in marten using CPUE appears to be a stable trend (Fig.16) and a comparison of marten CPUE with the other terrestrial species is presented in Fig 52. Although marten age data has not been available since 2006-07 season, the previous long-term trend in population parameters show an average of three juveniles per adult female (Fig. 17), a positive age structure bias to juveniles (Fig. 18), a stable sex ratio (Fig. 19), with a slight decrease in median age of adults and median age of total harvest at one and a half, indicating a strong proportion of juveniles in the population (Fig. 20). Again, these parameters indicate a relatively stable population that is likely maintaining itself on a statewide basis.

Table 9. Marten harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 | |

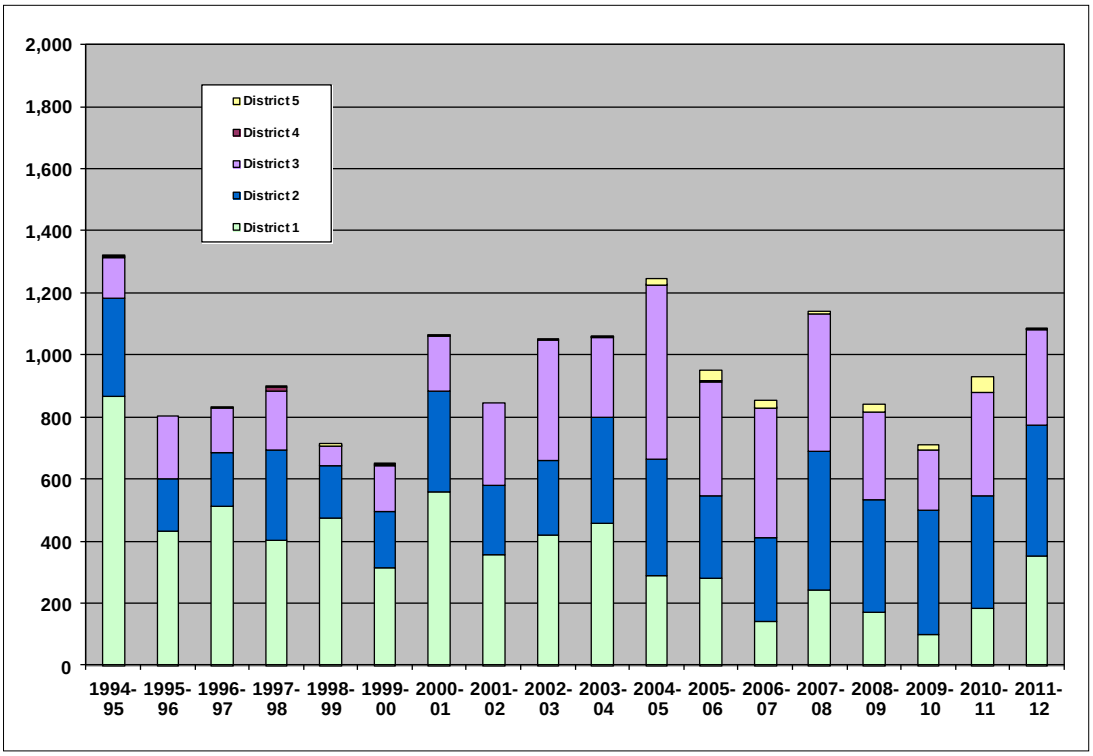


**Figure 15. Statewide marten harvest by trapping district, 1994-95 to 2011-12.**

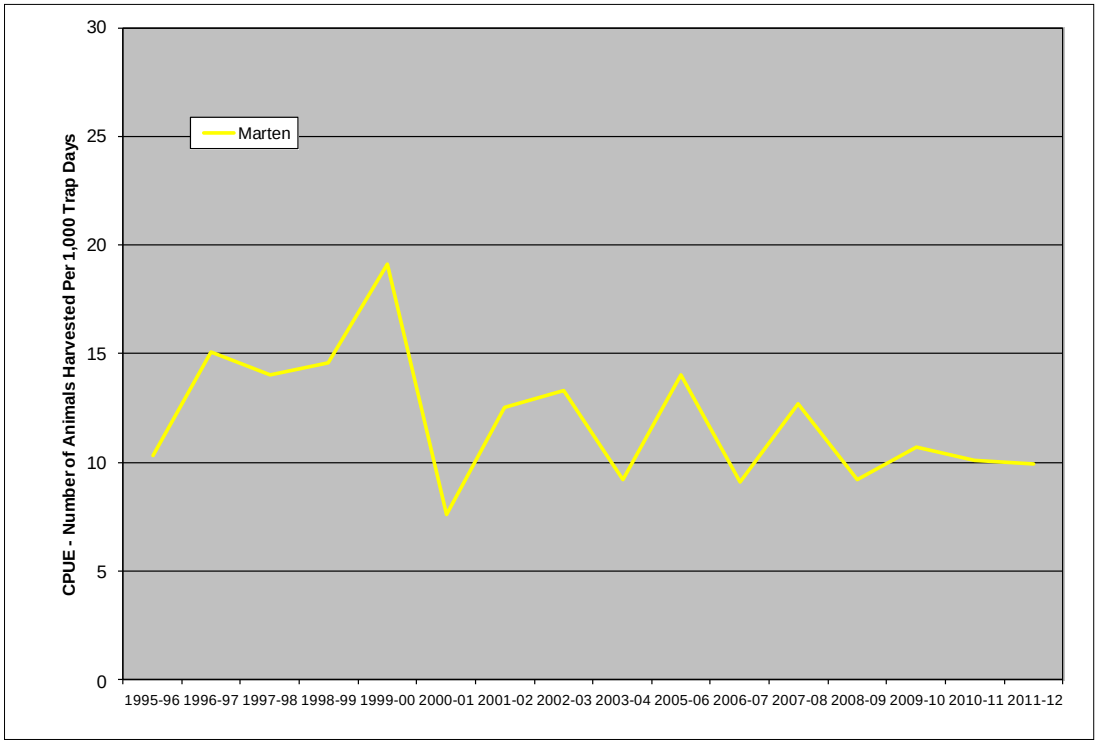


**Figure 16. Statewide trend in marten harvest from CPUE, 1995-96 to 2011-12.**

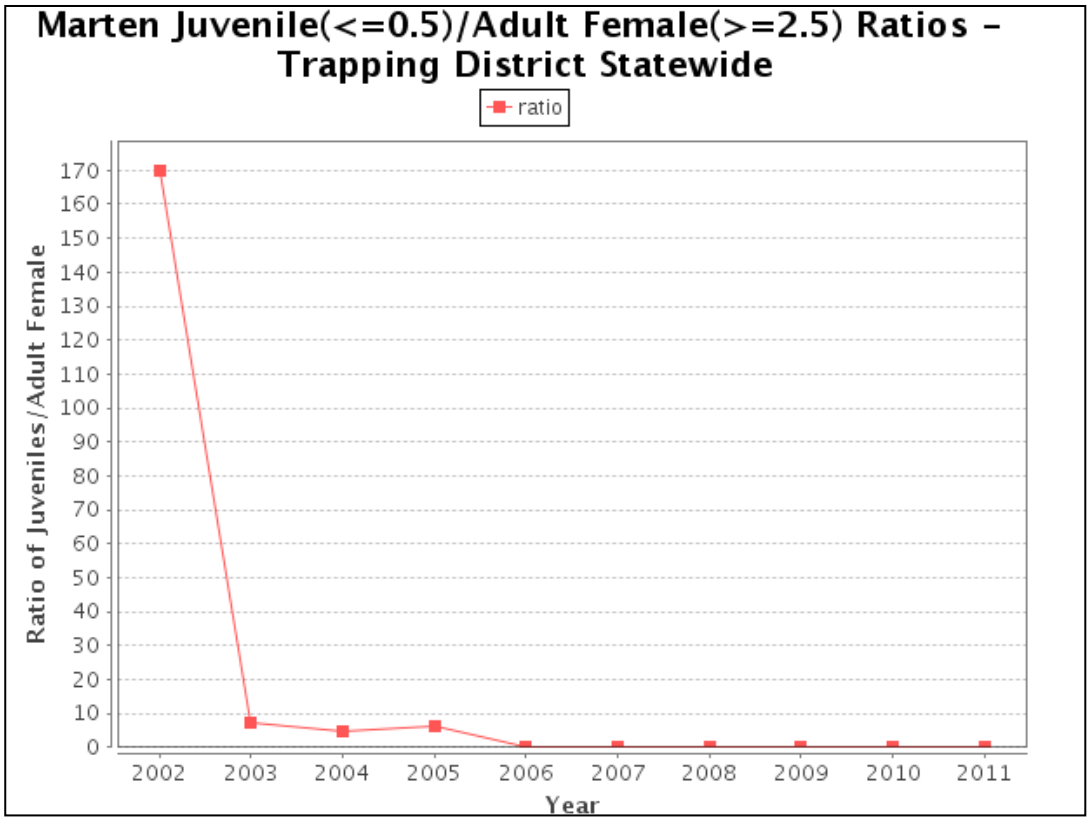


**Figure 17. Marten population parameter of juveniles per adult female ratio, 2002-03 to 2011-12.**

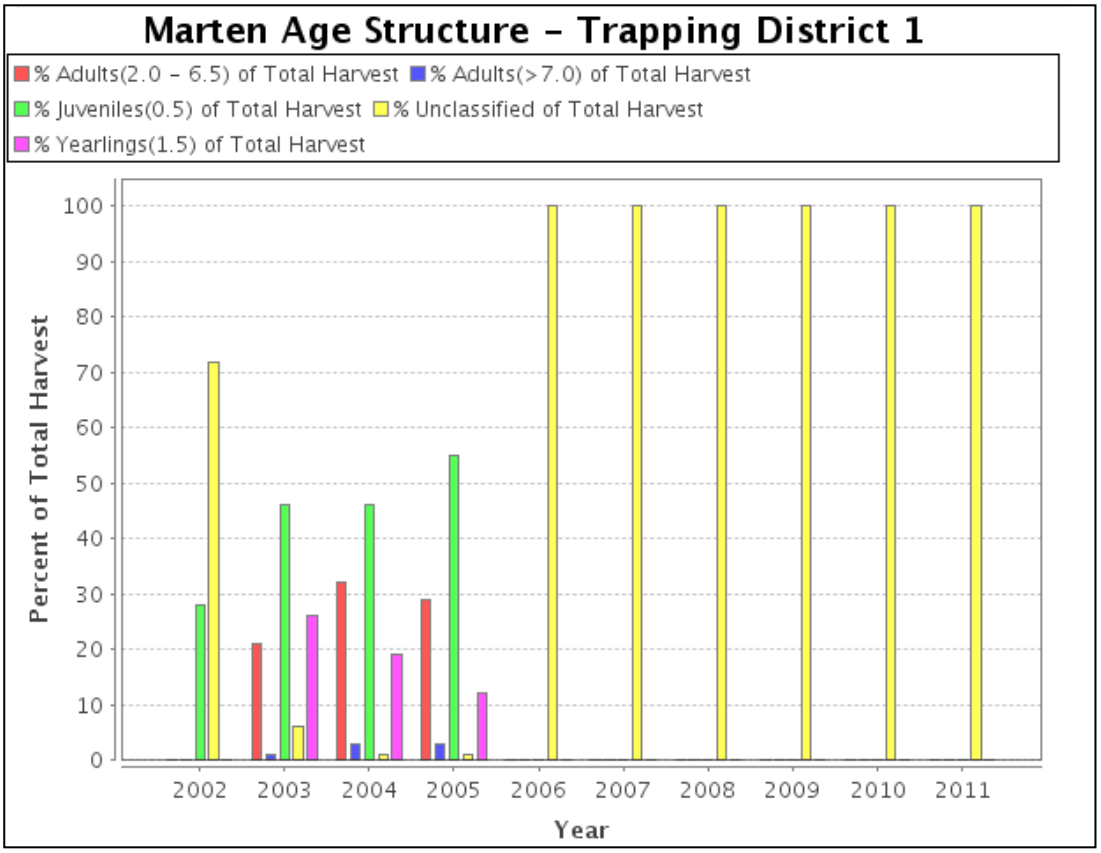


**Figure 18. Marten population parameter of age structure, 2002-03 to 2011-12.**

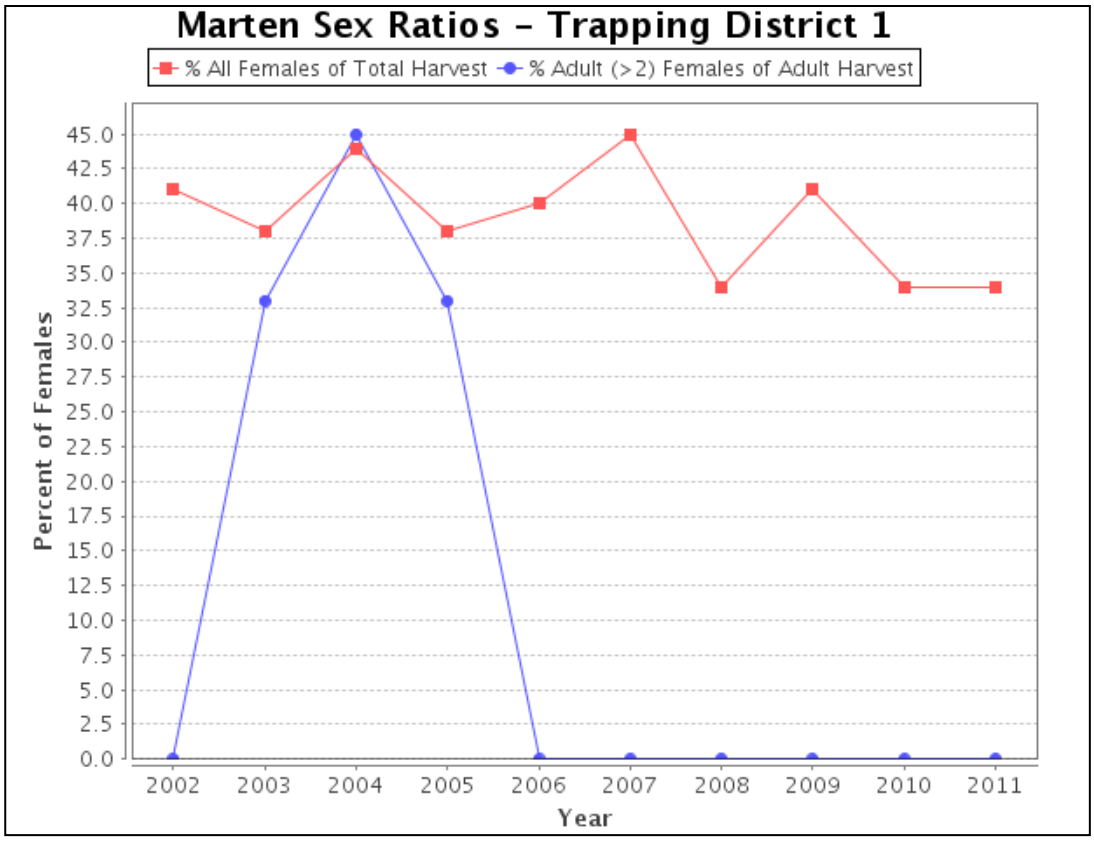


**Figure 18. Marten population parameter of sex ratios, 2002-03 to 2011-12.**

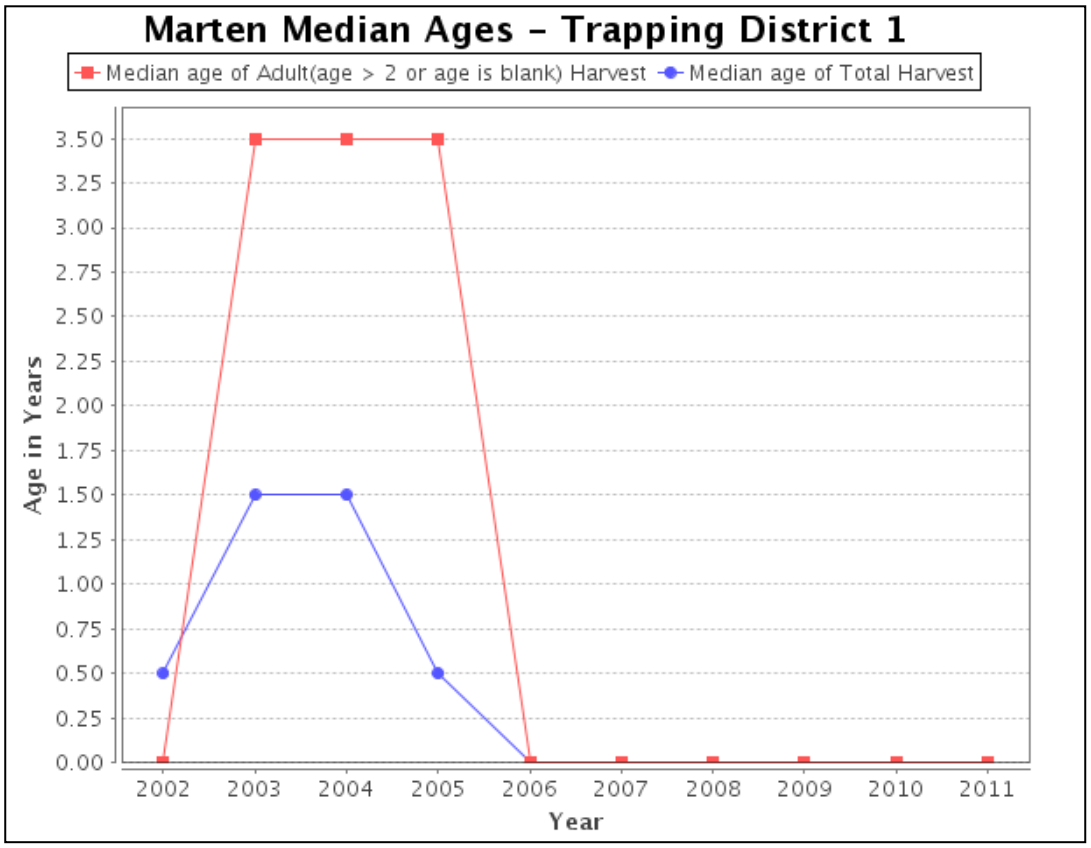


**Figure 19. Marten population parameter of median ages, 2002-03 to 2011-12.**

## FISHER

The fisher harvest has been managed through a trapper limit of one and quotas in trapping districts (TD) 1 and 2. Over time, conservative adjustments have been made to quota levels that were based on harvest rates, population parameters and snow track survey data. These previous changes 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 2 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 statewide fisher harvest continues to remain very stable (Fig. 21). The 2011-12 harvest level of 7 fisher was at the 10-year average annual harvest level. Under a quota the harvest of 7 animals during the 2011-12 season was maintained even with higher pelt prices (Table 10).

