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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DRAFT

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 km^2 (1.8 million acres) of land. Approximately 5,402 km^2 are public lands (Federal, State and Municipal), and approximately 2,059 km^2 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.

DAU B-16
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INTRODUCTION

Colorado Parks and Wildlife (CPW) manages wildlife for the use, benefit, and enjoyment of the people of the state in accordance with the CPW's Strategic Plan and mandates from the Colorado Parks and Wildlife Commission and the Colorado Legislature. Colorado's wildlife resources require careful and increasingly intensive management to accommodate the many and varied public demands and growing impacts from people. CPW is responsible for the maintenance of Colorado's big game at population levels that are established through a public review process and approved by the Colorado Parks and Wildlife Commission.

BEAR MANAGEMENT PLANS AND WILDLIFE MANAGEMENT BY OBJECTIVES

To manage the state's big game populations, CPW uses a "management by objective" approach (Figure 1). Big game populations are managed to achieve objectives established for Data Analysis Units (DAUs). DAUs are geographic areas that typically contain an individual big game population. For large mobile carnivores like black bears, DAUs are primarily administrative constructs with generally similar habitats and/or human social considerations. DAUs are composed of smaller areas designated as game management units (GMUs), which provide a more practical framework where the management goals can be refined and applied on a smaller scale, typically through hunting regulations.

The bear management planning process is designed to balance public demands, habitat, and big game populations into a management scheme for the individual DAU. The public, hunters, federal and local land use agencies, landowners, and agricultural interests are involved in determining the plan objectives through input given during public meetings, the opportunity to comment on draft plans and when final review is undertaken by the Colorado Parks and Wildlife Commission.

The strategic goals and specific mortality objectives defined in the plan guide a long-term cycle of annual information collection, information analysis, and decision-making. The end product of this process is a recommendation for numbers of hunting licenses for the DAU (Figure 1). The plan also specifically outlines the management techniques that will be used to reach desired objectives. CPW intends to update these plans as new information and data become available, at least once every ten years.

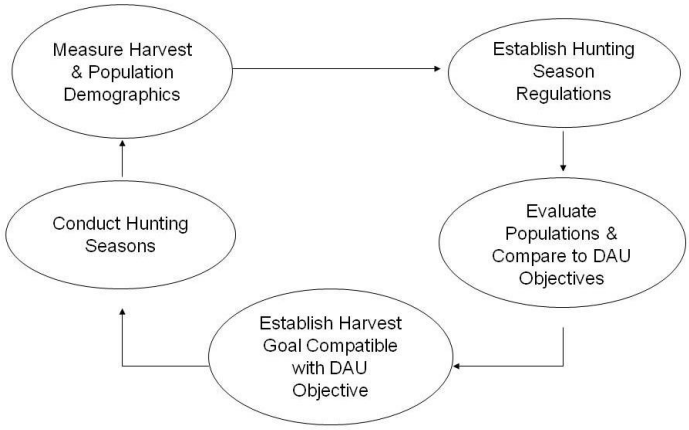

Figure 1. Management by objectives process used by the CPW to manage big game populations on a DAU basis.

Black bear management issues and what tools should be used to address them are particularly complex and multifaceted. Strategies in communities within B-16 and in other North American states and provinces involving attempts at bear behavioral change, community education, enforcement of ordinances requiring bear-proof garbage containers, the human dimensions component of human-bear conflicts, etc. have been reviewed elsewhere (e.g., Peine 2001; Gore 2004; Tavss 2005; Kiel 2007; Baruch-Mordo et al. 2009, 2011, 2013; Johnson et al. 2018). The structure of a bear management plan focuses on one specific tool, primarily hunting, out of a suite of tools, including education, enforcement, and habitat modification, which also can be used to manage conflicts. This plan provides harvest-related monitoring structures along with strategic goal alternatives that will attempt to influence the bear population size in B-16. However, the types of conflicts that occur between people and bears often require more than simple changes in licensing or hunting structure in order to completely resolve the problem. Active involvement by residents and businesses in the communities, trash companies, HOAs, and local governments to reduce and ideally eliminate human food sources for bears are also critical to resolving bear management issues.

