



Utah's Predator Control Program Summary

Program activities and data from July 1, 2014 through June 30, 2015

Utah's *Mule Deer Protection Act* went into effect in July of 2012. The primary goal of the program is to remove coyotes from areas where they may prey on mule deer. Two bills were passed by the Utah Legislature that provide funding for implementation of the program. SB245 set aside \$500,000 from the Utah General Fund to pay a bounty fee for coyotes that are harvested by the public and SB87 added a \$5.00 fee increase to all big game hunting permits to help pay for predator removal efforts. The Utah Division of Wildlife Resources (Division) created the General Predator Control Program which tracks harvest and participation, and provides payment to all participants in the program. The Division established locations throughout the state where people could check-in coyotes for payment. Each participant must submit the scalp of the animal with both ears attached, the lower jaw, and a datasheet that documents where the coyote was killed.

In addition to the general bounty payment the Division is allowed to contract with individuals to remove coyotes from specified areas. Contracts focus in areas where the Division is concerned about deer herd performance and where the deer population management objective is <90% and the fawn:doe ratios are lower than expected.

This report summarizes details from the implementation of the Act in Fiscal Year 2015.

Participation, Payments and Coyotes Submitted for Payment

This is the third year of the General Predator Control Program and a total of 8,192 coyotes were turned in for \$409,600 in compensation, an increase of 16% compared with 7,041 coyotes in FY2014¹. In addition to the general control program the Division committed \$118,000 in funding through contracts established with 11 qualified individuals for targeted coyote removal. In contrast to previous years, the FY15 agreements allowed contractors to operate for a longer period (February 2014 to August 2015). Through the end of June 2015 contractors harvested a total of 305 coyotes.

In FY2015 a total of 1,065 individuals submitted coyotes through the General Predator Control Program. Participation was down 3% from the previous year, however the number of coyotes submitted by individual hunters increased with 40% of the participants submitting more than 5 animals compared with 33% in FY2014.

Impact of the Program: Estimates from Survey Data

The Division's yearly furbearer survey provided ancillary information about coyote harvest in the state. Up until implementation of the *Mule Deer Protection Act* and the General Predator Control Program the annual reported harvest of coyotes by hunters licensed to harvest furbearers averaged 7,397. The reported harvest of coyotes by licensed furbearers was 6,449 during 2014-2015. Of the 6,449 coyotes that were reported to be harvested by licensed fur harvesters 45% were not turned in for redemption of the payment. This means that in addition to the 8,192 an additional 2,903 coyotes were harvested that were not submitted for a payment through this program in FY2015. Total reported coyote harvest by the general public including this program between July 1, 2014 to June 30, 2015 is 11,095. Approximately one-third of the individuals who

purchased a furbearer permit in FY2015 indicated that they increased their efforts to harvest coyotes this year because of the predator control program.

In addition, the Division has a cooperative interagency agreement with USDA Wildlife Services (WS) to remove coyotes under this program. WS personnel reported removing 3,099 coyotes from July 1, 2014 to June 30, 2015.

Total estimated harvest of coyotes for FY2015 through the General Predator Control Program (8,192), the Targeted Control Program (305), additional general fur harvest not redeemed through the Predator Control Program (2,903), and by Wildlife Services (3,099) is 14,499 coyotes. Prior to the implementation of the Mule Deer Protection Act reported harvest of coyotes by licensed furbearer permits holders and Wildlife Services together averaged approximately 9,300 per year.

Biological Data

Samples and locations of all coyotes could not be collected due to errors in locations, incomplete data forms, or when conditions prevented gathering the additional data. For example, some coyotes were submitted with injuries which precluded sampling such as broken teeth and damaged hides. Also, when long lines or software problems at coyote check-in locations were encountered, biological data was not collected in order to provide quicker customer service to program participants.

Biological data collected for coyotes harvested in FY2015 indicates that of 8,147 coyotes for which gender data was available, 3,690 (45.3%) were female, 4,273 (52.4%) were male and 184 (2.3%) the sex was unknown. For 7,782 coyotes for which hunting method information was available, most (5,857; 75.3 %) were taken by shooting, 1,726 (22.2%) were trapped and 199 (2.6%) were harvested by other means such as dogs, vehicle collision, etc.

The Division did not send in teeth for aging in FY2015 but data from 592 coyotes harvested by the general public in FY2014 indicate that 80% of the harvest was two years old or younger and 60% of the animals were less than one year old. Of the 100 teeth sampled from contractor harvest, 67% were two years old or younger and 45% of the total harvest was less than one year old (Figure 1). However, older animals were also taken in FY2014; the oldest animal submitted was estimated to be 14 years old.