Population monitoring of fisher consists of analyzing harvest data and using the collection and analysis of biological data from the harvest sample through mandatory carcass turn-in from trappers. The trend in fisher harvest effort using CPUE is a stable trend (Fig.22) and a comparison of fisher CPUE with the other terrestrial species is presented in Fig 52. Harvested fishers provide a small sample size, so the population parameters are do not allow a lot of interpretation. However, the small amount of data that is available appears to show that the population trend from these parameters is about two juveniles per adult female (Fig. 23), a mixed age structure with a good representation of juveniles in most years (Fig. 24), a low female sex ratio in most years (Fig. 25), with a higher than expected median age of adults and expected median age of the total harvest (Fig. 26).

Table 10. Fisher harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 |

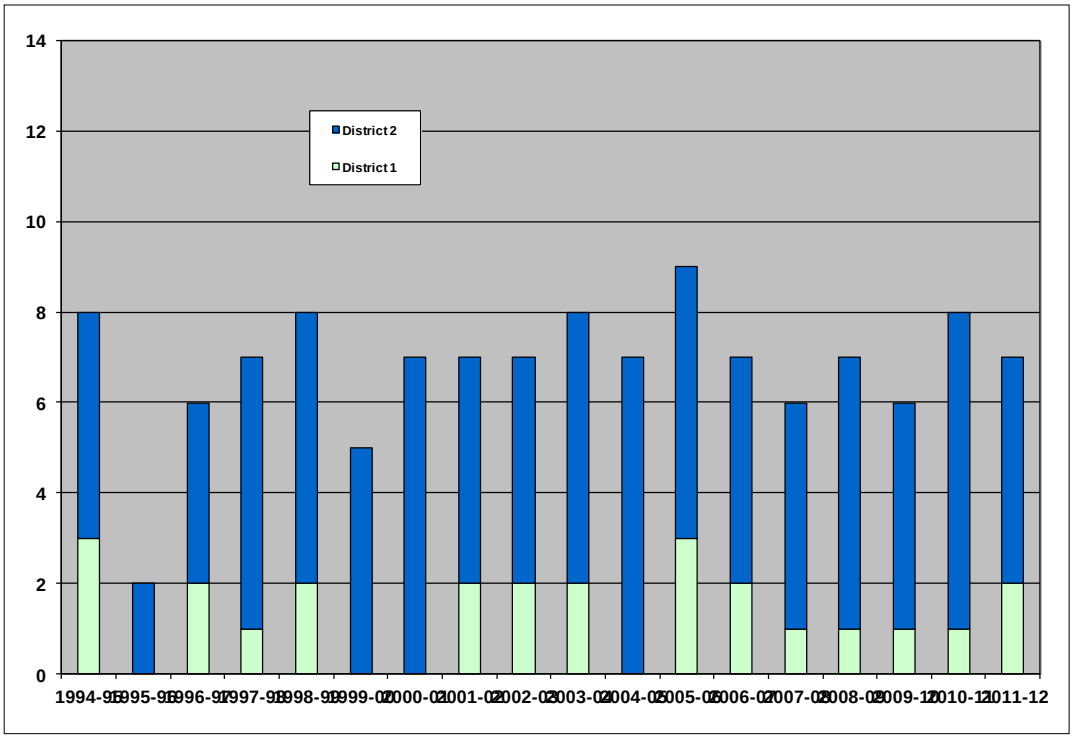


**Figure 21. Statewide fisher harvest by trapping district, 1994-95 to 2011-12.**

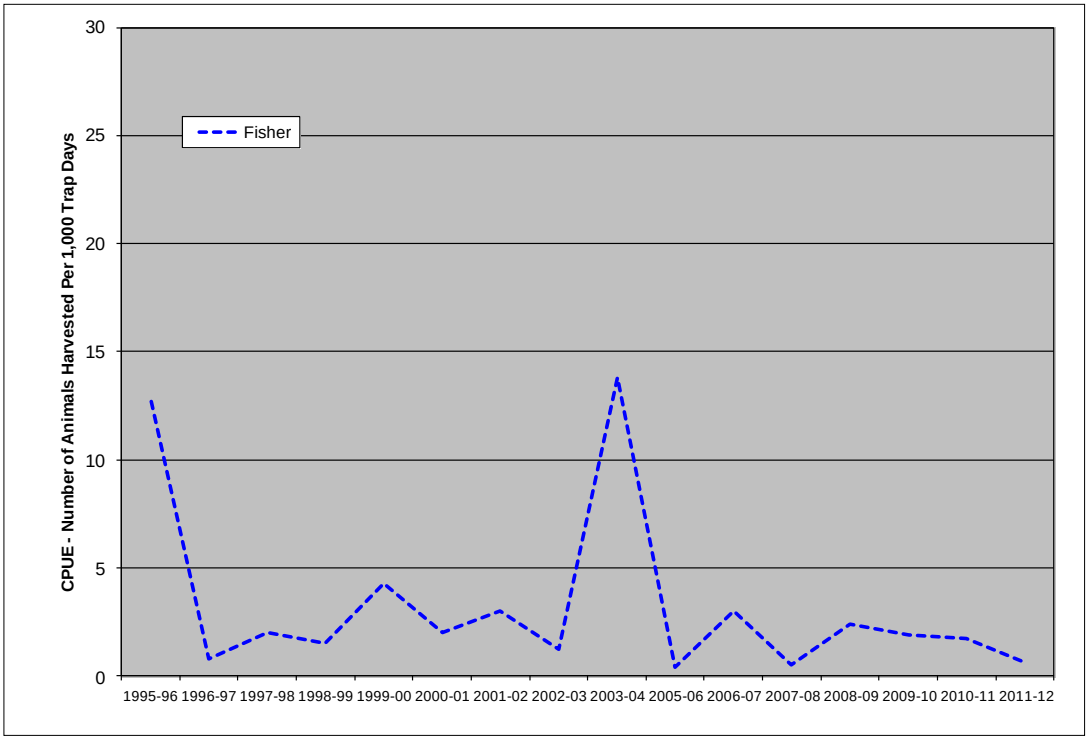


**Figure 22. Statewide trend in fisher harvest from CPUE, 1995-96 to 2011-12.**

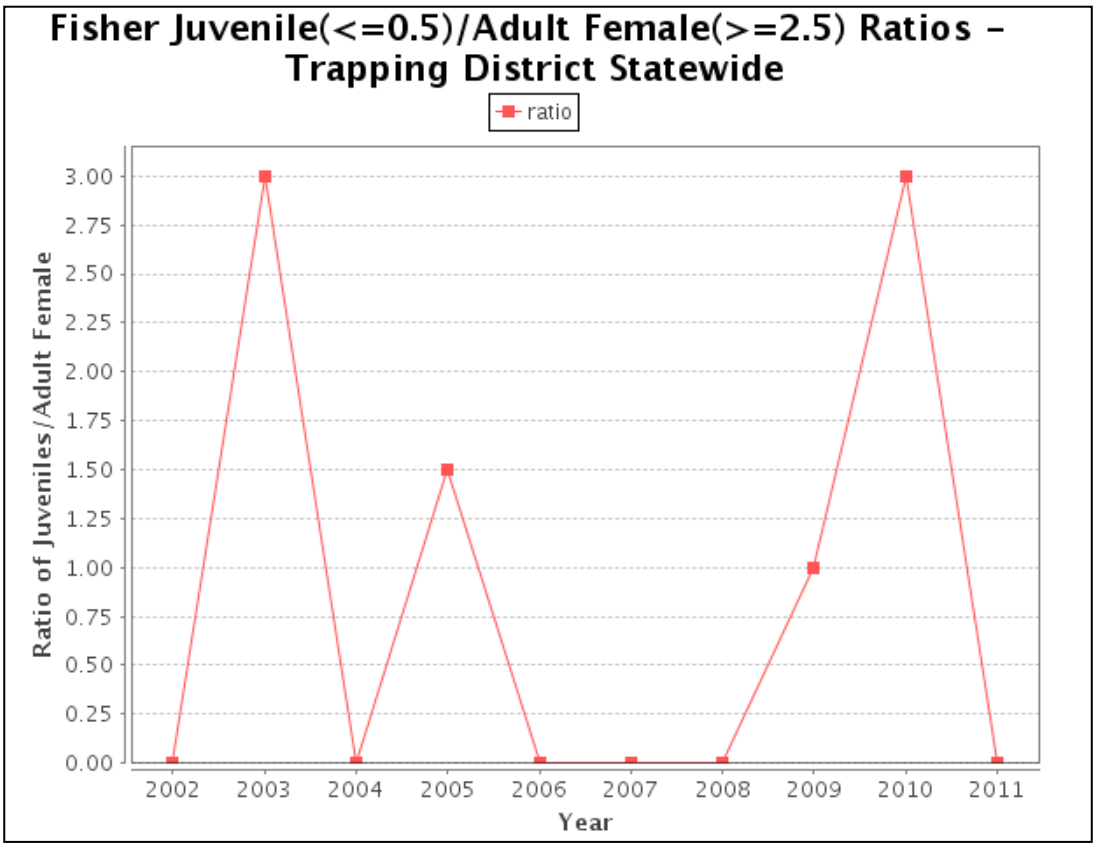


**Figure 23. Fisher population parameters of juveniles per adult female ratio, 2002-03 to 2011-12.**

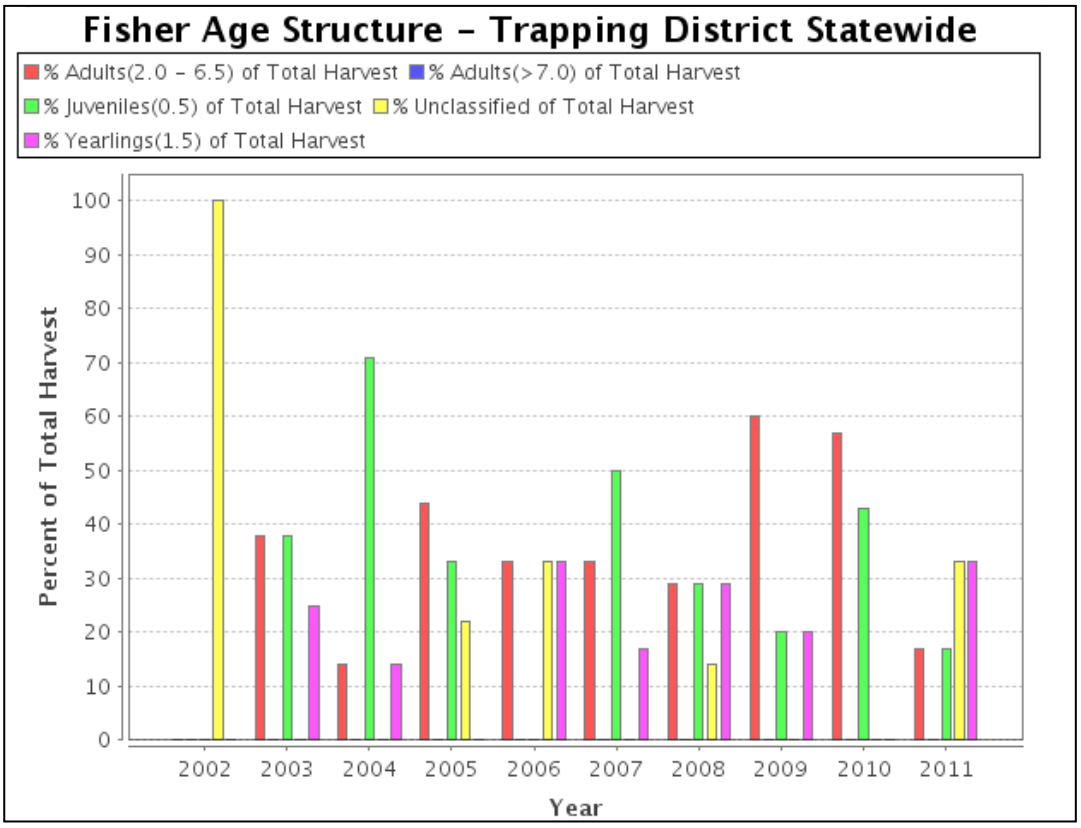


**Figure 24. Fisher population parameter of age structure, 2002-03 to 2011-12.**

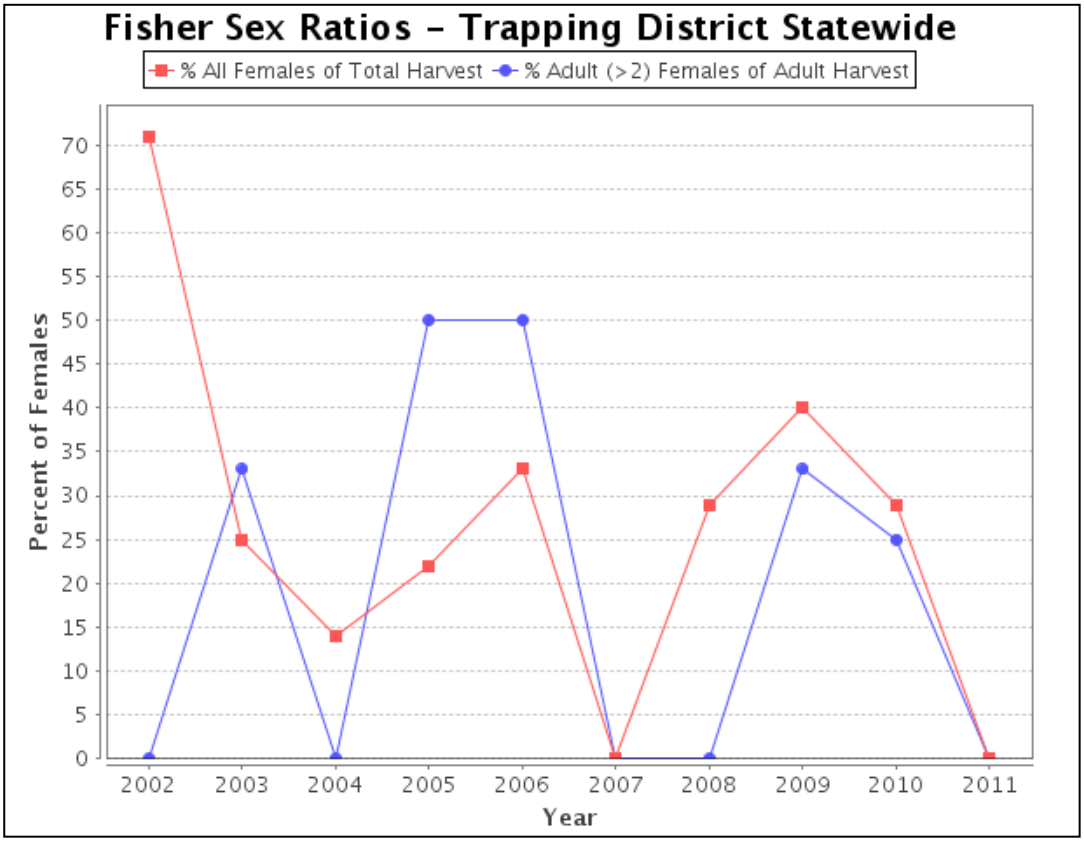


**Figure 25. Fisher population parameter of sex ratios, 2002-03 to 2011-12.**

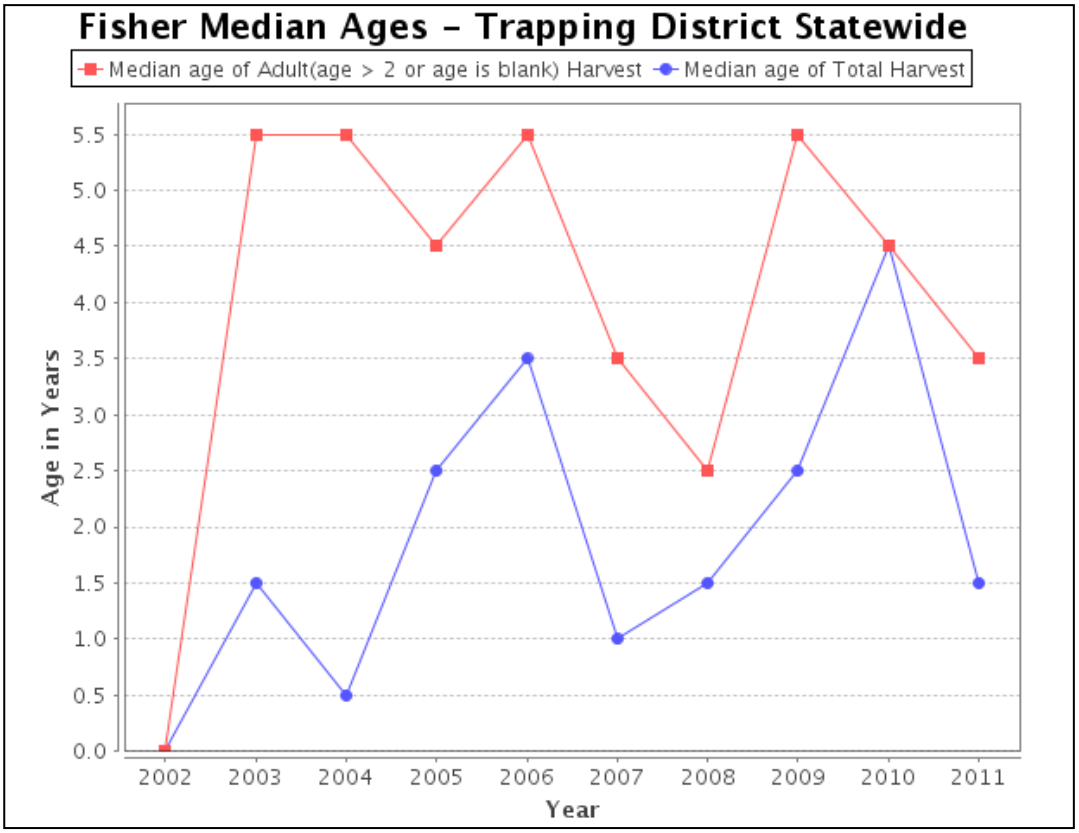


**Figure 26. Fisher population parameter of median ages, 2002—03 to 2011-12.**

## 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 occupied the western third of the state. A study in the mid-1970s found that wolverines were at relatively high densities in the South Fork of the Flathead River drainage. State 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. 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. Therefore, FWP changed trapping regulations to reflect emerging information and additional data from wolverine research that suggested more conservative quota levels were appropriate. Quotas were adjusted to associate quota 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 trappers that does not jeopardize conservation of the species.

Wolverines 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 (Table 11). The statewide wolverine harvest continues to remain stable (Fig. 27). Conservative quotas implemented beginning with the 2008-09 season were reflected in the harvest of two wolverines during the 2011-12 season, which was 75% below the 10-year average harvest. This restrictive quota system has achieved the management goal of redistributing and lowering the wolverine harvest in the state. Harvest of wolverine is considered independent of pelt prices (Table 10). Examining the trend in CPUE it appears harvest effort has been relatively stable to more recently declining on a statewide basis, indicating that less wolverine are being taken per unit of effort, which would be expected (Fig.28).

Population monitoring for wolverine consists of analyzing harvest data and using the collection and analysis of biological data from the harvest sample through mandatory carcass turn-in from trappers. The statewide trend in wolverine using CPUE is a stable to declining trend (Fig.28) and a comparison of wolverine CPUE with the other terrestrial species is presented in Fig 52. The harvest sample of wolverine provides only a very small sample size, so population parameters are more difficult to interpret. However, the long-term trend in population parameters have showed about .5 juveniles per adult female (Fig. 29), a mixed age structure with a relatively continuous representation of juveniles (Fig. 30), about a 50% female sex ratio (Fig. 31), with a median age of adults higher than the median age of the total harvest (Fig. 32).

