

State of California
The Natural Resources Agency
Department of Fish and Game
Wildlife Branch

2010 Bear Take Report

The 2010 archery bear hunting season opened statewide on August 21 and extended for 23 consecutive days. The general bear hunting season opened concurrently with general deer hunting season in the A, B, C, D, X8, X9A, X9B, X10 and X12 deer hunting zones. In the remaining deer hunting X zones, bear season commenced October 9. The bear season closed on the last Sunday in December (December 26) pursuant to California Code of Regulations, Title 14, section 365, making it the first time since 2006 that the bear season did not close early.

The Department has since ascertained that 1,503 bears were harvested during the 2010 black bear hunting season, which is statistically less than the previous three years' average ($p = 0.0504$, $df = 2$). This difference can be explained, in part, due to heavy snowfall accumulation, beginning in the Central Sierras on November 8, 2010, and in Northern California beginning on November 20, 2010 (NOAA records). This snowfall accumulation prevented many bear hunters from accessing remote sections of the state considered prime black bear habitat.

The Department monitors the black bear population in accordance with the 1998 Black Bear Management Plan. Contained within this plan is a matrix of thresholds of concern for the statewide black bear population. The plan states that if two or more of these thresholds are exceeded, the Department will recommend to the Fish and Game Commission that the bear harvest be reduced. One of these thresholds has been exceeded (a statistically lower harvest when compared to the previous three years' average). The Department will evaluate the remaining thresholds once the ages of hunter-killed bears have been ascertained. If one more of the remaining three monitoring thresholds are exceeded relative to the 2010 California black bear harvest, the Department will recommend to the Fish and Game Commission a reduced harvest level.

In all, 24,859 bear hunters purchased tags, as reported by the License and Revenue Branch. This total consisted of 24,591 resident bear tags and 268 non-resident bear tags. Total bear tag sales in 2010 were 0.6% greater than 2009 bear tag sales and 7.6% greater than the previous ten years' average.

This season, 1,503 black bears were reported harvested, which is 20.9% less than the reported take in 2009 which was 1900. Of the 1,503 bears harvested, 39% were female, 58% were male and 3% were unreported or marked unknown (Figure 2).

The first upper premolar tooth was collected from half the harvested bears and have been sent to a laboratory for age determination. The Department uses the age and gender ratios from harvested bears to estimate the pre-hunt population size. The 2010 age data and subsequent population estimate are forthcoming at the time of this report.

The Department has recently updated the method for estimating the statewide black bear population number. While the theoretical basis for determining the population estimate has remained unchanged, the Department revised the mathematical technique. This revision now provides the Department with a standard error and thus confidence intervals about the population estimate. In essence, the Department is now more confident that the true population lies between an upper limit and a lower limit. The latest black bear population estimate (hunt-year 2009) is estimated to be 31,432 (+/- 7,991) bears (Figure 1). It is important to note that this method only estimates bears within the current hunt zone, prior to the commencement of the previous year's hunting season. As bears occupy habitats outside the 2009 hunt zone, the Statewide population is likely greater than this number.

Bears were predominantly harvested in October (Figure 3), most likely due to hound use restrictions. Similar to previous years, the number of bears harvested in November and December were less than the month previous, reflecting decreasing bear availability due to inclement weather and denning chronology.

Northern California counties provide some of the better bear hunting in the State (Table 1). Shasta, Siskiyou and Trinity counties accounted for about 11% each,

while Tulare, Tuolumne, Humboldt and Fresno counties accounted for 7%, 6%, 5% and 5% of the total statewide 2010 bear harvest, respectively. These northern counties provide some of the better bear habitat in the state – areas of mixed aged conifers interspersed with open meadows and mixed hardwood forests that provide ample amounts of calorie-dense berries and nuts.

Similar to 2009, most bear hunters who were successful in harvesting a bear spent a week or less afield (Figure 4). Nearly half of successful hunters reported having spent a day or less in the field; 43% of successful hunters spent from 2 to 7 days in the field and the remaining 13% spent 8 or more days in the field.