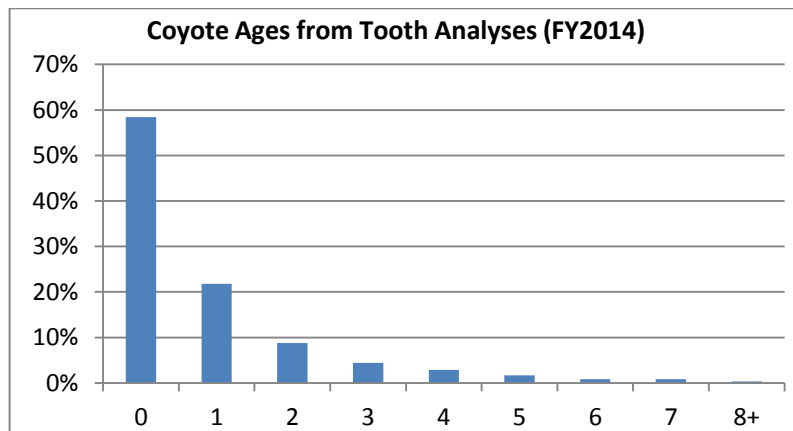


Figure 1. Age of coyotes determined by cementum annuli in FY2014

Temporal Distribution of Coyote Harvest

Coyote submission in FY2015 increased from November 2014 until a peak in early- to mid-February 2015, followed by marked decrease thereafter (Figure 2). This follows the general pattern observed in previous years, reflecting a seasonal increase in hunters on the landscape and people harvesting coyotes for the regional fur sale held in February.

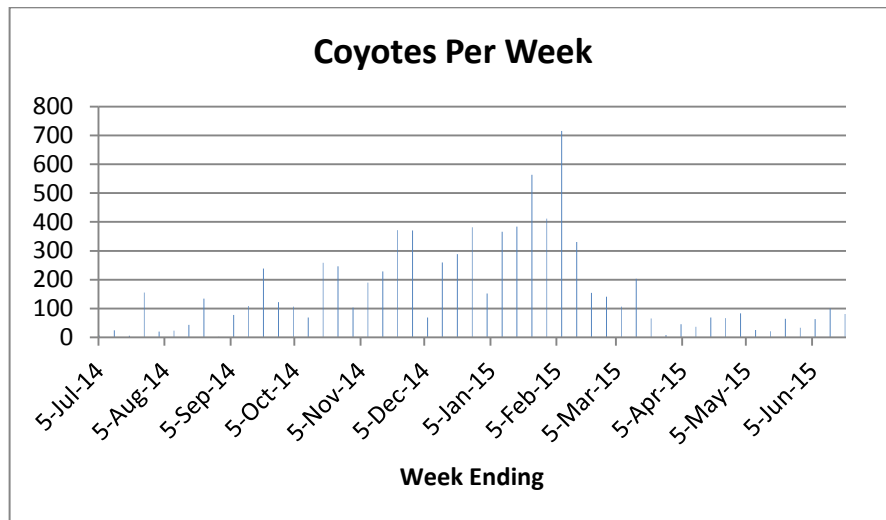


Figure 2. Number of coyotes turned in by week FY2015

Spatial Distribution of Coyote Take

The total number of coyotes submitted with usable spatial data was 7,442 in FY2015. Coyote removal locations were plotted onto the state's deer management units (Figure 3). Coyote removal success varied across the state but, as in past years, several popular deer WMUs (Box Elder, Fillmore, Southwest Desert, West Desert, San Juan and Pine Valley) accounted for almost half of the coyotes removed statewide (Table 1; n=3,559; 48%).