Table 11. Wolverine harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 |

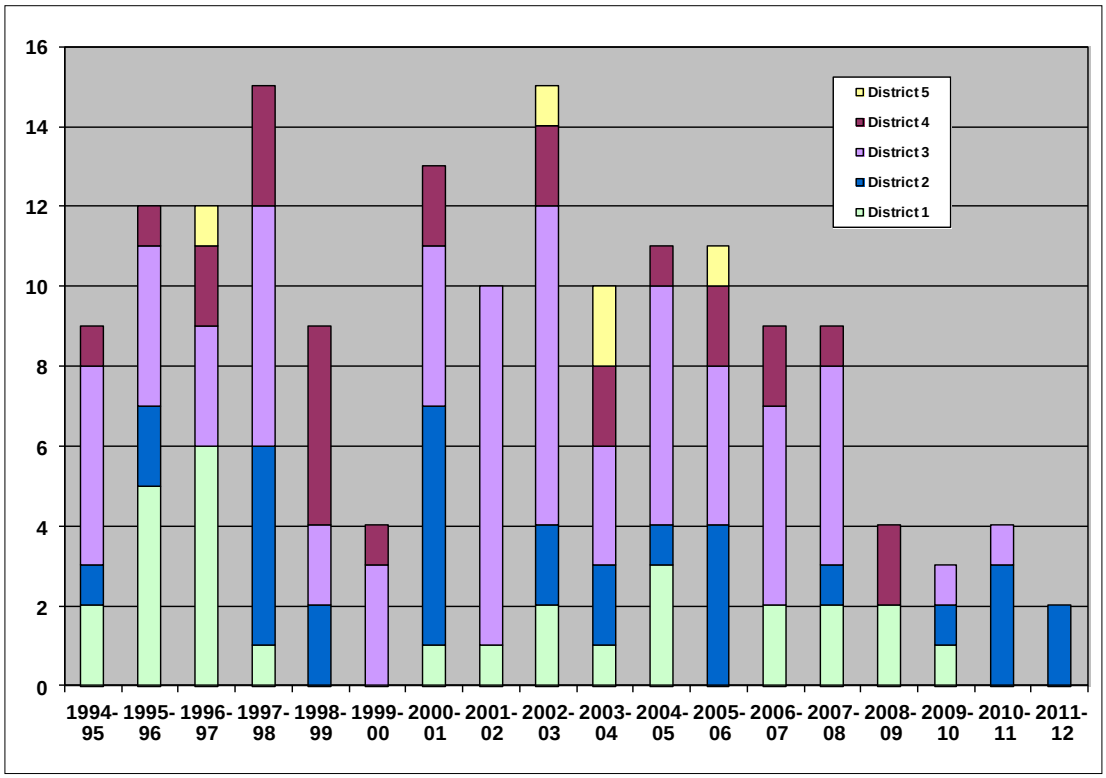


**Figure 27. Statewide wolverine harvest by trapping district, 1994-95 to 2011-12.**

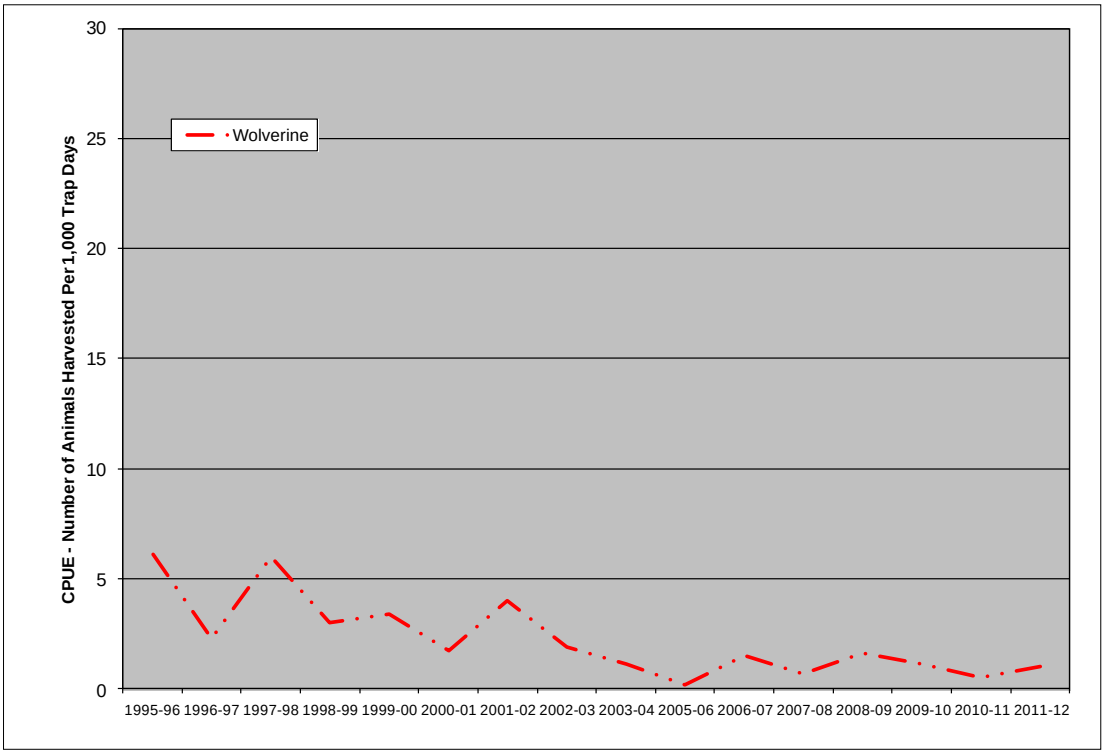


**Figure 28. Statewide trend in wolverine harvest from CPUE, 1995-96 to 2011-12.**

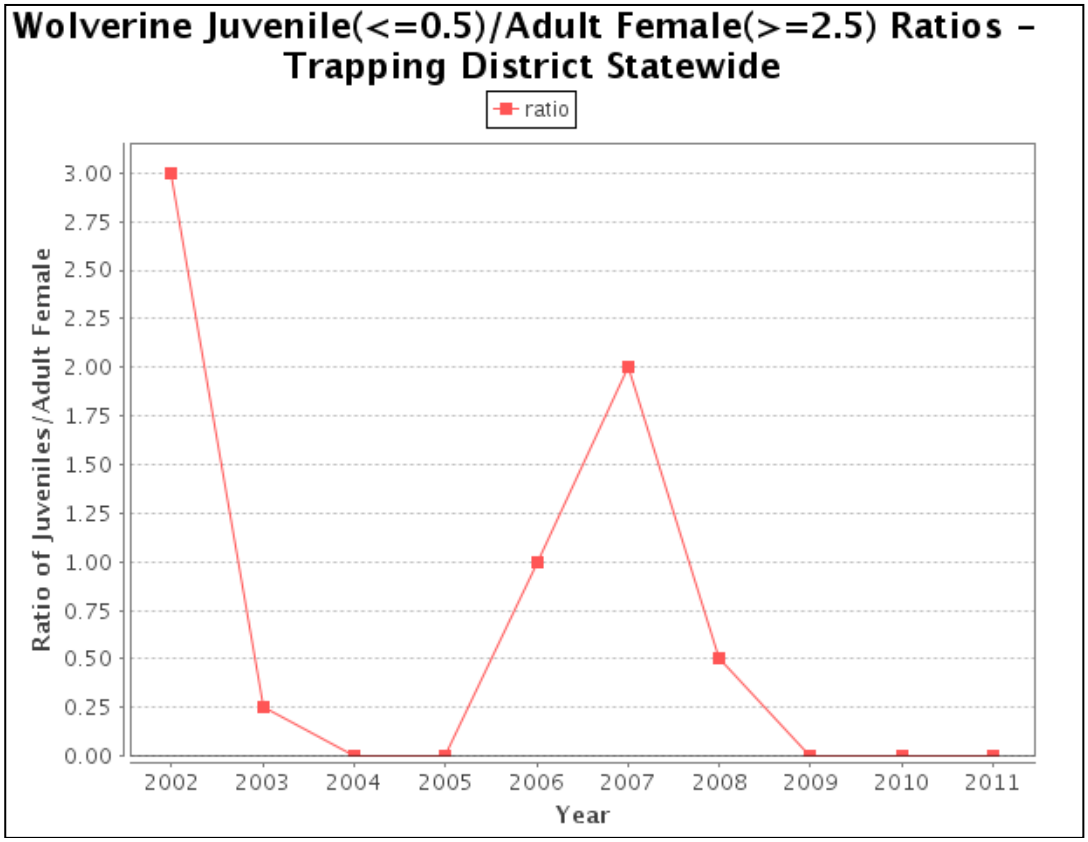


**Figure 29. Wolverine population parameter of juveniles per adult female ratio, 2002-03 to 2011-12.**

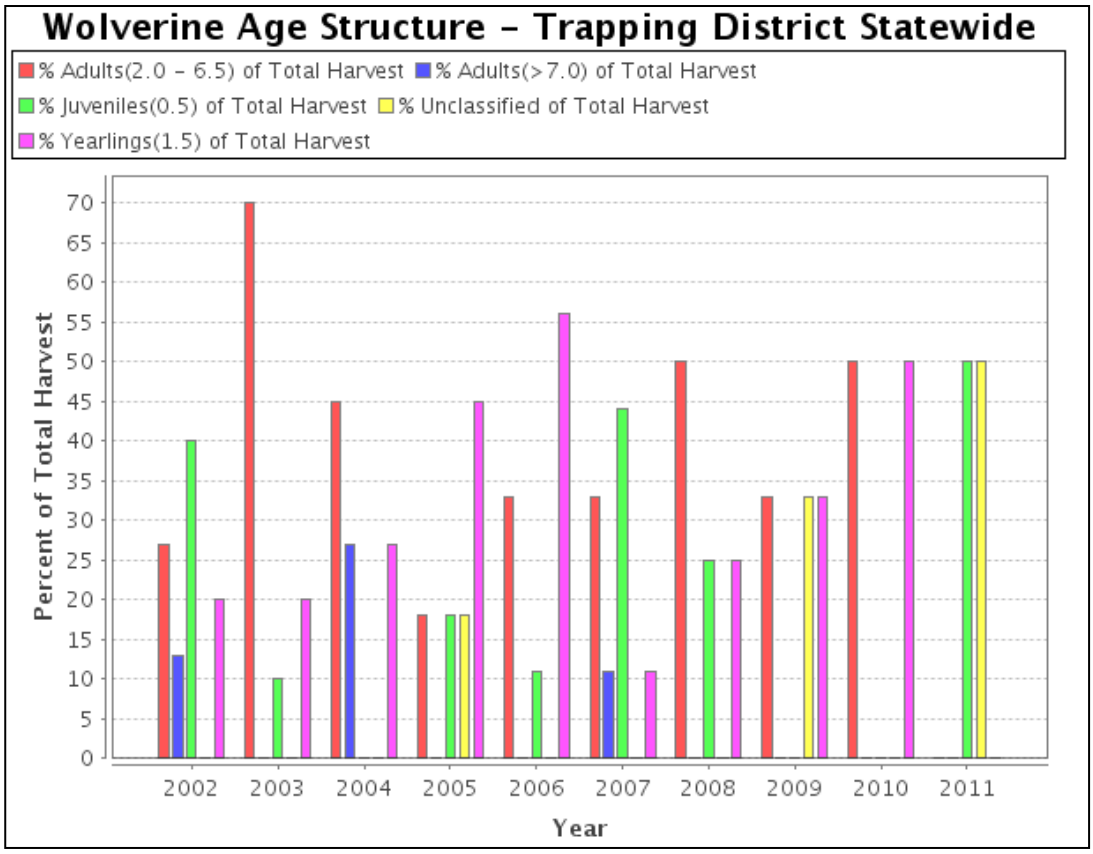


**Figure 30. Wolverine population parameter of age structure, 2002-03 to 2011-12.**

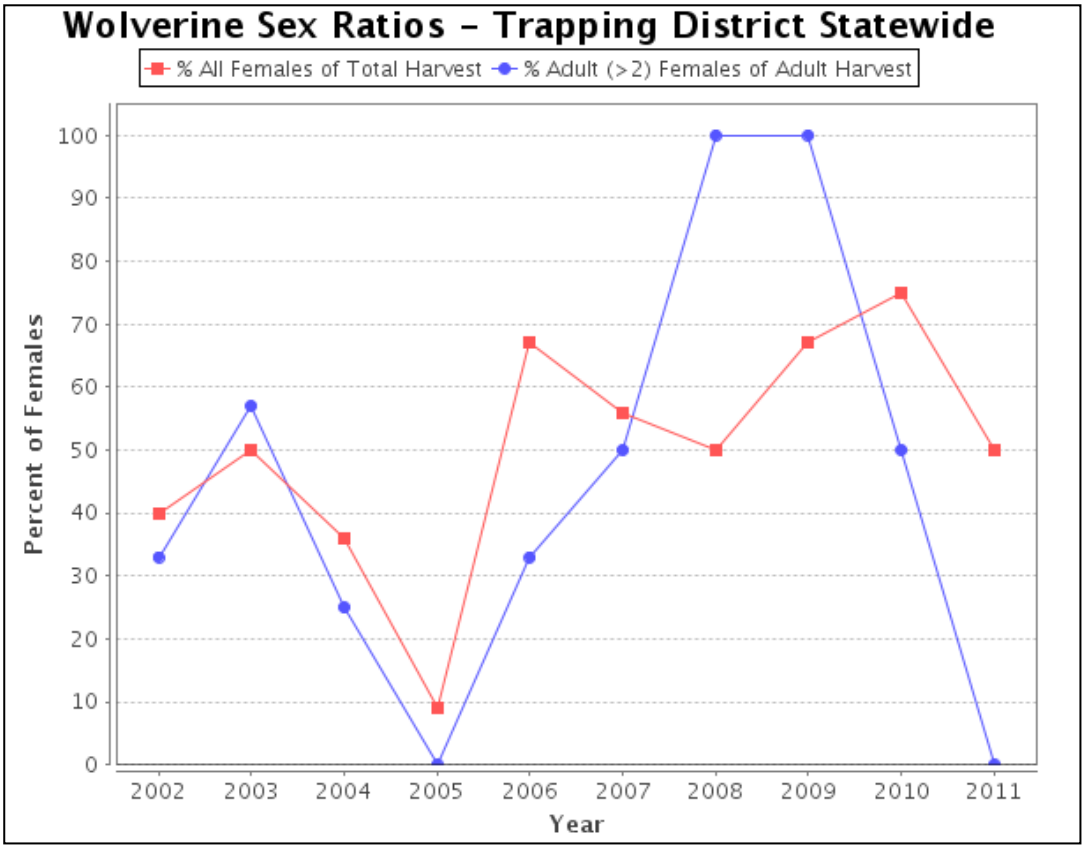


**Figure 31. Wolverine population parameter of sex ratios, 2002-03 to 2011-12.**

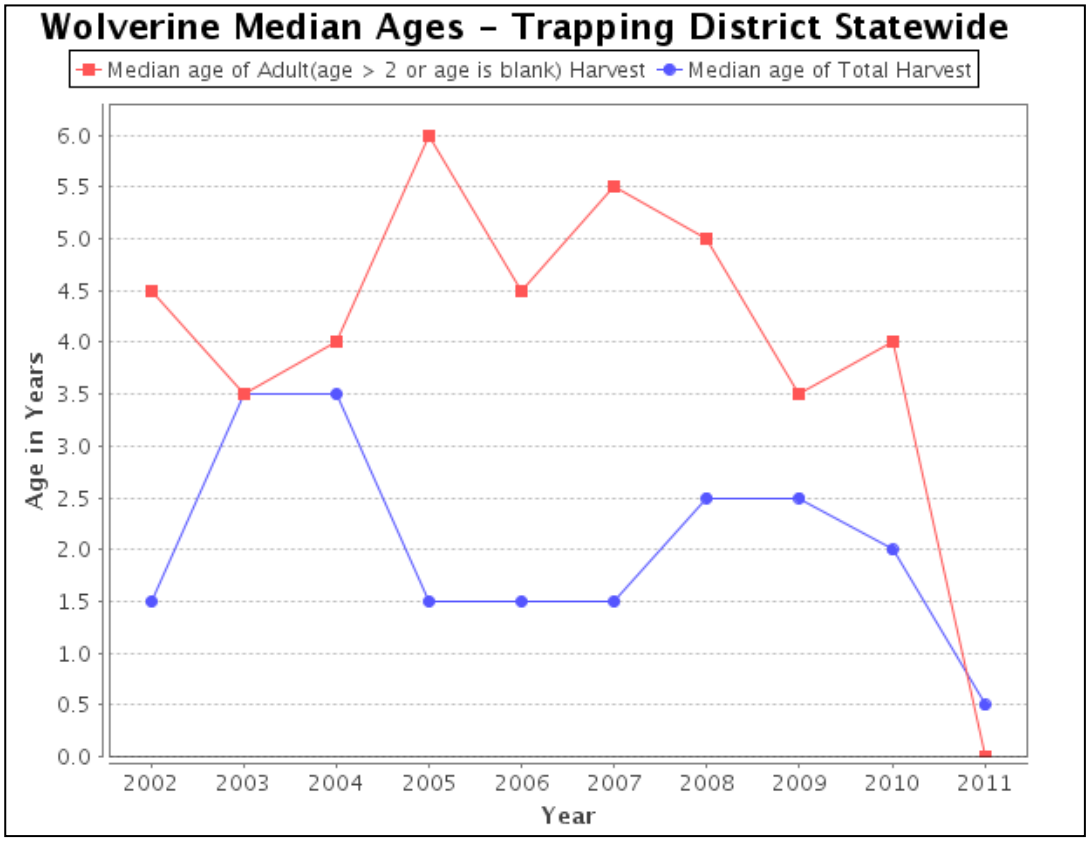


**Figure 32. Wolverine population parameter of median ages, 2002-03 to 2011-12.**

## BOBCAT

Bobcats are one of five furbearers that are required to be registered and pelt tagged so that the actual number of harvested animals is known (Table 12). The bobcat harvest has been always been managed through trapping district (TD) quotas with changes in trapper limits or removal of trapper limits in some districts. 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 in the eastern districts (TD 4 – 7). Trapper limits were retained in the western three TDs (TD 1-3) but have varied in the trapper limit number depending on trapper interest to distribute harvest more equitable. 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 total quota has increased from 1,415 in 1994-95 to 2,480 in 2008-09 and 1,925 during the 2011-12 season (Table 12). The bobcat harvest has increased from 1,052 in 1994-95 to 2,428 in 2008-09 and 1975 in 2011-12 (Fig. 33). Pelt prices have jumped dramatically beginning with the 2003-04 season and continue to remain at a high level through 2011-12 (Table 12). Examining the trend in CPUE it appears harvest effort has been stable to slightly declining, indicating that fewer bobcat are being taken per unit of effort (Fig.34).

The statewide trend in bobcat using CPUE is declining slightly (Fig.34) and a comparison of bobcat CPUE with the other terrestrial species is presented in Fig 52. 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. Population parameters show a recent upward trend in juveniles per adult female (Fig. 35), an older age structure (Fig. 36), less than a 50% female sex ratio (Fig. 37), and an increasing trend in the median age of the total harvest (Fig. 38). Again, these parameters indicate a stable to a somewhat declining population trend on a statewide basis.

