

BLACK BEAR POPULATION MANAGEMENT PLAN

*DAU B-16
MIDDLE PARK, RADIUM & STAGECOACH*

GAME MANAGEMENT UNITS
15, 18, 181, 27, 28, 37, & 371
Northwest Region



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BLACK BEAR POPULATION MANAGEMENT PLAN FOR DATA ANALYSIS UNIT B-16

EXECUTIVE SUMMARY

GMUs: 15, 18, 181, 27, 28, 37, & 371

Land Ownership: 55% USFS, 28% Private, 9% BLM, 5% NPS, 3% State, <1% Local municipalities/Land trust/NGOs.

Previous Population Objective: Sustain a healthy bear population.

Previous Mortality Objectives: Provisional: 15 harvested bears; 25 total bear mortalities.

Proposed (2025-2034) Strategic Goal: Maintain a stable bear population trend and no increase in human-bear conflicts: CPW will manage the B-16 bear population within the stable ranges of the age-sex harvest composition indices and total mortality rates, with an adaptive management approach that adjusts harvests according to three harvest composition metrics and a maximum human-caused mortality threshold. Continuing efforts will be made to engage communities in Bear Aware education and to encourage local governments to implement and enforce ordinances aimed at minimizing bear attractants. CPW will monitor the effectiveness of these strategies based on trends in annual human-bear conflicts. Under the current estimated population size of approximately 542 bears, a stable population strategy can be achieved through average total human-caused mortality range of 54 – 81 bears, which includes hunter harvest of approximately 55 - 65 bears annually. If total mortality exceeds 81 bears annually for an average of three consecutive years, or harvest composition metrics indicate a decreasing population, a transition from the OTC license structure to fully limited license structure will be considered for B-16.

BACKGROUND

Bear Data Analysis Unit (DAU) B-16 is located entirely within the Northwest Region of Colorado and includes Game Management Units (GMUs) 15, 18, 181, 27, 28, 37, & 371. The DAU encompasses all of Grand and Summit Counties (Middle Park), and includes a small portion of Routt and Eagle Counties. Major towns include Winter Park, Fraser, Granby, Grand Lake, Hot Sulphur Springs, Kremmling, Silverthorne, Frisco, Dillon, Breckenridge, Oak Creek and Yampa. B-16 covers 7,461 km² (1.8 million acres) of land. Approximately 5,402 km² are public lands (Federal, State and Municipal), and approximately 2,059 km² are private lands.

Annual bear mortality in B-16 has increased since provisional objectives were set in 2000. The 10-year average of annual human-caused bear mortality in B-16 is 69 bears per year, and the 3-year average is 79 bears per year. Conflicts between bears and humans occur throughout B-16, especially when natural foods are scarce and when garbage and other human-related attractants are readily available. These conflicts are the combined result of increases in both bear and human populations over the past several decades, increased availability of human-related food sources, and more frequent drought conditions resulting in poor natural forage.

Harvest has also increased since 2005 when license quotas were increased. The current 10-year average annual harvest mortality is 52 bears, and the current 3-year average is 64 harvested bears. Currently, a majority of the harvest takes place during the September hunting seasons: archery (33%), September rifle (26%), September PLO (15%), and Muzzleloader (13%).

CPW uses the age and sex composition of harvested bears as an indicator of population trajectory. Over the most recent 3 years of available data (2020-2022), the age and sex composition of the harvest has averaged: (a) 23% adult male in the total harvest, (b) 37% female in the total harvest,

and (c) 54% adult female in the female portion of harvest. Overall, the trend since 2013 in these age-sex composition indices considered altogether reflect a population trajectory that is relatively stable.

The most current population estimate for B-16 contains two components: an assessment of bear habitat use/occupancy and a density estimate for each level of use/occupancy, based on bear densities observed non-invasive genetic sampling studies performed throughout Colorado from 2009 to 2015. This model yielded a bear population estimate range of 477 to 607 bears in B-16. For the purposes of establishing management guidelines and objectives, the mean of 542 bears is used as the current DAU population estimate.

SIGNIFICANT ISSUES

The most significant issue regarding bear management in B-16 is managing conflicts between bears and people. These conflicts generally involve bears feeding on trash, entering and damaging houses and vehicles, occasionally killing livestock, vehicle collisions, and camping conflicts. On rare occasions, direct contact between bears and humans have resulted in human injuries. Conflicts are common in the resort towns within the DAU and are heightened during poor natural food years. Trash ordinances have been adopted by many towns and counties in B-16 and have had varied success at reducing available anthropogenic foods. In reality, trash continues to be a problem in many communities due to poor compliance with trash ordinances.