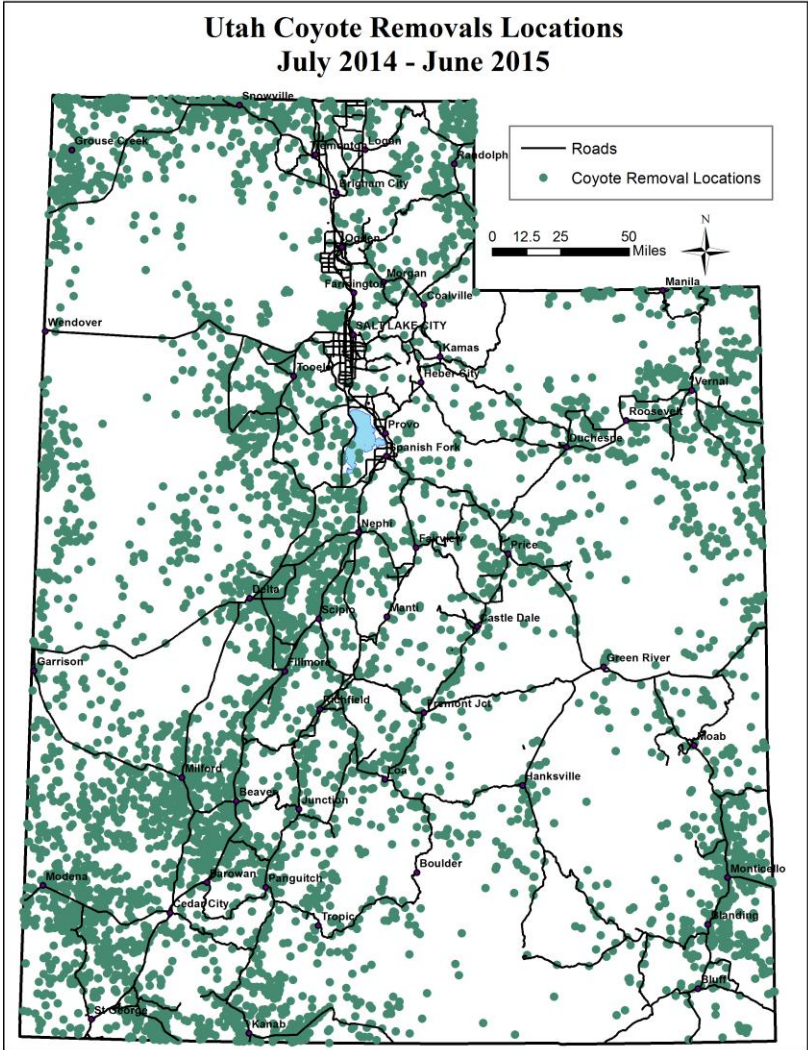


Figure 3. Locations of coyote harvested and turned in for payment

Hunt Unit/Tribal	Coyotes	Percent
Box Elder	802	10.8%
Fillmore	578	7.8%
West Desert	572	7.7%
Southwest Desert	569	7.6%
San Juan	540	7.3%
Pine Valley	498	6.7%
Beaver	475	6.4%
South Slope	393	5.3%
Central Mountains	311	4.2%
Zion	306	4.1%
Cache	291	3.9%
Oquirrh-Stansbury	262	3.5%
Paunsaugunt	252	3.4%
Plateau	228	3.1%
Nine Mile	134	1.8%
Book Cliffs	132	1.8%
La Sal	120	1.6%
Wasatch Mountains	118	1.6%
San Rafael	115	1.5%
Panguitch Lake	108	1.5%
Morgan South Rich	92	1.2%
Mt. Dutton	93	1.2%
North Slope	90	1.2%
Kaiparowits	78	1.0%
Monroe	76	1.0%
East Canyon	46	0.6%
Henry Mountains	51	0.7%
Ogden	49	0.7%
Navajo Res	37	0.5%
Chalk Creek	19	0.3%
Kamas	7	0.1%

Table 1. Number of coyotes turned in for payment by deer wildlife management unit

Conclusion

The Predator Incentive Program was efficiently and effectively implemented at a statewide scale during fiscal year 2015. The program likely increased the numbers of coyotes harvested in Utah. Based on three years of data collected we estimate that 39,551 coyotes have been harvested. This is an average of 13,184 coyotes per year. It will likely take several years of implementation of this program before improvements in fawn:doe ratios statewide may become observed and this effect may be more visible in local areas versus statewide. Prior to implementation of the Mule Deer Protection Act the statewide (2012) fawn:doe ratio was 61. Since 2012 the fawn:doe ratio has fluctuated between 61 to 65 indicating a stable deer population overall. There are many factors such as weather, drought and habitat conditions that contribute to fawn:doe ratios. For the entirety of the program, the location data indicates that most coyotes are harvested in areas occupied by mule deer.

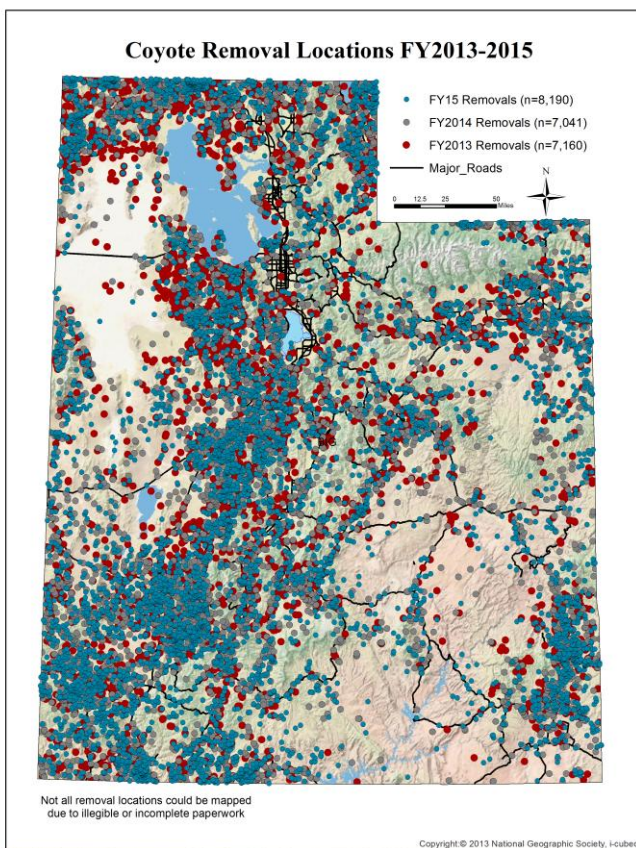


Figure 4. Cumulative locations of coyote harvested and turned in for payment 2012-2105

¹The coyote program does not have mandatory reporting requirements. It is legal to harvest coyotes and store them for indeterminate periods, meaning that coyotes harvested in one fiscal year may be submitted for payment in a different fiscal year. For the purposes of this report, analyses include all coyotes submitted for payment in FY 2015, regardless of their actual kill date.