DATA ANALYSIS UNIT DESCRIPTION

Location & Land Ownership

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 portions 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. Major highways that traverse the DAU include U.S. Highway 40 from Berthoud Pass to Rabbit Ears Pass; Interstate 70 from the Eisenhower Tunnel to Vail Pass; Highway 9 from Kremmling to Hoosier Pass; and Highway 91 from I-70 to Fremont Pass. B-16 is bordered on the northeast by Rocky Mountain National Park. Middle Park is a large basin surrounded on most sides and intersected by high mountain ranges. The Gore Range, Tenmile Range and Continental Divide all have peaks exceeding 13,000 to 14,000 feet in elevation, and the valley floor surrounding Kremmling is 7,300 feet in elevation. Major drainages in B-16 include the headwaters of the upper Colorado River, the Fraser River, the Williams Fork River, Troublesome Creek, Muddy Creek, the Blue River, the Snake River, Tenmile Creek, the Yampa River, Sarvis Creek, Wheeler Creek and Toponas Creek.

B-16 covers approximately 7,461 square kilometers (1.8 million acres) (Figure 2). Nearly 70% of the DAU is composed of public lands including 54.8% US Forest Service (USFS), 9.1% Bureau of Land Management (BLM), and 5.2% National Park Service (NPS) as Rocky Mountain National Park. The State of Colorado manages 3.0% of the DAU as State Wildlife Areas (0.8%) and State Trust Lands (2.2%). Less than 1% of the DAU is managed by local city and county municipalities (0.3%). Approximately one-quarter (27.6%) of the land in B-16 is held in private ownership, including land trusts and non-governmental organizations (NGOs). The entire DAU is considered overall black bear range, although bear densities vary by habitat type. Approximately 21% of the DAU is considered summer concentration area for bears (1,583 km^2), and 11% (836 km^2) is considered fall concentration habitat for black bears (Figure 3). About 5% (356 km^2) of the DAU is identified as human conflict areas, particularly in the towns of Yampa, Winter Park, Fraser, Granby, Grand Lake, Silverthorne, Dillon, Keystone, Frisco and Breckenridge. During the fall when bears transition to hyperphagia, they concentrate in areas with high mast crop production and/or accessible human food sources.