Table 12. Bobcat harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 |

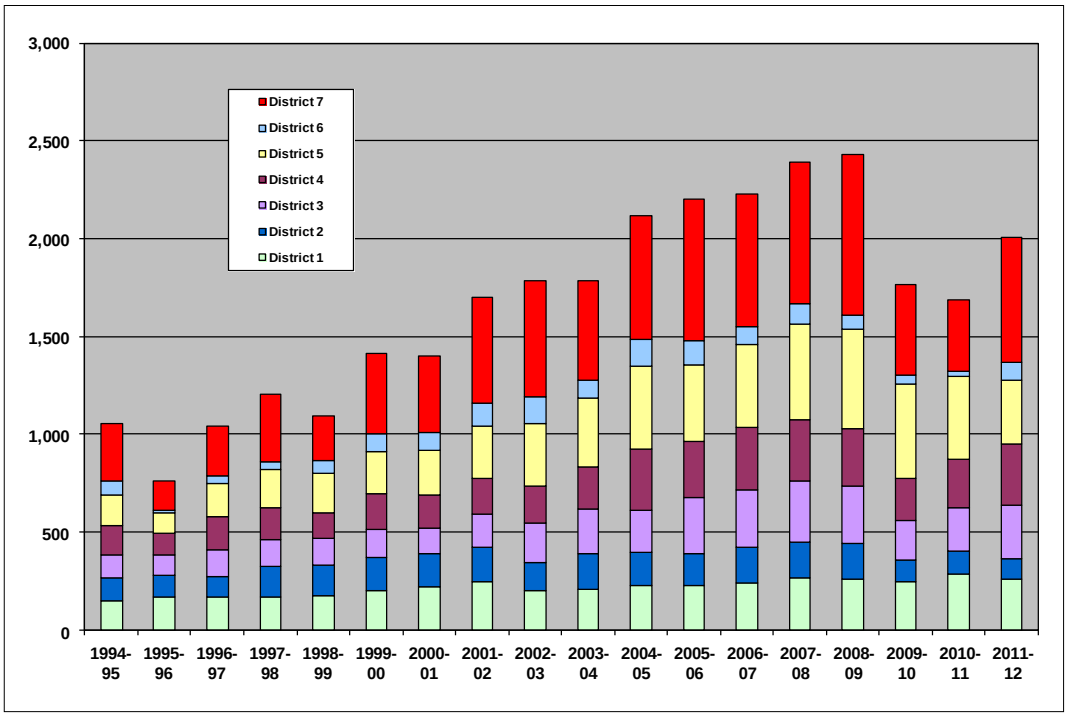


**Figure 33. Statewide bobcat harvest by trapping district, 1994-95 to 2011-12**

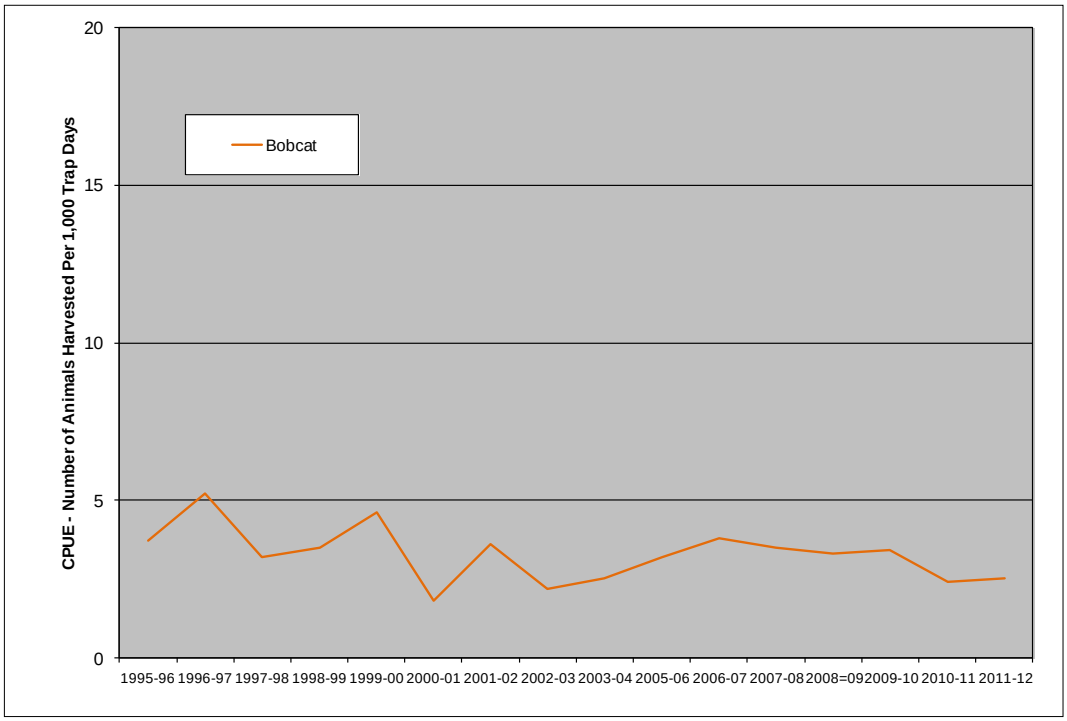


**Figure 34. Statewide trend in bobcat harvest from CPUE, 1995-96 to 2011-12.**

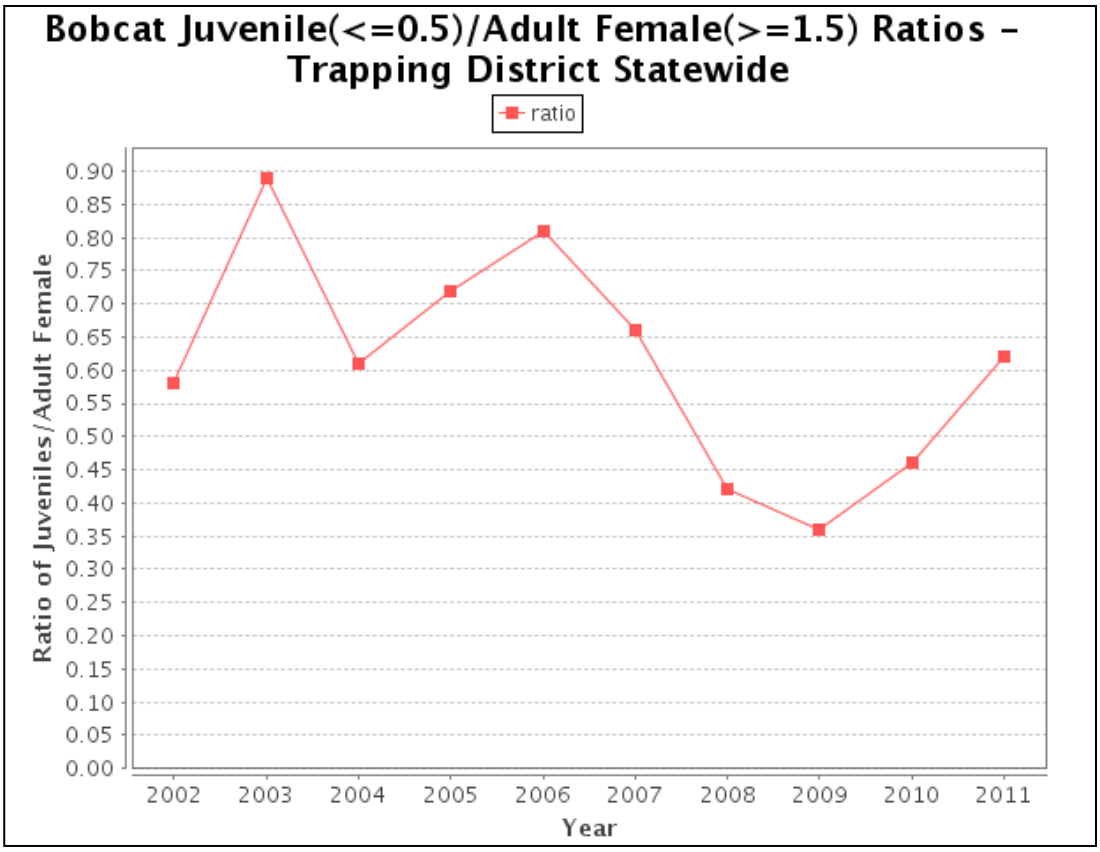


**Figure 35. Bobcat population parameter of juvenile per adult female ratios, 2002-03 to 2011-12.**

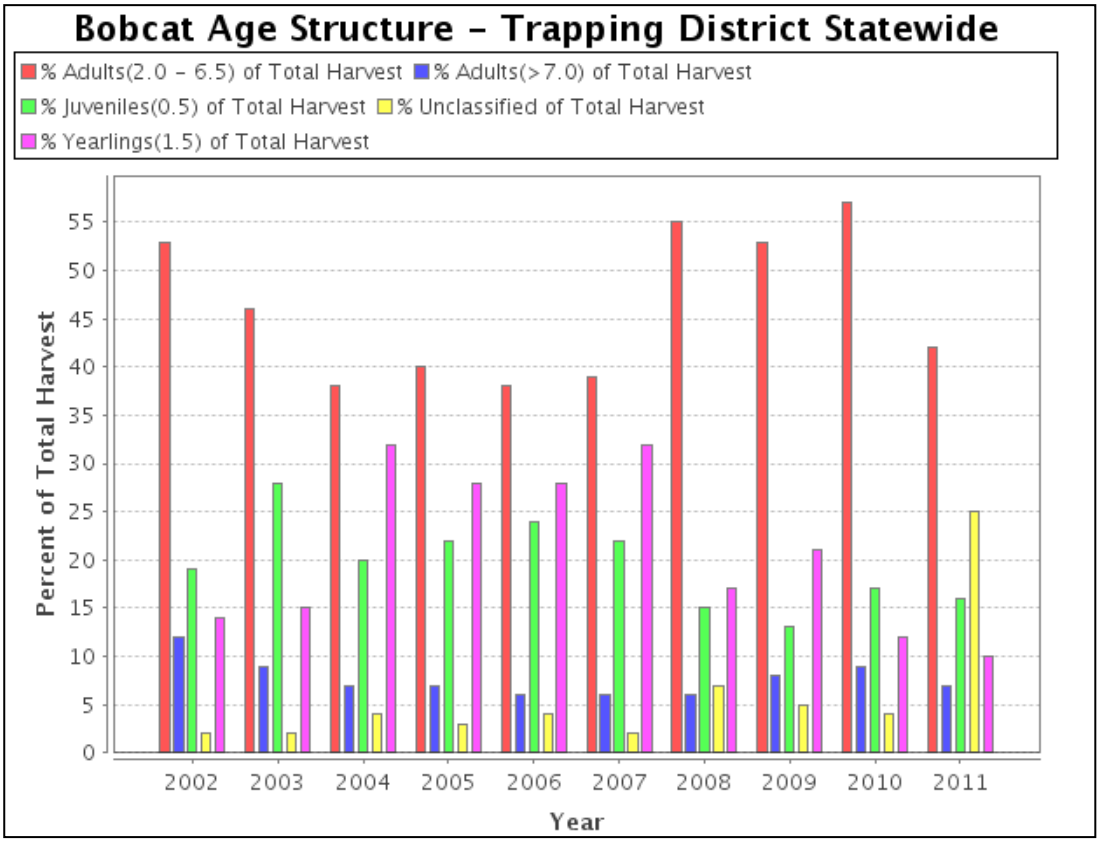


**Figure 36. Bobcat population parameter of age structure, 2002-03 to 2011-12.**

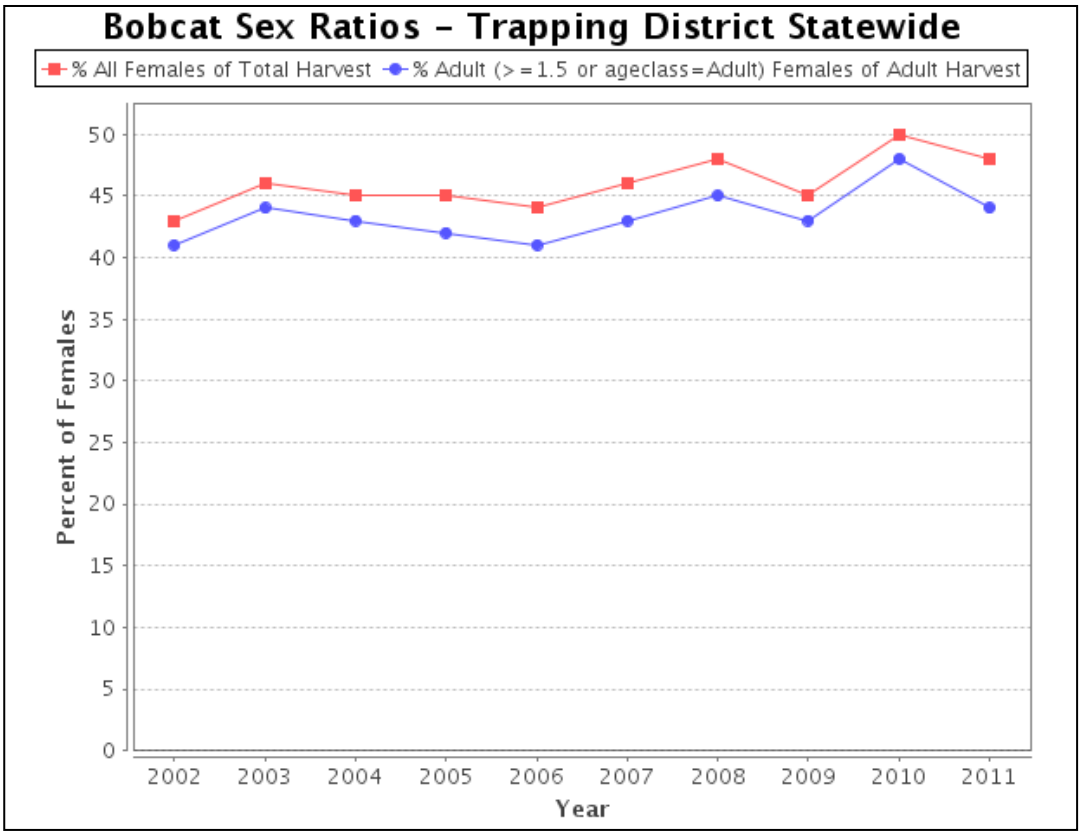


**Figure 37. Bobcat population parameter of sex ratios, 2002-03 to 2011-12.**

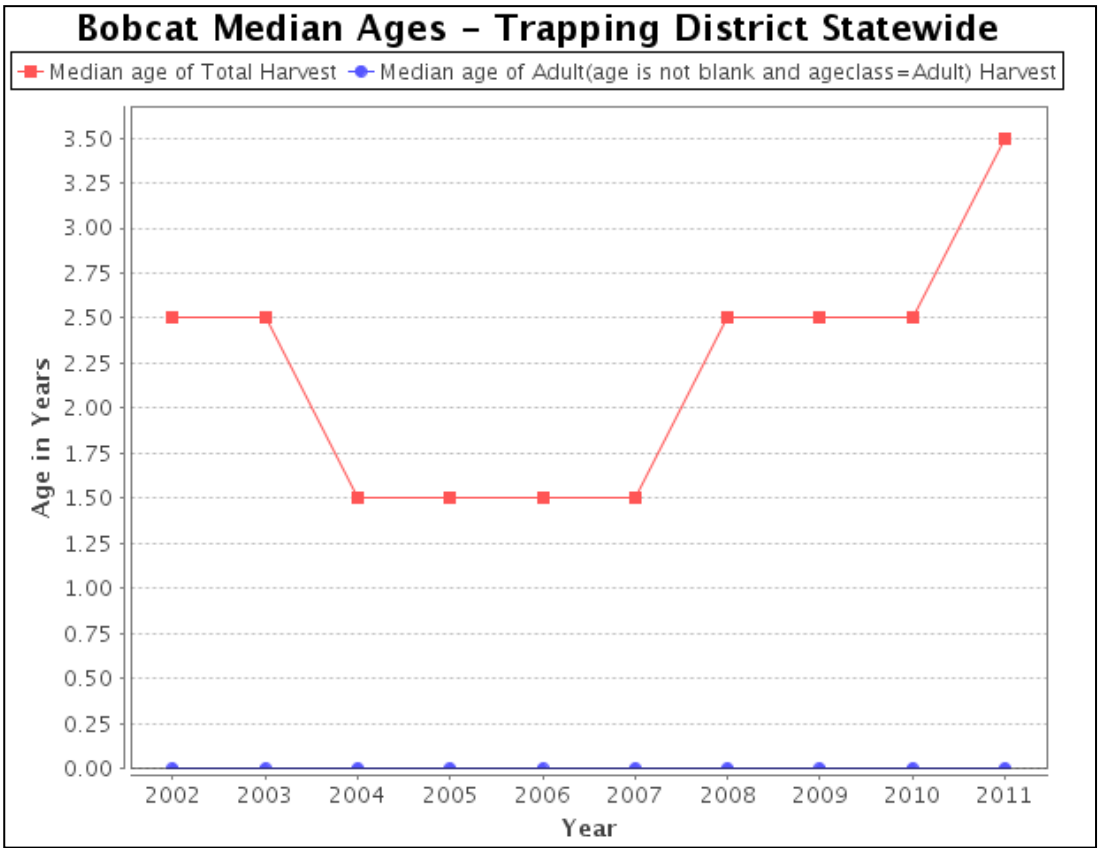


**Figure 38. Bobcat population parameter of median ages, 2002-03 to 2011-12.**

## WEASEL

The statewide weasel harvest continues to remain relatively stable, although generally at a lower level during the past decade within a range of 200 to 500 animals with some years below or above this level (Table 13). The majority of weasel taken over most years is in northwestern Montana's trapping district (TD) 1 (Fig. 39). The estimated 2011-12 statewide harvest of 342 animals was 6% below the 10-year average harvest, along with average pelt prices (Table 13). Despite the moderate harvest, average pelt prices offered for 2011-12 were higher than a decade ago.

Examining the trend in CPUE it appears harvest effort has generally increased over the past two years, indicating that more weasels are being taken per unit of effort (Fig.40). Population monitoring activities for weasel are based completely on harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered stable to increasing. A comparison of CPUE for weasel with the other classified predator species is shown in Fig. 53.

Table 13. Weasel harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 | |

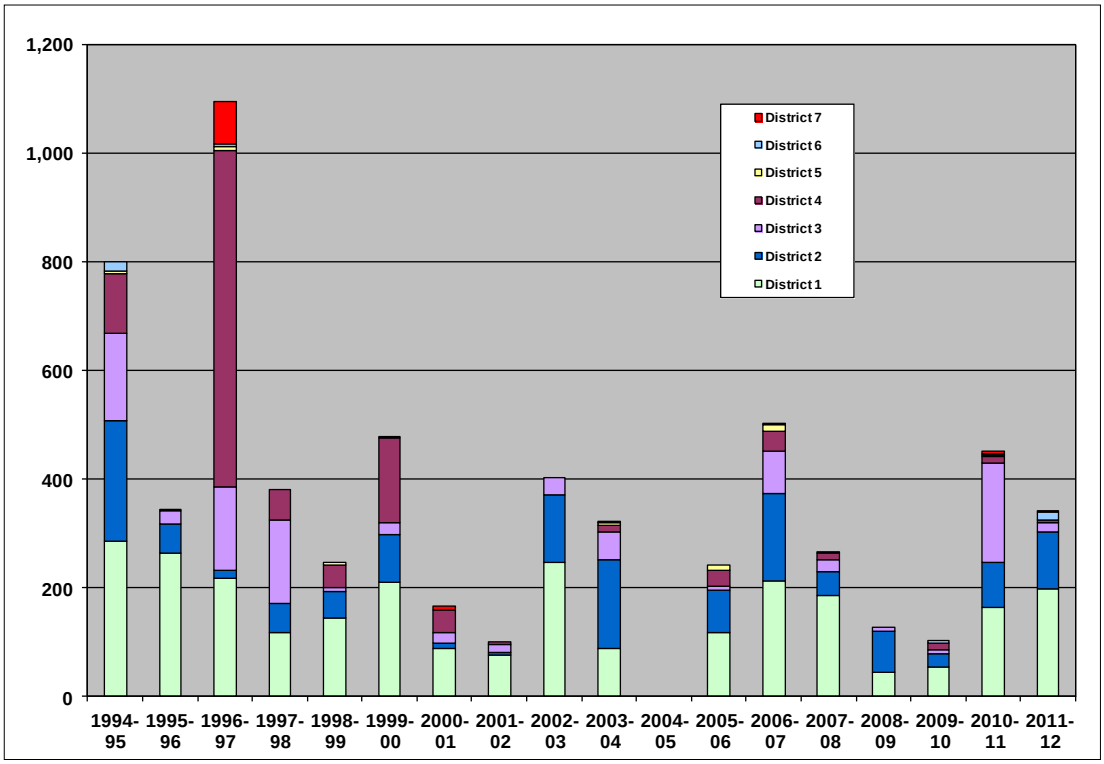


**Figure 39. Statewide weasel harvest by trapping district, 1994-95 to 2011-12.**

**Figure 40. Statewide trend in weasel harvest from CPUE, 1995-96 to 2011-12.**

## SKUNK

The statewide skunk harvest continues to remain stable, and within a general range of 1,000 to 3,000 animals with some years below or above this level (Table 14). The majority of skunk taken over most years is in the central and southern portions of Montana in trapping districts (TD) 4 and 5 (Fig. 41). The estimated 2011-12 statewide harvest of 1,735 animals was 28% below the 10-year average harvest, despite a higher than average pelt price (Table 14). Despite a lower harvest than the previous several years, the pelt prices offered for 2011-12 of $7.30 were well above the average over the last decade.

Examining the trend in CPUE it appears harvest effort declined significantly during the 2011-12 season, indicating that fewer skunks are being taken per unit of effort (Fig.42). Population monitoring activities for skunk are based completely on harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered to be declining after an increasing trend over previous years. A comparison of CPUE for skunk with the other classified predator species is shown in Fig. 53.