The cost of bear-related game damage claims in B-16 from 1995 to 2022 totaled \$239,202, and averaged \$8,860 per year. Domestic sheep have comprised the overwhelming majority of claims, followed by cattle. Control kills (CPW, APHIS, landowner, other law enforcement) account for 11% of total non-harvest bear mortalities over the past two decades.

PREFERRED MANAGEMENT STRATEGY

The preferred management priorities in DAU B-16 are to maintain a stable and healthy bear population, continue to provide bear hunting opportunity, and minimize conflicts between humans and bears. The structure of a Bear Management Plan focuses on the primary tool available to wildlife managers which is hunting, in addition to public education, law enforcement, game damage mitigation and habitat modification. This plan provides harvest and mortality-related monitoring indices to manage the bear population size and human-bear conflict trends in B-16. In addition to license structure and hunting, active prevention of human-bear conflicts by removing attractants for bears is critical to address current and future conflicts.

Alternative 1: Manage for a Stable Population (Preferred Strategy)

Under Alternative 1, B-16 would continue be managed for a stable bear population trajectory and for no increase in human-bear conflicts. Ideally, a decrease in human-bear conflicts is preferred and CPW will continue to work with communities to educate residents and visitors on Bear Aware practices, and encourage municipal and county authorities to strictly enforce trash ordinances. Effectiveness of these strategies will be determined by monitoring annual number of human-bear conflicts, which are tracked internally through the CPW Wildlife Incidents App.

The following 3-year averages of age/sex composition of the harvest are indicative of a stable population:

1. Total females between 30-40% of total harvest.
2. Adult females at 45-55% of the female harvest.
3. Adult males between 25-35% of total harvest (>35% indicates an increasing population).

The total mortality rate as a proportion of the population should fall in the 10-15% range to maintain a stable population. With a current population estimate in B-16 of approximately 542 bears, the three-year average total human-caused mortality to maintain a stable population should not exceed 81 total bear mortalities per year. Based on the long-term average and range of bear harvests and other human-caused mortalities reported, this strategy maintains a 3-year average harvest objective of approximately 55 - 65 bears and 3-year average total human-caused mortality objective of approximately 54 - 81 bears.

B-16 currently utilizes the unlimited add-on license structure, which was implemented as an option for black bear DAUs in the current 2020-2024 Big Game Season Structure. While B-16 has experienced a substantial increase in bear license sales since 2020, harvest metrics have not changed significantly and continue to indicate a stable bear population. Under Alternative 1, CPW will continue to monitor harvest and evaluate license sales as they relate to harvest annually. If the 3-year averages of age/sex composition of the harvest start to indicate a changing population, CPW will consider a limited licensing structure for B-16 to adjust license availability and continue to manage bear harvest for a stable population.

Additionally, CPW will continue to work with local municipalities, communities, and trash companies to emphasize both Bear Aware information and education, as well as enforcement of trash ordinances and other regulations aimed at reducing or prohibiting artificial food sources available to bears. Funding for efforts to reduce human-bear conflicts will be instrumental. Internal CPW grant funds have been allocated to address human-bear conflicts in B-16, but additional matching funds from local governments and organizations will also be necessary to continue implementing these efforts on a scale significant enough to positively influence outcomes.

Alternative 2: Manage for a Lower Population

The following 3-year averages of age/sex composition of the harvest are indicative of a decreasing population:

1. Total females > 40% of total harvest.
2. Adult females > 55% of the female harvest.
3. Adult males < 25% of total harvest (>35% indicates an increasing population).

Under Alternative 2, CPW would consider ways to increase future harvest and decrease the population. Over time, this will lead to fewer numbers of bears, less hunting opportunity as the population decreases, and potentially fewer human-bear encounters and conflicts in B-16.

Alternative 3: Manage for a Higher Population

The following 3-year averages of age/sex composition of the harvest are indicative of an increasing population:

1. Total females < 30% of total harvest.
2. Adult females < 45% of the female harvest.

3. Adult males > 35% of total harvest.

Under Alternative 3, CPW would consider a fully limited license structure with decreased number of licenses available based on current demand, in order to decrease future harvest. This alternative would increase the number of bears, decrease hunter opportunity, and likely increase human-bear encounters and conflicts in B-16.