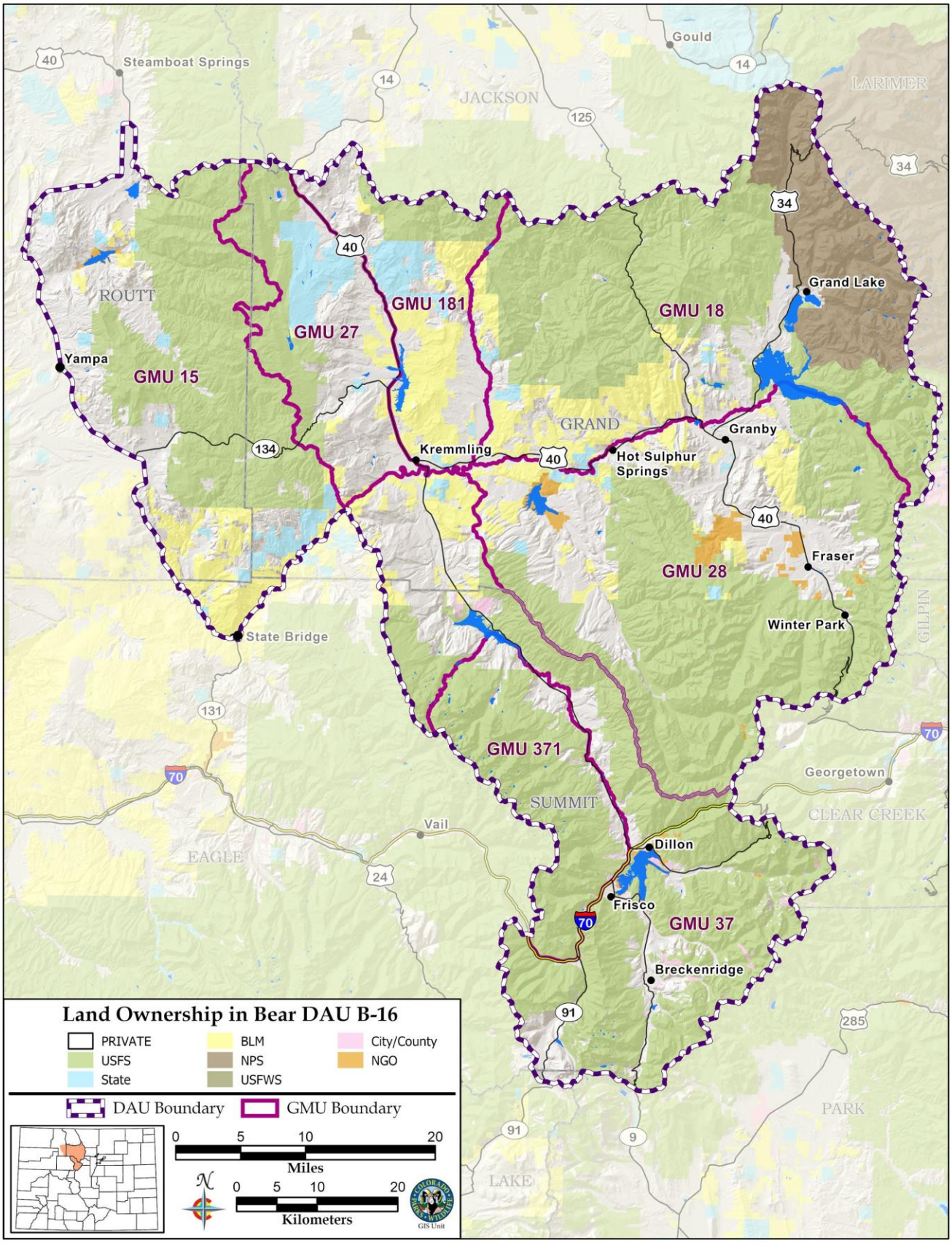

Figure 2. Land ownership in DAU B-16.