Table 14. Skunk harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 | |

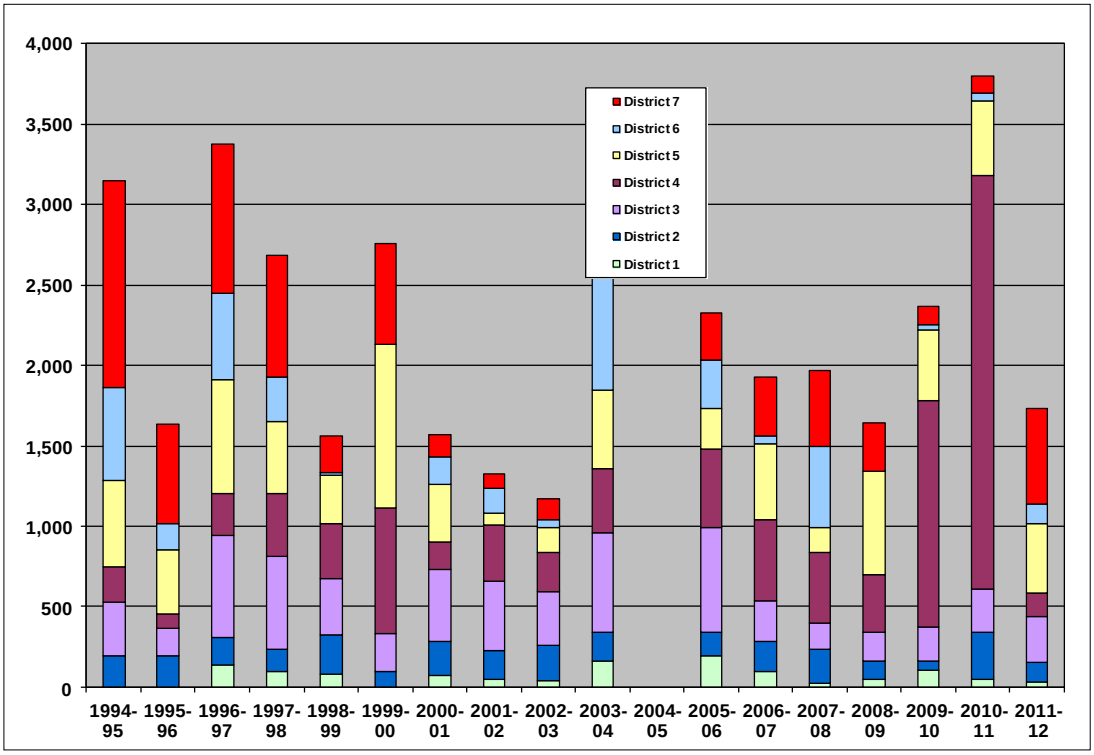


**Figure 41. Statewide skunk harvest by trapping district, 1994-95 to 2011-12.**

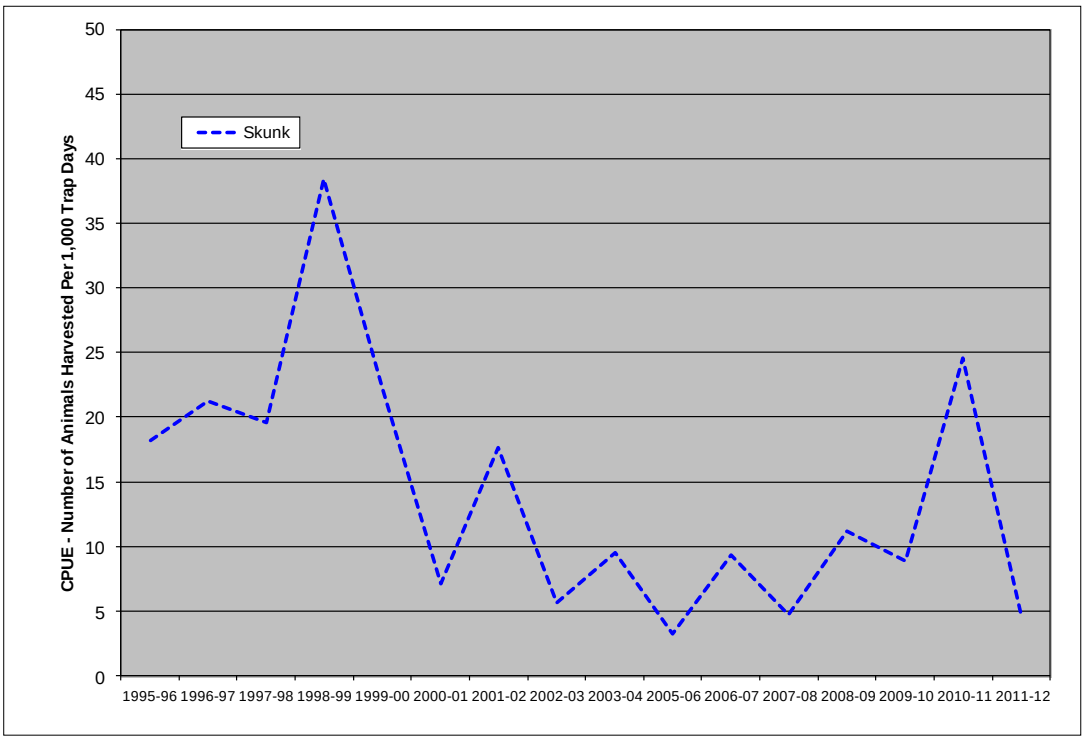


**Figure 42. Statewide trend in skunk harvest from CPUE, 1995-96 to 2011-12.**

## COYOTE

The statewide coyote harvest increased dramatically during the 2011-12 season from both trapping and hunting (Table 15). The majority of coyotes taken over most years are in eastern Montana's trapping district s (TD) 4, 5, 6 and 7 (Fig. 43). The estimated 2008-09 statewide harvest of 16,398 animals was 36% above the 10-year average harvest, along with a better than average pelt price of $77.30 (Table 15). This average coyote pelt prices offered for 2011-12 was the highest reported in the past 18 years.

Examining the trend in CPUE it appears harvest effort has generally remained the same, indicating that the relative number of coyotes are being taken per unit of effort (Fig.40) which may indicate, also looking at the harvest, that there is an increase in the number of trappers and/or hunters. Population monitoring activities for coyote are based completely on 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. 53.

Table 15. Coyote harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| Year | TD 1 | TD 2 | TD 3 | TD 4 | TD 5 | TD 6 | TD 7 | State | Pelt Price | Quota |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | |

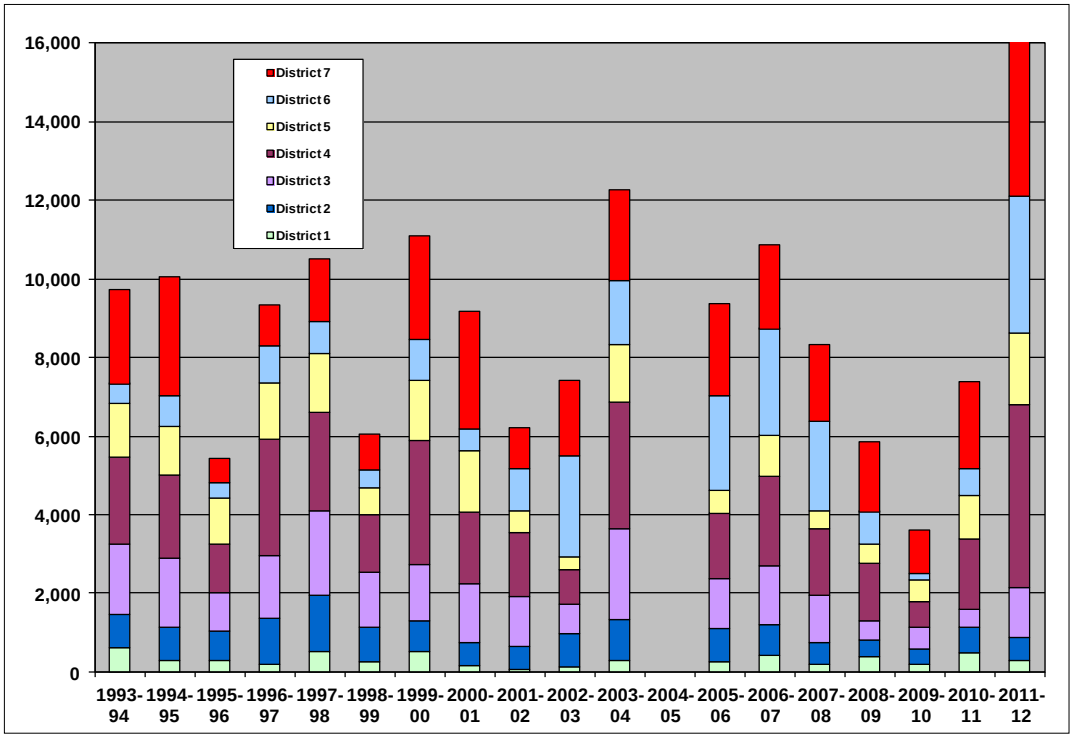


**Figure 43. Statewide coyote harvest by trapping district, 1994-95 to 2011-2012.**

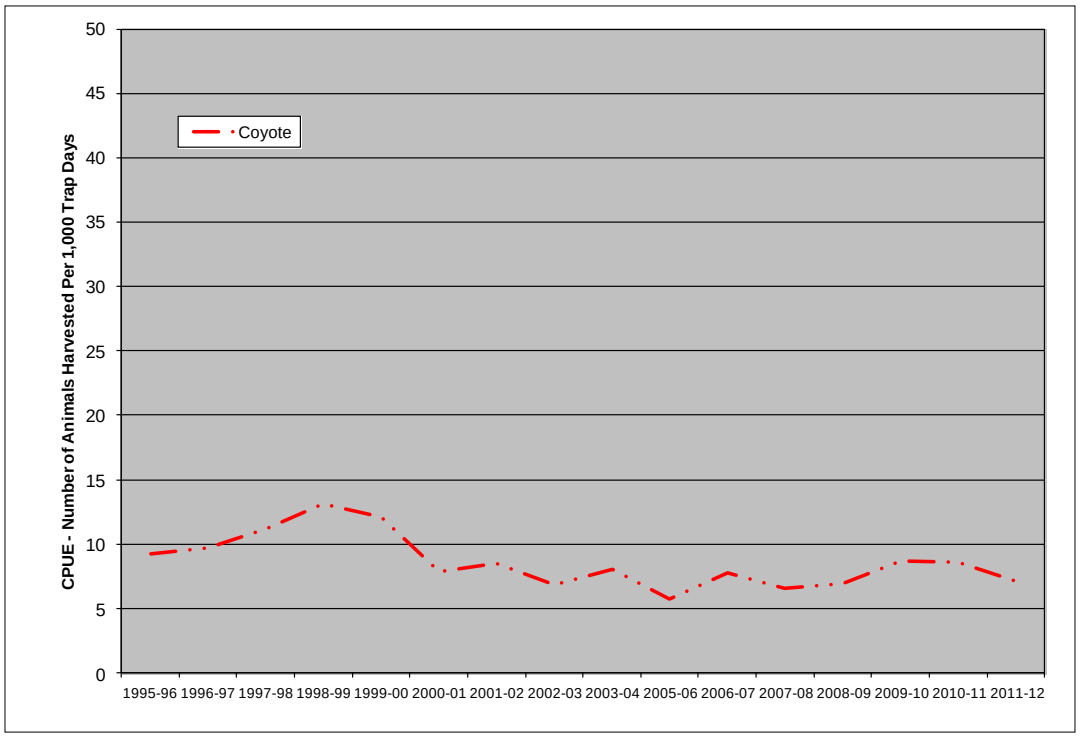


**Figure 44. Statewide trend in coyote harvest from CPUE, 1995-96 to 2011-12.**

## RED FOX

The statewide fox harvest increased during the 2011-12 season following a general declining harvest over the past 18 years (Table 16). The majority of fox taken over most years is across all trapping districts (TD) except TD 1 (Fig. 45). The estimated 2011-12 statewide harvest of 2,469 animals was only 14% above the 10-year average harvest, despite the highest pelt price in 18 years of 57.49 (Table 16

Examining the trend in CPUE it appears harvest effort has generally been stable with a decrease during 2011-12, indicating that fewer fox are being taken per unit of effort (Fig.46). Population monitoring activities for red fox are based completely on harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as declining. The comparison of CPUE for fox with the other unclassified nongame species is shown in Fig. 54.

Table 16. Fox harvest, pelt price, and harvest quota if applicable, 1994-95 to 2011-12.

| 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 | |

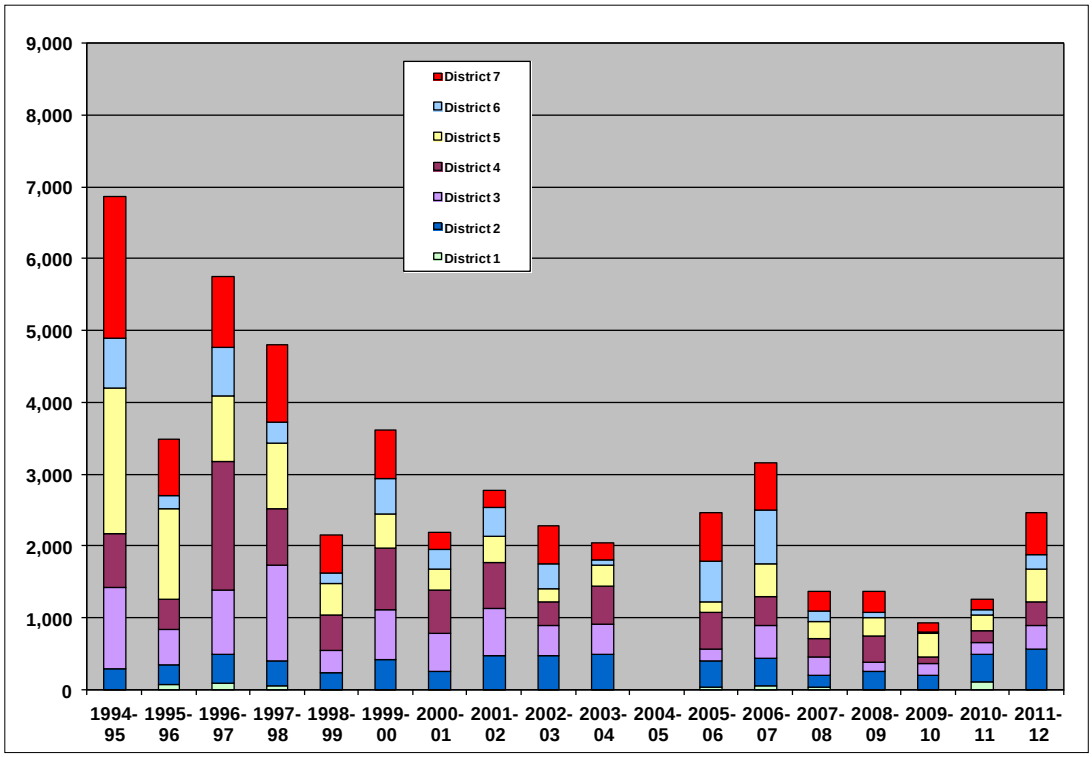


**Figure 45. Statewide red fox harvest by trapping district, 1994-95 to 2011-12.**

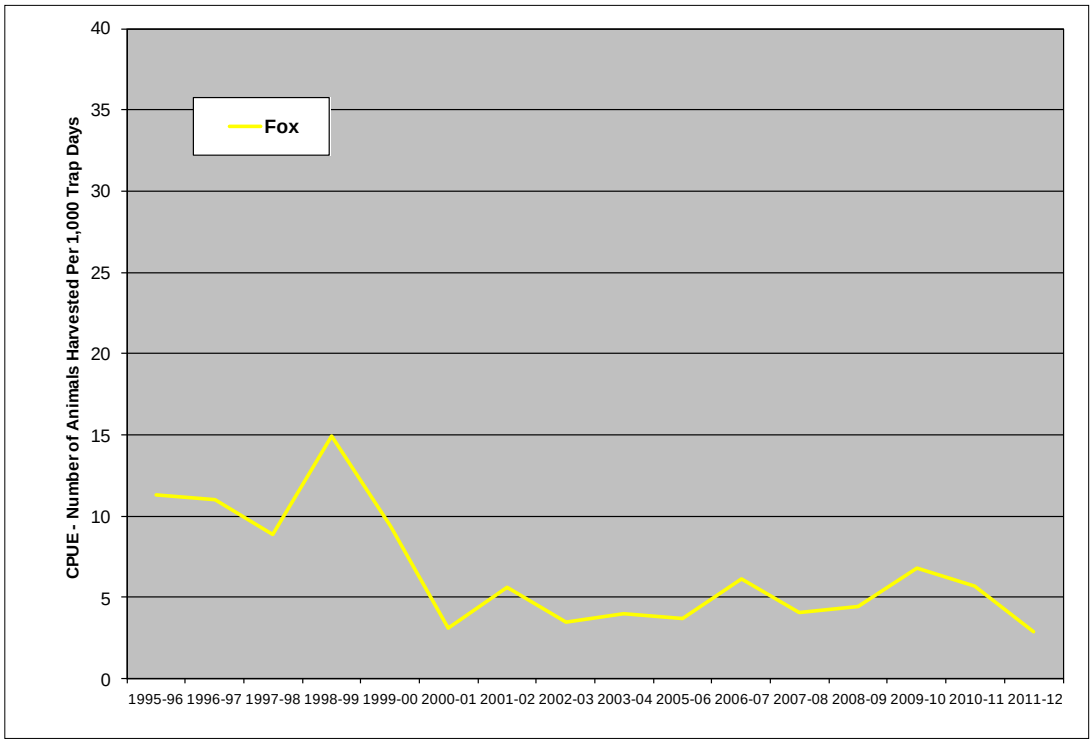


**Figure 46. Statewide trend in red fox harvest from CPUE. 1995-96 to 2011-12.**

## RACCOON

The statewide raccoon harvest had been declining but has increased in recent years, and jumped substantially during the 2011-12 season relative to previous years (Table 17). The majority of raccoon harvested by trapping or hunting over most years is in southern Montana's trapping districts (TD) 3, 5 and to a lesser degree TD 7 (Fig. 47). The estimated 2011-12 statewide harvest of 6,409 animals was 30% above the 10-year average harvest, even with only a better than average pelt price of $19.45 (Table 17).

Examining the trend in CPUE it appears harvest effort has declined in the past couple of years, indicating that fewer raccoon are being taken per unit of effort (Fig.48). Population monitoring activities for raccoon are based completely on harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as declining. However, with a higher raccoon harvest level in 2011-12 and only average pelt prices, this may also 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. 54.