California bear hunters use various methods to harvest bear. In 2010, half of all bears were harvested without the assistance of hounds (Figure 5), whereas 45% of bears were reportedly taken while using hounds. Hunters who took a bear while deer hunting accounted for more than a third of the total harvest (Table 2); only 4% of these hunters used archery equipment. Over 50% of hunters took their bear while only bear hunting and 4% of these hunters used archery equipment.

Figure 1. Bear Population Estimates.

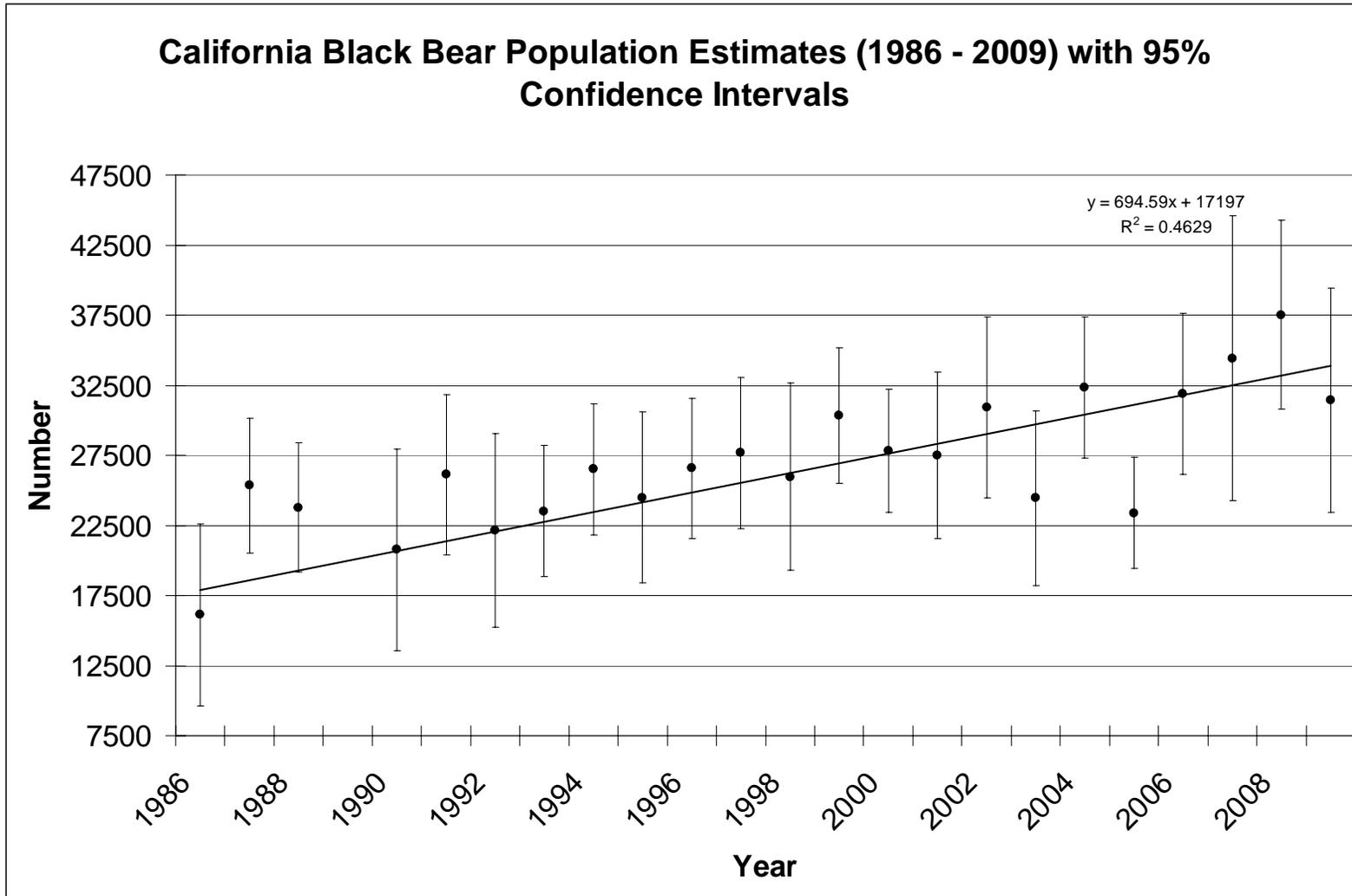


Figure 2. Harvested Bear Gender

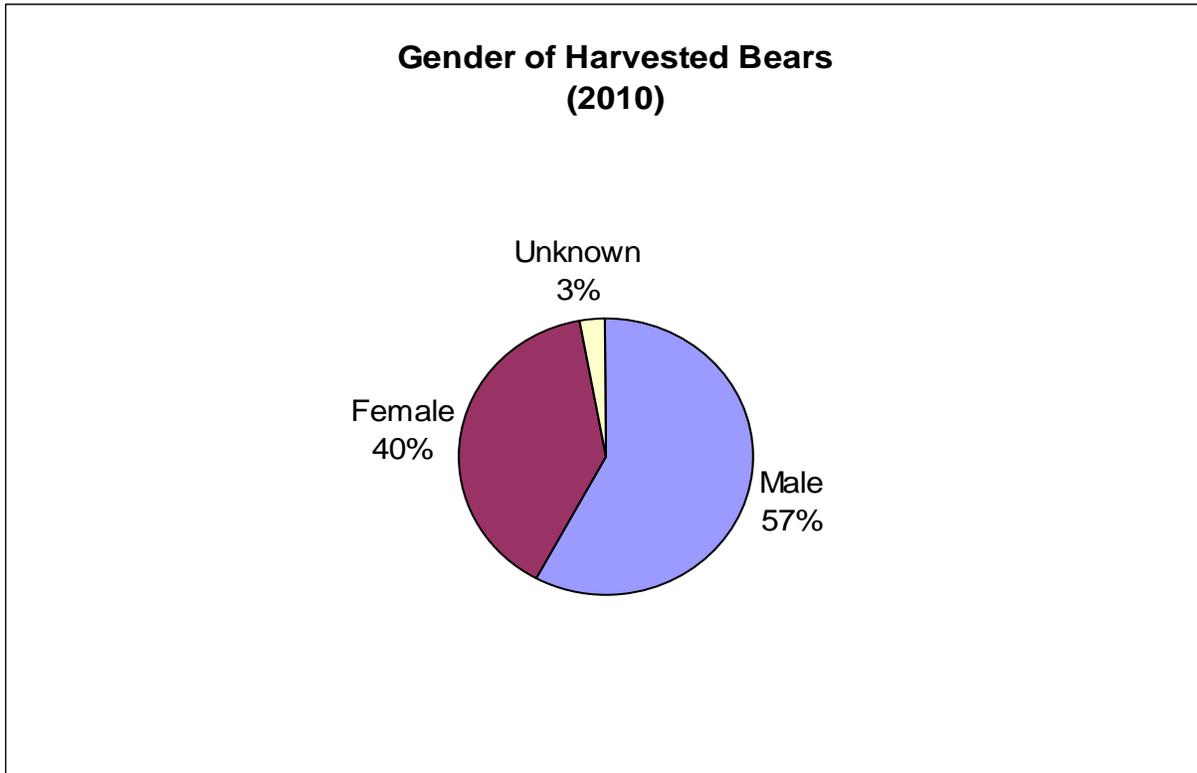


Figure 3. Monthly Bear Harvest

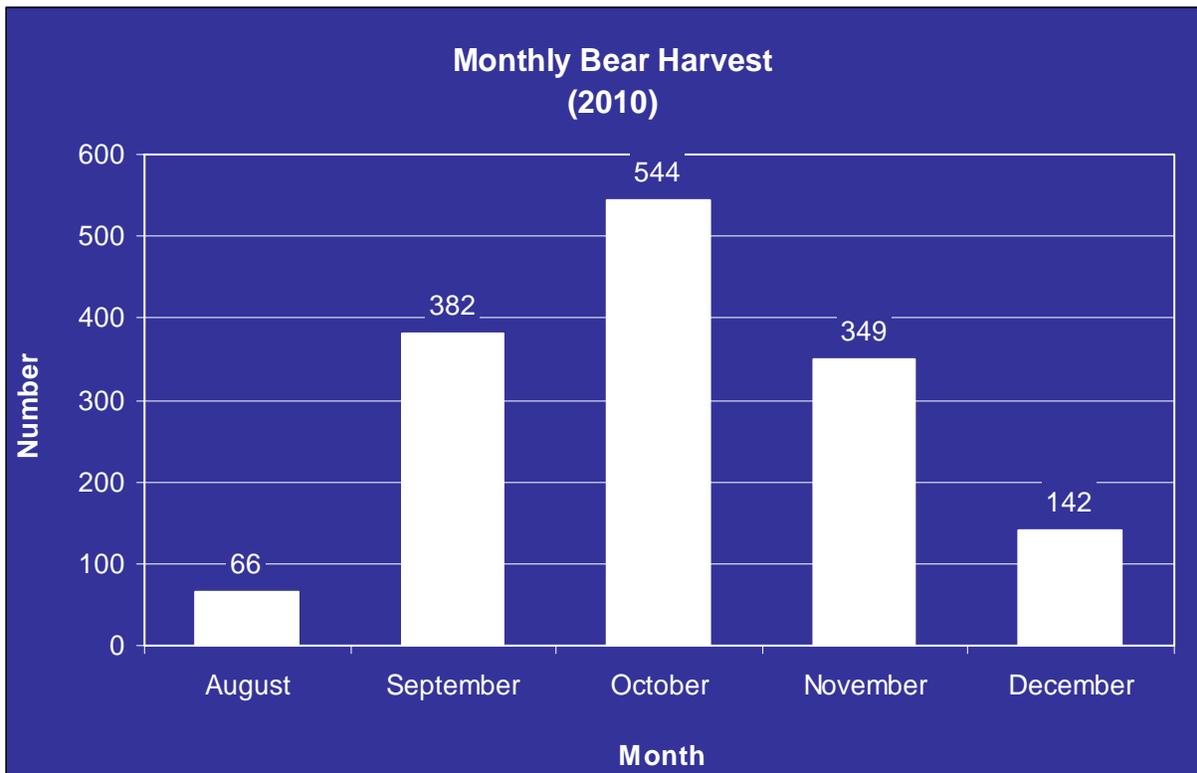


Table 1. Bear Harvest by County

County	# of Bears Harvested	Percent of Total Harvest
Alpine	6	0.4%
Amador	5	0.3%
Butte	44	2.9%
Calaveras	16	1.1%
Colusa	1	0.1%
Del Norte	24	1.6%
El Dorado	47	3.1%
Fresno	76	5.1%
Glenn	18	1.2%
Humboldt	77	5.1%
Kern	29	1.9%
Lake	12	0.8%
Lassen	16	1.1%
Los Angeles	9	0.6%
Madera	32	2.1%
Mariposa	18	1.2%
Mendocino	61	4.1%
Modoc	3	0.2%
Mono	12	0.8%
Napa	1	0.1%
Nevada	25	1.7%
Placer	33	2.2%
Plumas	62	4.1%
San Bernardino	7	0.5%
San Luis Obispo	1	0.1%
Santa Barbara	10	0.7%
Shasta	172	11.4%
Sierra	42	2.8%
Siskiyou	167	11.1%
Stanislaus	3	0.2%
Tehama	56	3.7%
Trinity	161	10.7%
Tulare	101	6.7%
Tuolumne	94	6.3%
Ventura	11	0.7%
Yolo	4	0.3%
Yuba	23	1.5%
Unknown County	24	1.6%
Total	1503	100.0%