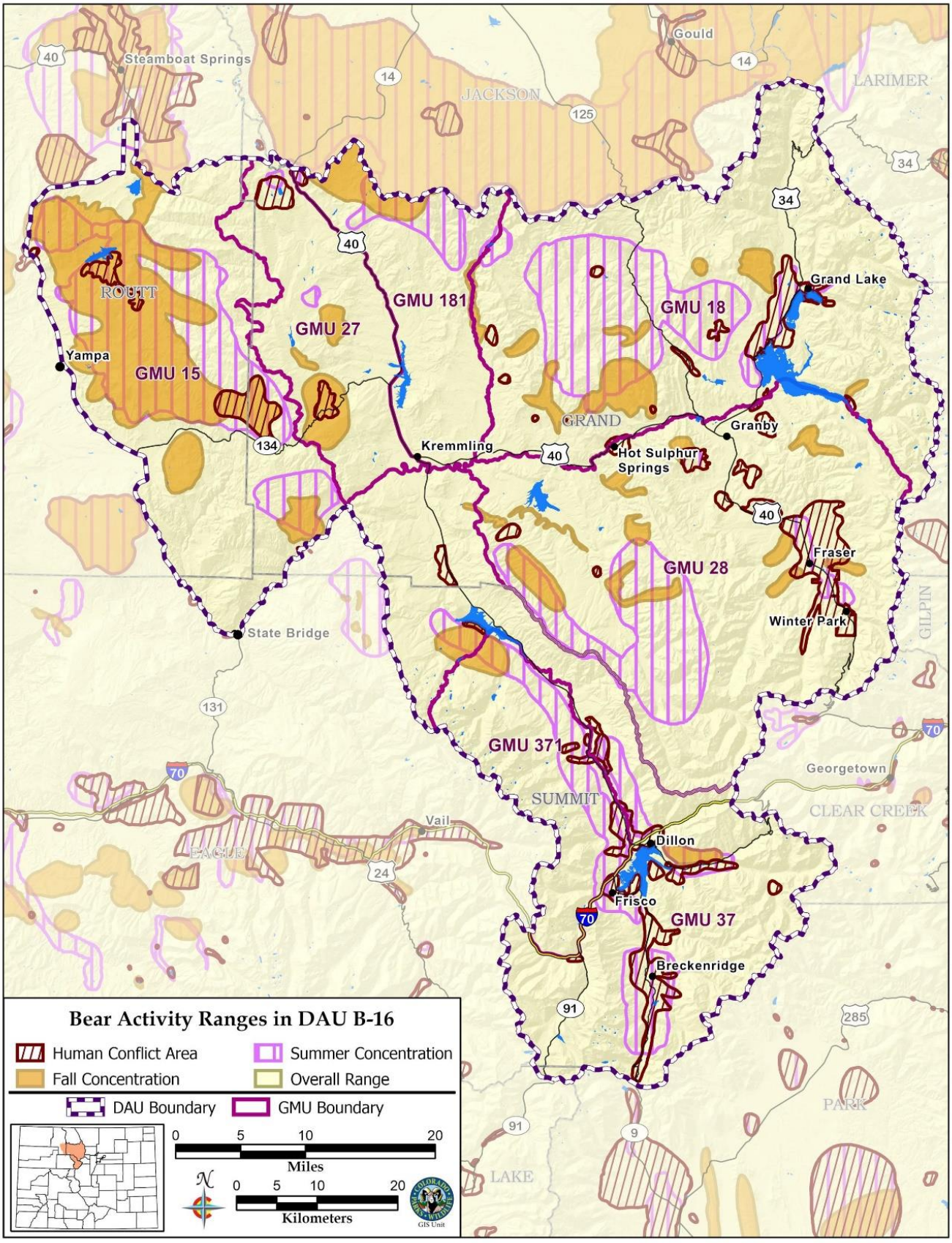

Figure 3. Black bear seasonal habitats in B-16.

Land Use & Land Status

Over the past few decades, all of the counties in B-16 have experienced significant human population growth (Appendix A). The commensurate increases in roads, property subdivision, residential and commercial development in areas of bear habitat, particularly along the I-70 and Highway 40 corridors, have increased the black bear-human interface in this DAU. Domestic sheep and cattle graze lands within GMUs 15, 27, 28 and 37, and livestock depredation by bears occurs periodically.

Topography & Climate

Elevations in the DAU range from 7,000 feet in elevation along the Colorado River to over 14,000 feet in the Tenmile Range and along the Continental Divide. Summers are warmer at the lower elevations, with high temperatures typically ranging in the 70s and 80s (˚F) and occasionally reaching the 90s in July. Higher elevations have short, mild summers, with high temperatures in 50s and 60s. Nighttime summer temperatures throughout Middle Park may drop below freezing. Winter temperatures are generally colder at the lower elevations and strong temperature inversions occur at night during the winter months as denser cold air settles on the valley floors. Subzero winter temperatures are common, frequently dropping below -20˚F at night and remaining below zero throughout the day. Strong winds above tree-line can exceed 50 to 100 mph in exposed locations.

Precipitation

Average annual precipitation in B-16 varies from 11-12 inches in the valleys to 18-26 inches at higher elevations, averaging 17 inches per year. Winter snow depths range from a low of 7-16 inches in the valleys to 20-45 inches above 9,000 feet in elevation. Total snowfall averages 120 inches annually, ranging from 6-12 inches per month in the valleys and up to 34 inches per month above 9,000 feet.

Vegetation

Vegetation types in this unit are largely determined by elevation and aspect (Figure 4). The mountain peaks above 11,500 feet consist of low-growing alpine plants and bare rock. Vegetation communities between the elevations of 8,000 and 11,500 feet are dominated by spruce-fir forests at the upper and predominantly north-facing aspects, giving way to lodge pole pine and aspen communities below and on south-facing aspects. Aspen stands and mountain shrubs dominate the slopes from approximately 7,000 to 8,000 feet, with sagebrush parks on the more level aspects. Riparian vegetation grows along the creeks and rivers throughout B-16, and high-elevation willow complexes and fens are present along natural drainages throughout the DAU. Pinyon-juniper vegetation is present in southern GMU 15, where the elevation drops to approximately 6,750 feet along the Colorado River in the Radium Basin. In northern GMU 15, serviceberry, chokecherry, and oakbrush vegetation are found and provide the highest quality bear habitat within B-16.

Aspen and riparian habitats provide bears with forage in the spring through mid-summer, and coniferous forest provides shade and cover for resting habitat. In late summer into fall, lower elevation mountain shrub habitats become important habitats for bears as fall mast ripens. Due to being predominantly a high-elevation park, much of B-16 is classified as low to moderate bear habitat as Middle Park lacks the abundance of serviceberry, chokecherry, and oakbrush forage that is present in other areas of Northwest Colorado; however these habitats are present in GMU 15. Non-natural, yet high-nutrition food sources for bears living near human communities come in the form of anthropogenic food (all sources associated with human activities including, but not limited to, trash, pet food, barbeque grills, fruit trees, and bird feeders).