Table 17. Raccoon harvest, pelt price, and harvest quota if applicable, 1994-95 to 2008-09.

| 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 | |

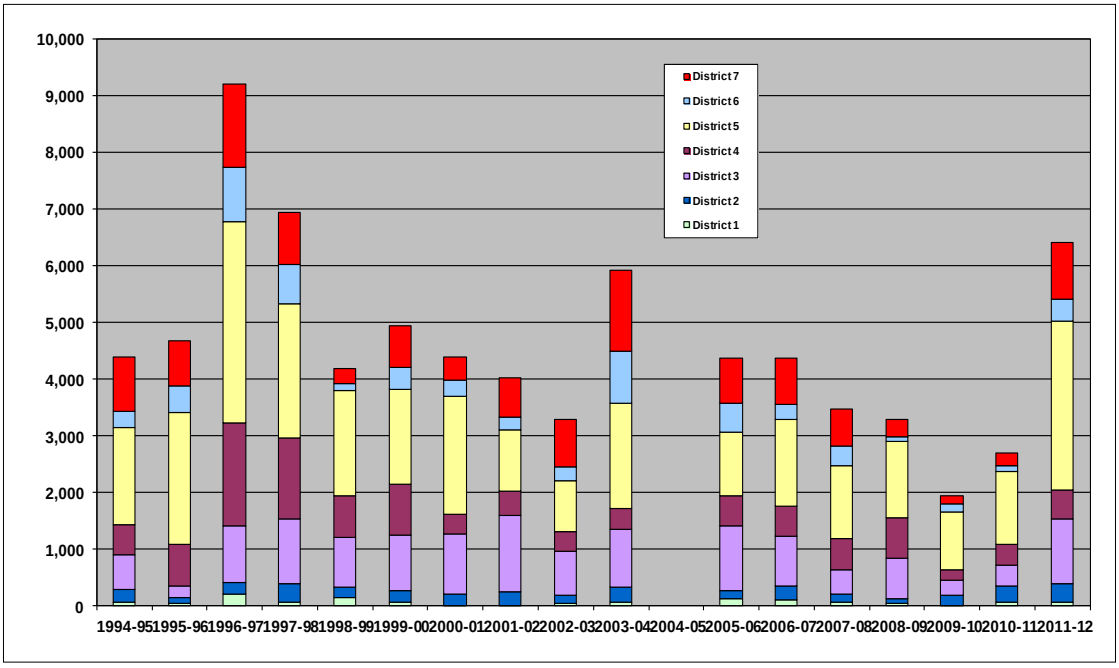


**Figure 47. Statewide raccoon harvest by trapping district, 1994-95 to 2011-12.**

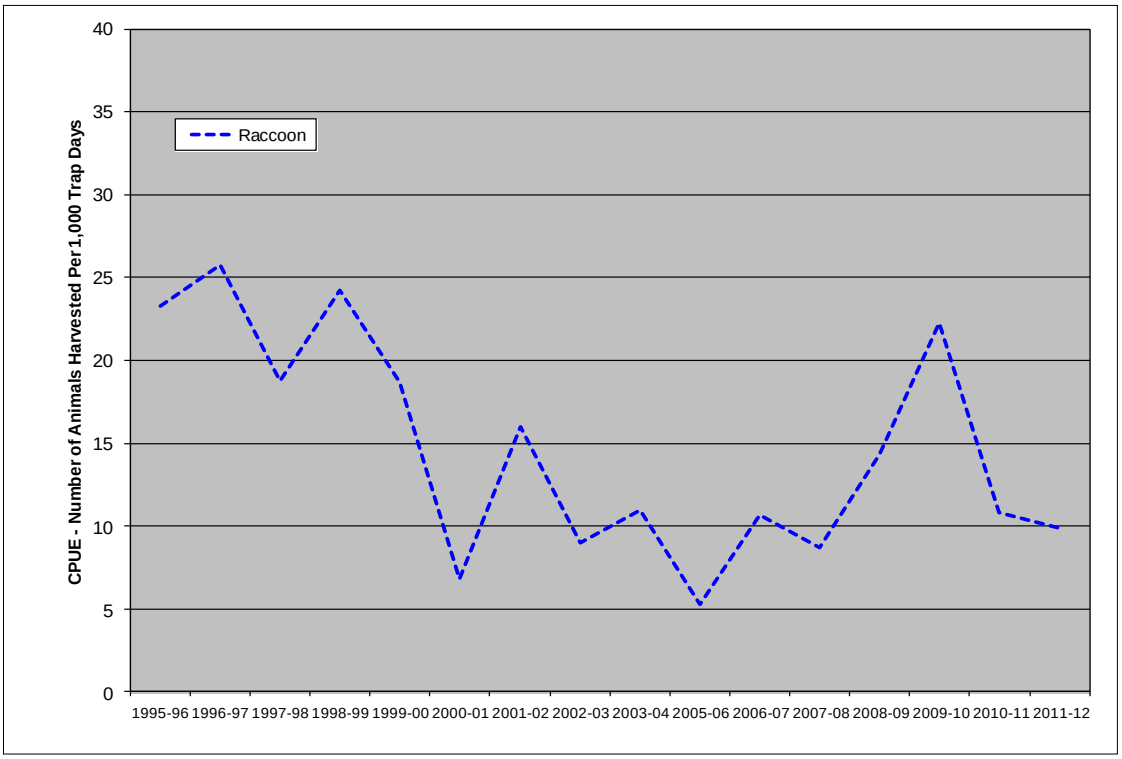


**Figure 48. Statewide trend in raccoon harvest from CPUE, 1995-96 to 2011-12.**

## 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 during the 2011-12 season (Table 18). The majority of the badgers taken over most years are in north central and southeastern Montana's trapping districts (TD) 4 and 7 (Fig. 49). The estimated 2011-12 statewide harvest of 1,474 animals was 30% above the 10-year average harvest, along with a better than average pelt price of $38.61 (Table 18). This higher harvest follows several years of lower than average harvest levels despite generally good pelt prices.

Examining the trend in CPUE it appears harvest effort has been stable to slightly increasing, indicating that a relatively stable number of badger are being taken per unit of effort (Fig. 50). Population monitoring activities for badger are based completely on harvest survey data, with CPUE considered to be an indicator of relative population trend, which could be considered as stable to slightly increasing. A comparison of CPUE for badger with the other unclassified nongame species is shown in Fig. 54.

Table 18. Badger harvest, pelt price, and harvest quota if applicable, 1994-95 to 2008-09.