Figure 4. Hunter Days Afield

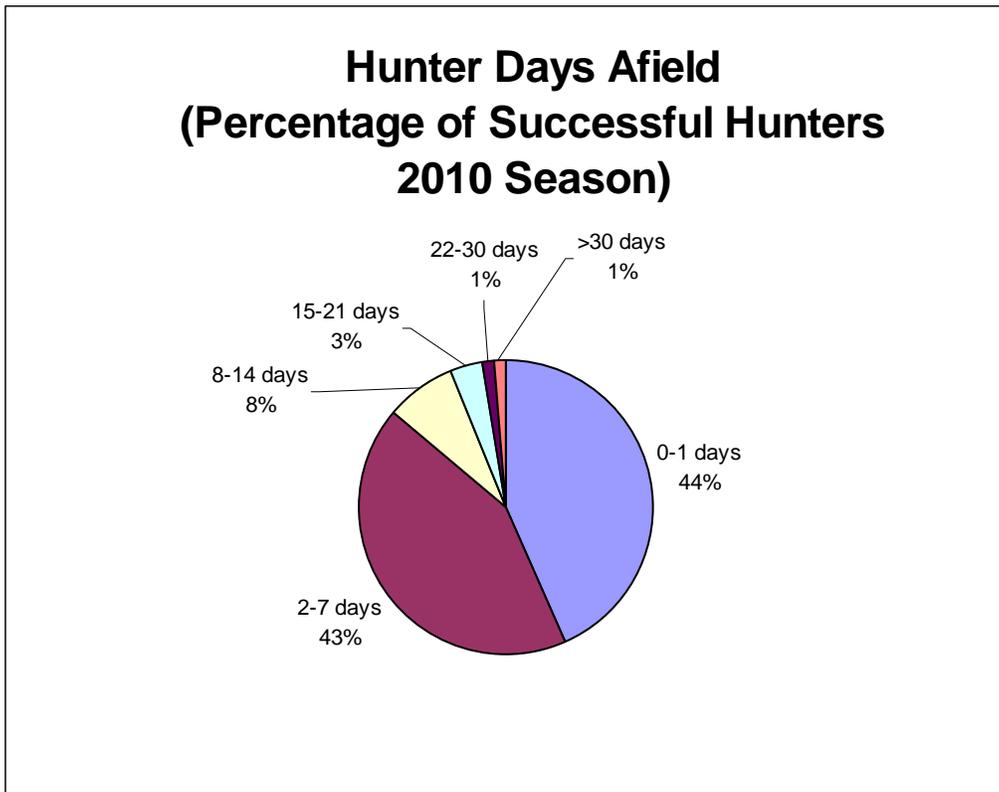


Figure 5. Use of Dogs.

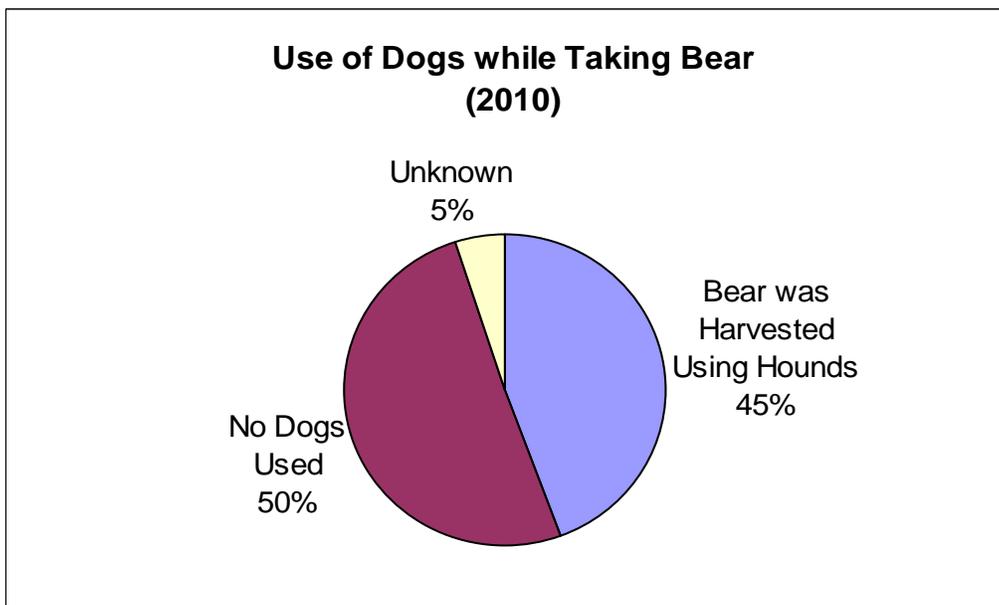


Table 2. Method of Take Summary

	Not Archery Hunting	Archery Hunting	Unknown	Grand Total
Bear Hunting	48.3%	4.0%	3.3%	55.6%
Took a Bear while Deer Hunting	29.4%	4.1%	2.9%	36.5%
Unknown	2.5%	0.2%	5.3%	8.0%
Grand Total	80.2%	8.3%	11.5%	100.0%