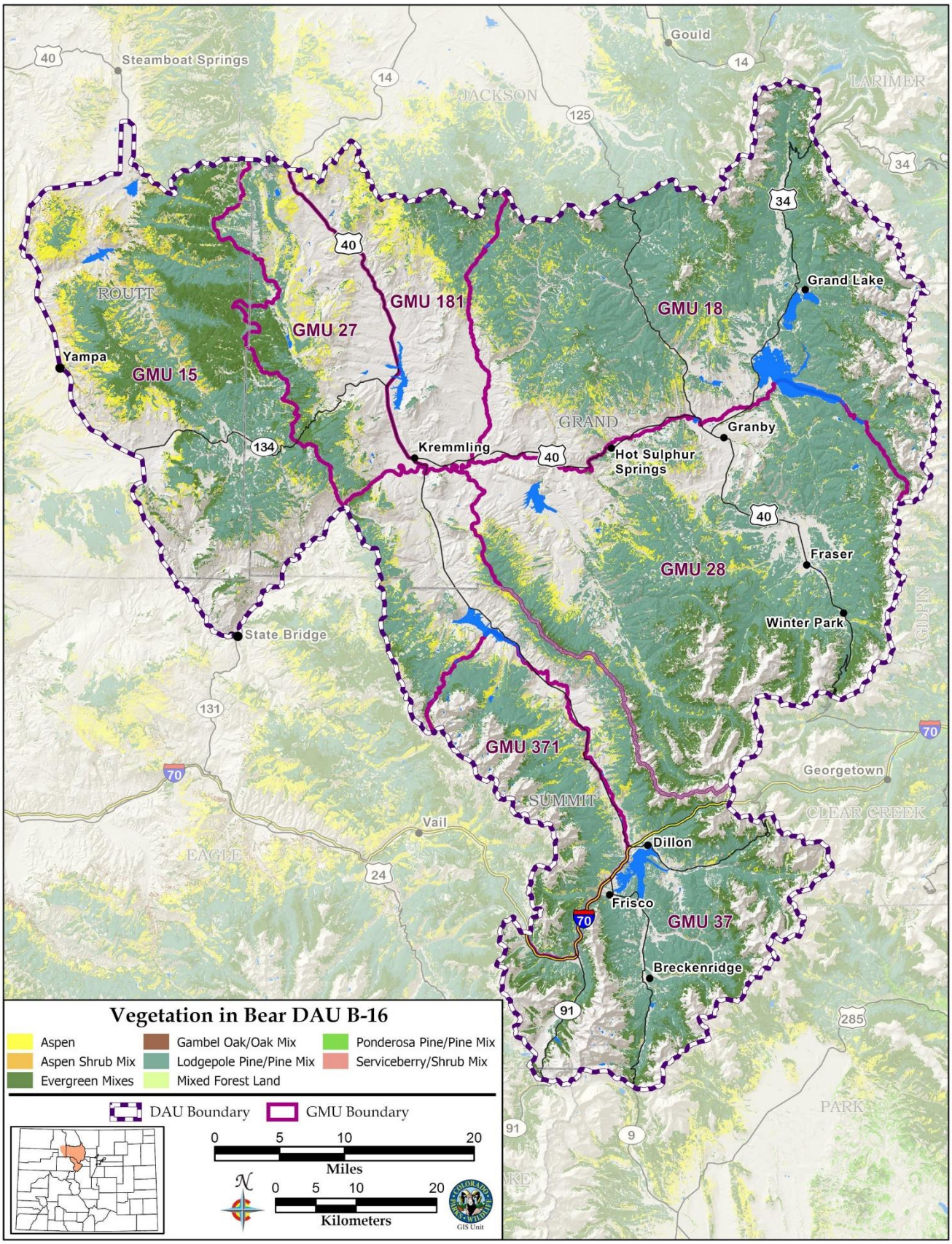

Figure 4. Vegetation classes in B-16.