| 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 | |

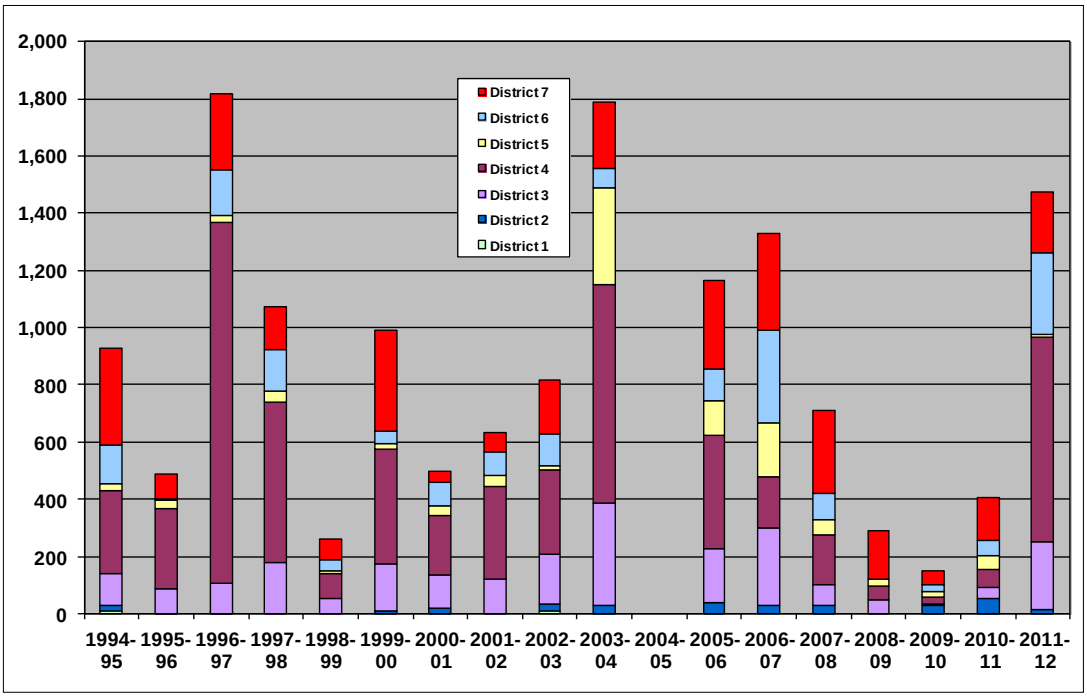


**Figure 49. Statewide badger harvest by trapping district, 1994-95 to 2011-12.**

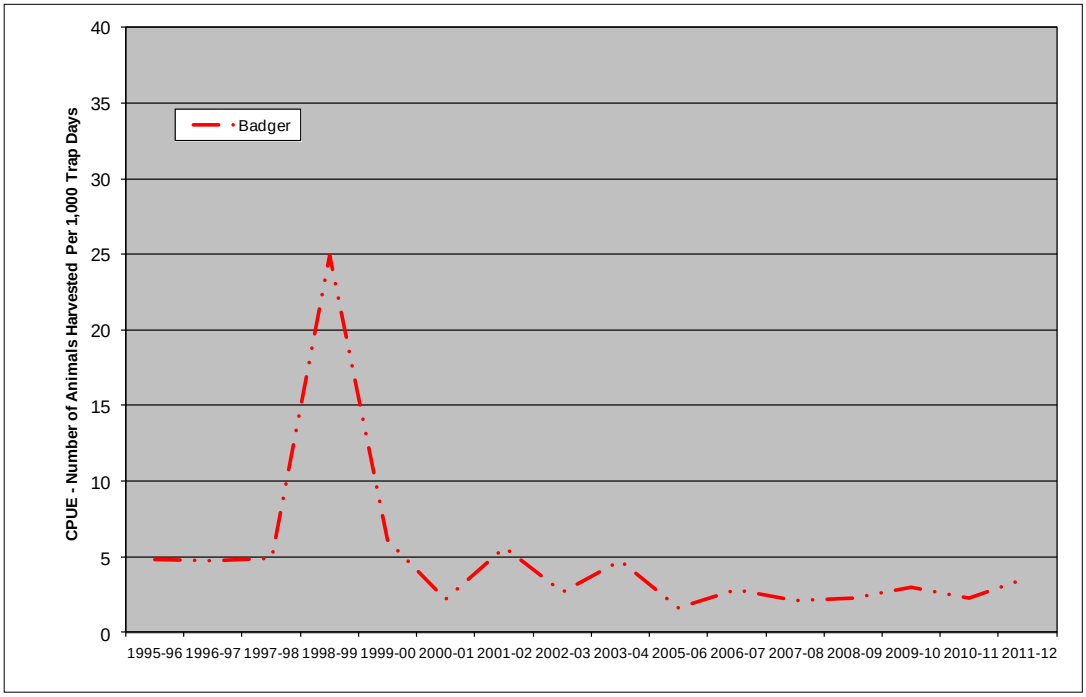


**Figure 50. Statewide trend in badger harvest from CPUE, 1995-96 to 2011-12.**

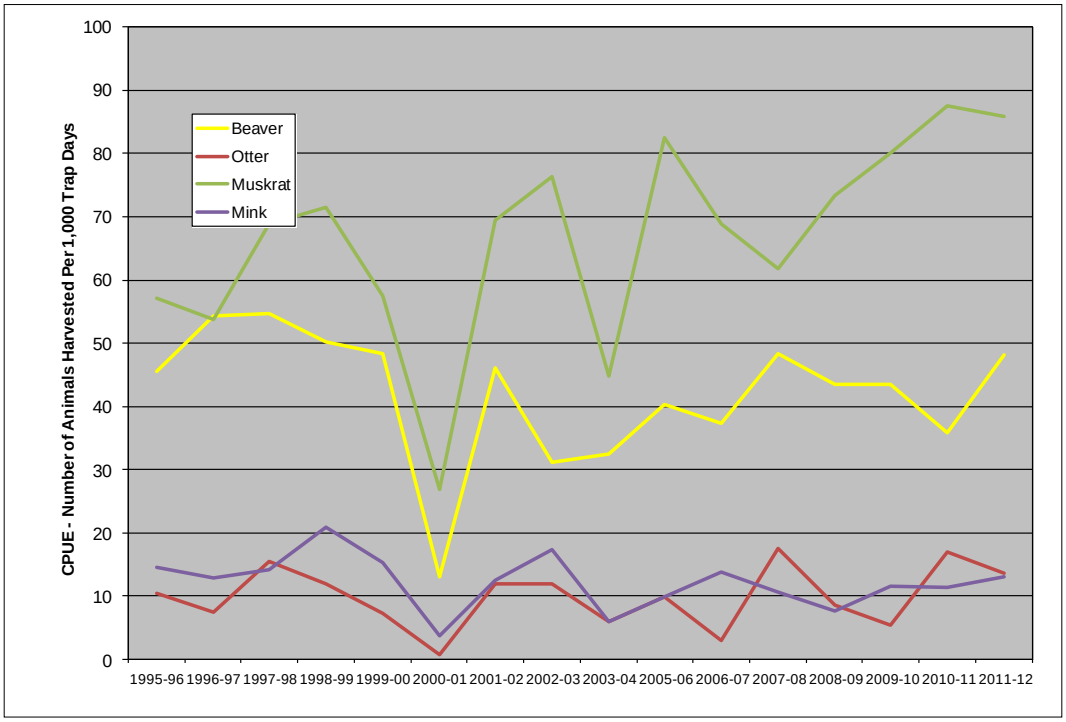


**Figure 51. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2011-12.**

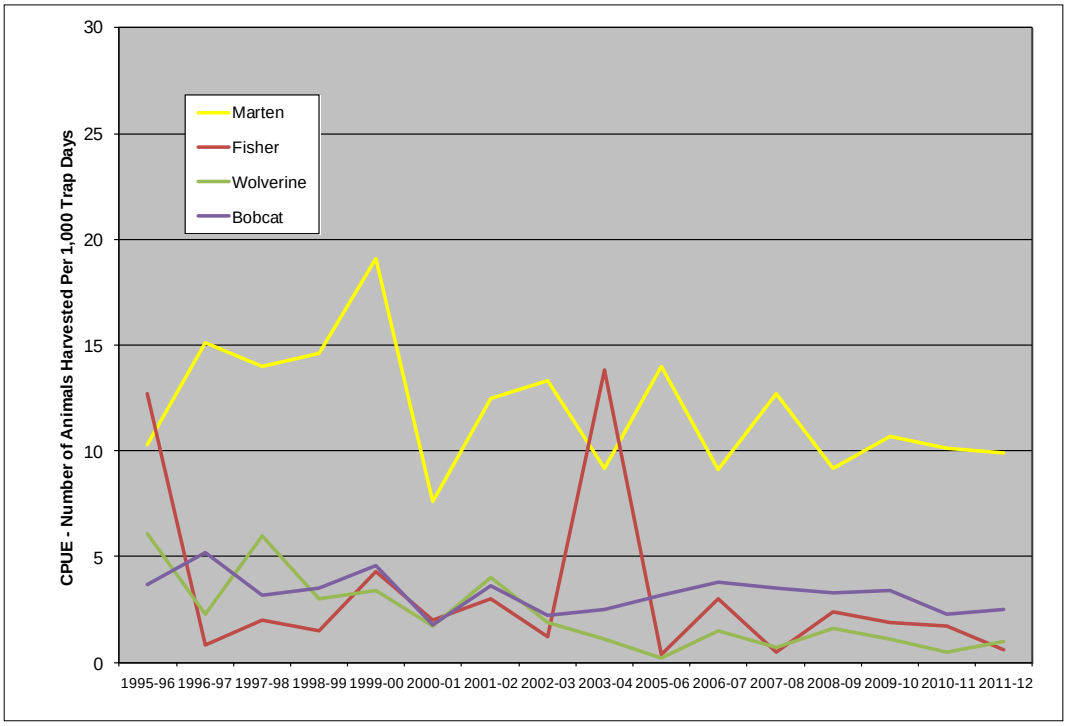


**Figure 52. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2011-12**

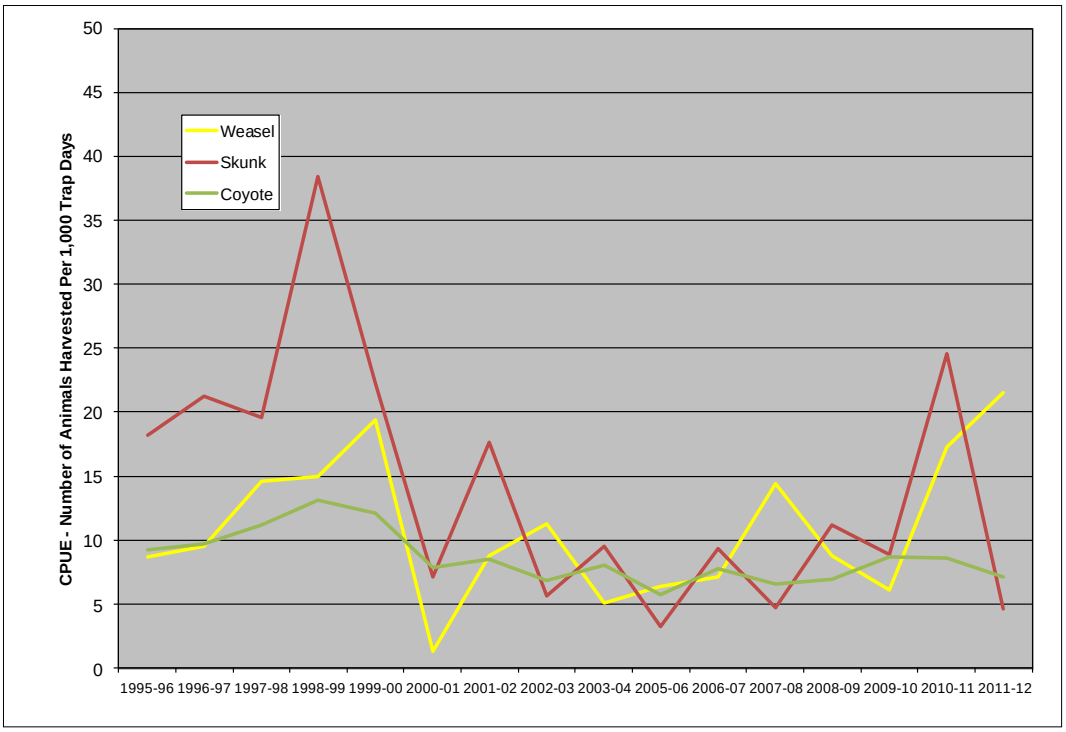


**Figure 53. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 1011-12.**

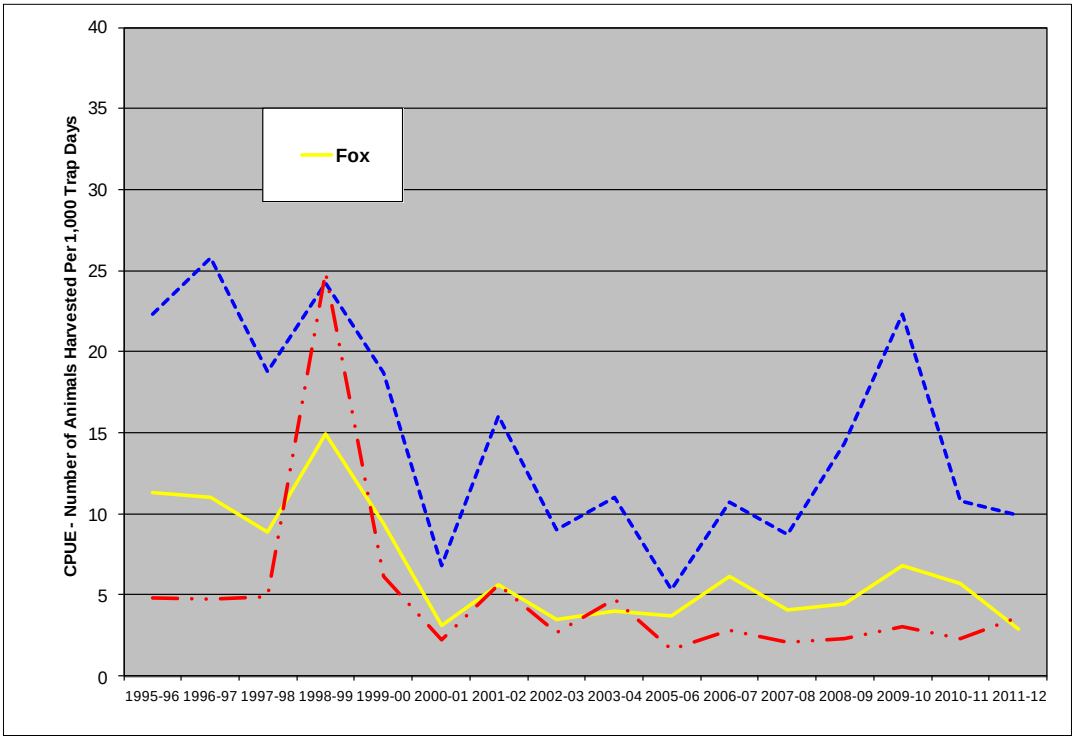


**Figure 54. Statewide harvest trend comparison of species group from CPUE, 1995-96 to 2011-12.**

Table 19. Statewide furbearer snow track survey results, NW & SW Montana (Trapping Districts 1-4).

| Year | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|---|---|
| Routes | 29 | 29 | 23 | 26 | 22 | 24 | 25 | 14 | 19 | 13 |
| Replicates | 1-3 | 1-3 | 1-3 | 1-3 | 1-3 | 1-3 | 1-3 | 1-2 | 1-3 | 1-2 |
| Miles | 966.7 | 922.9 | 544.6 | 718.5 | 637.4 | 746.6 | 689.1 | 321.8 | 550.7 | 283.4 |
| Hares | 11,716 | 10,694 | 5,519 | 8,815 | 7,188 | 6,581 | 6,209 | 3,701 | 4,643 | 3,272 |
| Squirrels | 3,462 | 6,496 | 2,548 | 2,355 | 2,360 | 1,970 | 2,802 | 1,803 | 1,955 | 1,657 |
| Marten | 363 | 556 | 173 | 246 | 262 | 258 | 305 | 217 | 357 | 256 |
| Fisher | 0 | 3 | 3 | 1 | 0 | 17 | 13 | 0 | 11 | 2 |
| Wolverine | 15 | 54 | 5 | 21 | 22 | 16 | 21 | 2 | 11 | 5 |
| Lynx | 321 | 287 | 98 | 204 | 223 | 264 | 100 | 100 | 95 | 3 |
| Bobcat | 118 | 49 | 95 | 89 | 77 | 49 | 86 | 56 | 74 | 24 |
| Lion | 31 | 14 | 13 | 34 | 14 | 44 | 31 | 31 | 24 | 6 |
| Weasel | 924 | 754 | 508 | 615 | 600 | 794 | 353 | 219 | 685 | 285 |
| Coyote | 1,007 | 914 | 895 | 961 | 820 | 410 | 760 | 379 | 744 | 410 |

Table 20. Statewide species track detection rates (tracks/100 miles), NW & SW Montana (Trapping Districts 1-4).

| Year | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|---|---|
| Hares | 1,211.9 | 1,158.7 | 1,013.4 | 1,226.8 | 1,127.7 | 881.5 | 901.0 | 1,150.1 | 843.1 | 1,154.5 |
| Squirrels | 358.1 | 703.8 | 467.8 | 327.7 | 370.2 | 263.8 | 406.6 | 560.2 | 355.0 | 584.6 |
| Marten | 37.5 | 60.2 | 31.7 | 34.2 | 41.1 | 34.5 | 44.2 | 67.4 | 64.8 | 90.3 |
| Fisher | 0.0 | 0.3 | 0.5 | 0.1 | 0.0 | 2.3 | 1.8 | 0.0 | 2.0 | 0.3 |
| Wolverine | 1.5 | 5.8 | 0.9 | 2.9 | 3.4 | 2.1 | 3.0 | 0.6 | 2.0 | 1.8 |
| Lynx | 33.2 | 31.1 | 18.0 | 28.4 | 34.9 | 35.3 | 14.5 | 31.1 | 17.2 | 1.0 |
| Bobcat | 12.2 | 5.3 | 17.4 | 12.4 | 12.1 | 6.5 | 12.4 | 17.4 | 13.4 | 8.5 |
| Lion | 3.2 | 1.5 | 2.4 | 4.7 | 2.2 | 5.9 | 4.5 | 9.6 | 4.3 | 2.1 |
| Weasel | 95.5 | 81.7 | 93.2 | 85.6 | 94.1 | 54.9 | 51.2 | 68.0 | 124.4 | 100.6 |
| Coyote | 104.1 | 99.0 | 164.3 | 133.7 | 128.6 | 106.3 | 110.2 | 117.7 | 135.1 | 144.7 |

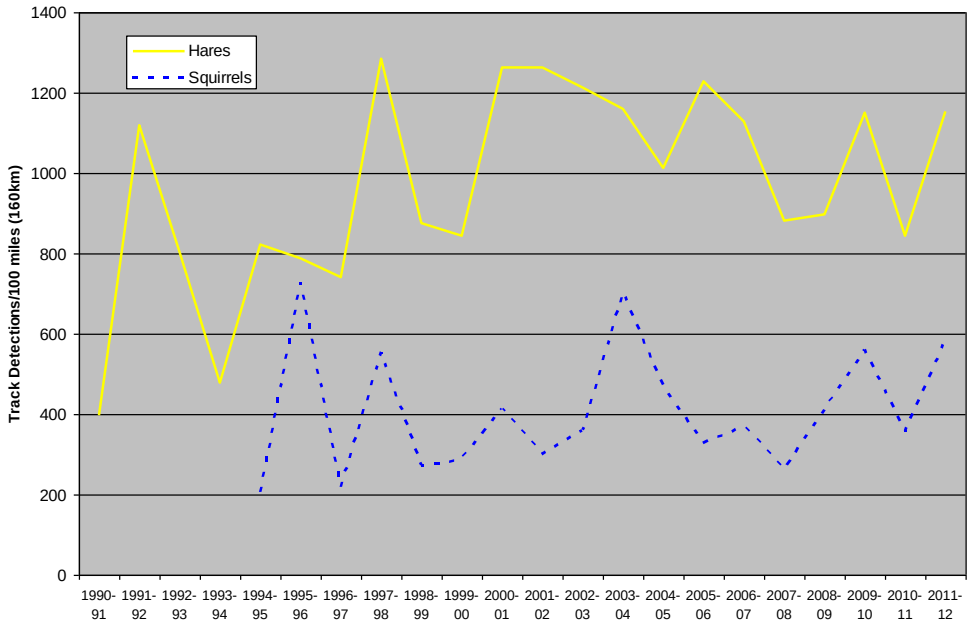


**Figure 55. Statewide (TD's 1-4) species track detection rates (tracks/100 miles), 1990-91 to 2011-12.**

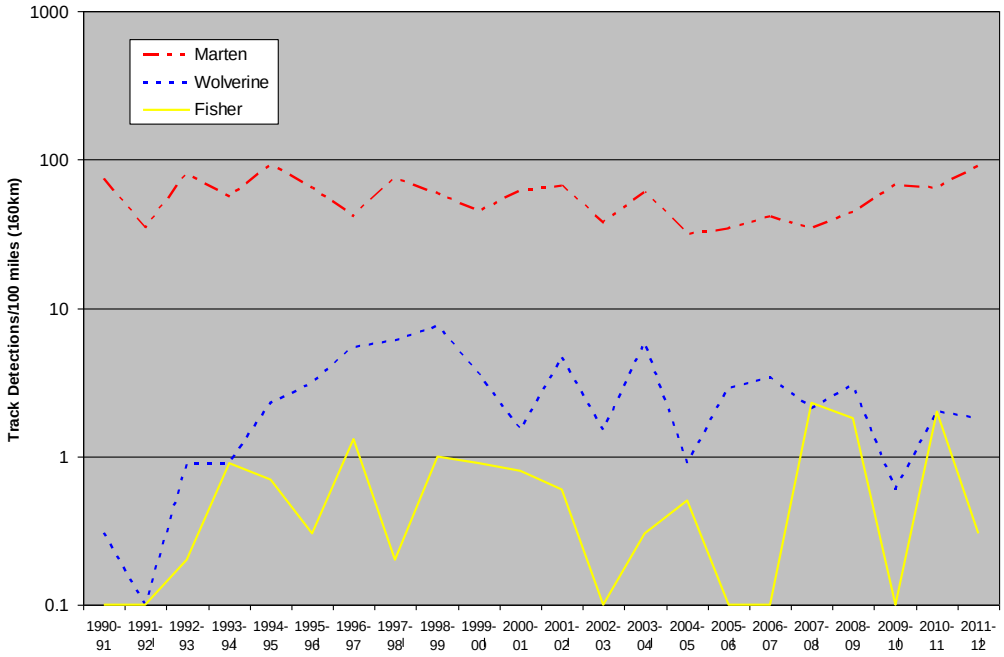


**Figure 56. Statewide (TD's 1-4) species track detection rates (tracks/100 miles), 1990-91 to 2011-12.**

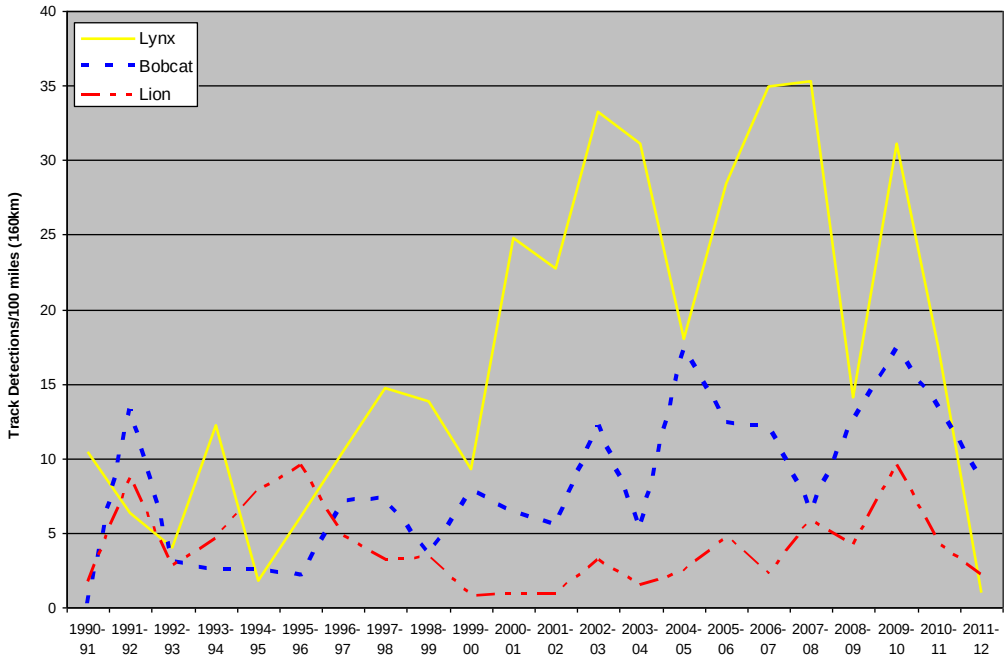


**Figure 57. Statewide (TD's 1-4) species track detection rates (tracks/100 miles), 1990-91 to 2011-12.**

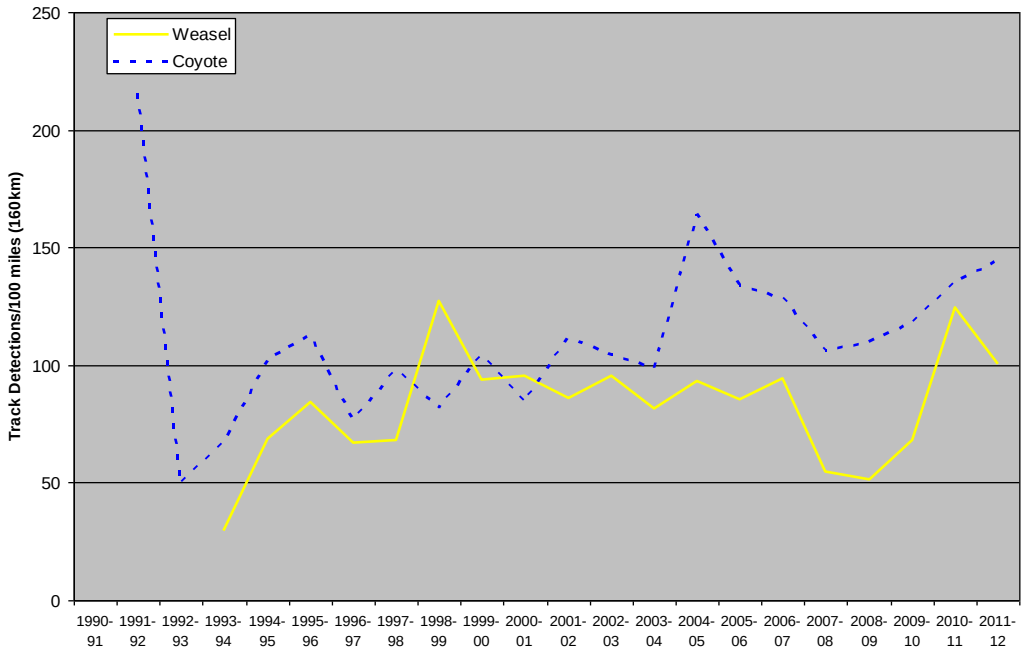


**Figure 58. Statewide (TD's 1-4) species track detection rates (tracks/100 miles), 1990-91 to 2011-12.**

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