MANAGEMENT HISTORY

Administrative

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 small portions of both Routt and Eagle Counties. B-16 is bordered on the north by Highway 40 and the Continental Divide; on the west by CO Highway 131, the Trough Road, and the Eagle River-Tenmile Divide; on the south and east by the Continental Divide.

Harvest Management History

In 2000, a brief, 2-page bear management document was developed for B-16 that recommended a provisional harvest objective of 15 bears, a total mortality limit of 25 bears/year, and a game damage objective of <$7,500/year over a three-year average (Wagner 2000).

Hunting Season & License History

From settlement of Colorado until the late 1800s, bears were considered livestock predators. From 1861 to 1935 there were no restrictions on hunting black bears in the state. In 1935, black bears were declared a big game animal and since then have been managed with limited hunting seasons and harvest limits. The first restrictions on hunting black bears were established in 1935, with regulations put in place to protect female bears with cubs from harvest.

From 1935 to1943, the hunting season for bears was October 1 to November 30 annually, with a bag limit of 1 bear. In 1947, *Harvest Report Cards* were attached to licenses and reporting became mandatory, although compliance was low (30-40%). From 1944 to 1963, bear hunting season dates were shifted to various dates throughout the fall, and at times were only concurrent with deer and elk seasons. In 1964, the black bear season was extended to begin April 1 and continue into September annually, with unlimited licenses available. In 1970, a separate spring bear season was established from April 1 to June 30. In 1978, baiting was made expressly allowed per regulation. In 1986, licenses for the spring bear season became limited, and in 1989, the fall season was only open to unsuccessful spring bear hunters. In 1992, a state ballot amendment was passed which changed bear hunting statutes within the state by prohibiting bear hunting prior to September 2nd (eliminating the spring bear season) and banning the use of bait and hounds.

Prior to 1999, bear licenses were valid statewide. Starting in 1999, a quota for B-16 was established for the September rifle season (Figure 5). Archery and muzzleloader licenses also became DAU-specific, but were unlimited until 2005 when a quota was established for those seasons as well. The concurrent (1st through 4th) rifle season licenses were also unlimited until 2005 when those licenses became over-the-counter (OTC) with caps, which were set by dividing statewide success rates by method and season into the 3-year average harvest rates for B-16. In 2007, 3rd and 4th season OTC licenses were decreased to reflect demand and potential for harvest. In 2009, archery and muzzleloader licenses were decreased, then increased in 2012 based on updated harvest objectives and constant nuisance bear issues. Starting in 2015, a single concurrent bear rifle season replaced the individual 1st, 2nd, 3rd and 4th rifle seasons. This concurrent rifle season opened with 1st rifle elk season, ended with the close of 4th rifle deer/elk season, and was valid only during open rifle deer or elk seasons. September and concurrent rifle season licenses increased by 25% in 2016 due to indicators of a stable to increasing bear population in B-16, and private-land-only (PLO) hunt codes

were split for GMUs 15/27, 18/181 and 37/371. Demand for licenses in B-16 remained consistently high, and all licenses levels were increased significantly in 2018 to increase opportunity as well as address growing conflicts throughout the DAU (Figure 5). Harvest subsequently increased; however the percent of females in harvest (39%) and in all mortality (38%) remained nearly the same as the two previous years, continuing to indicate a stable population.

Under the 2020-2024 Big Game Season Structure (BGSS), archery and September rifle bear seasons run from September 2 to 30, concurrent with deer and elk archery seasons. Bear muzzleloader season starts on the 2nd Saturday of September and runs for 9 days, concurrent with deer and elk muzzleloader seasons. Previous over-the-counter (OTC) archery and muzzleloader licenses in B-16 became unlimited add-on licenses, where hunters have to possess a valid deer or elk license for the same season in order to purchase. OTC bear rifle seasons run concurrent with deer and elk rifle seasons (1st through 4th), and hunters no longer need to possess a deer or elk license to purchase an OTC bear rifle license. All of the above bear licenses in B-16 are List A; the only List B licenses available in the DAU are the OTC September private-land-only (PLO) season and an extended PLO season (October 1st to the end of 4th rifle season), both of which became unlimited in 2020. OTC archery and concurrent rifle license sales have increased significantly under the current BGSS; however, harvest has only increased slightly and harvest indices continue to indicate a stable population (Figure 6). Limited archery, muzzleloader and rifle license quotas have remained status quo from 2019 (Figure 5).

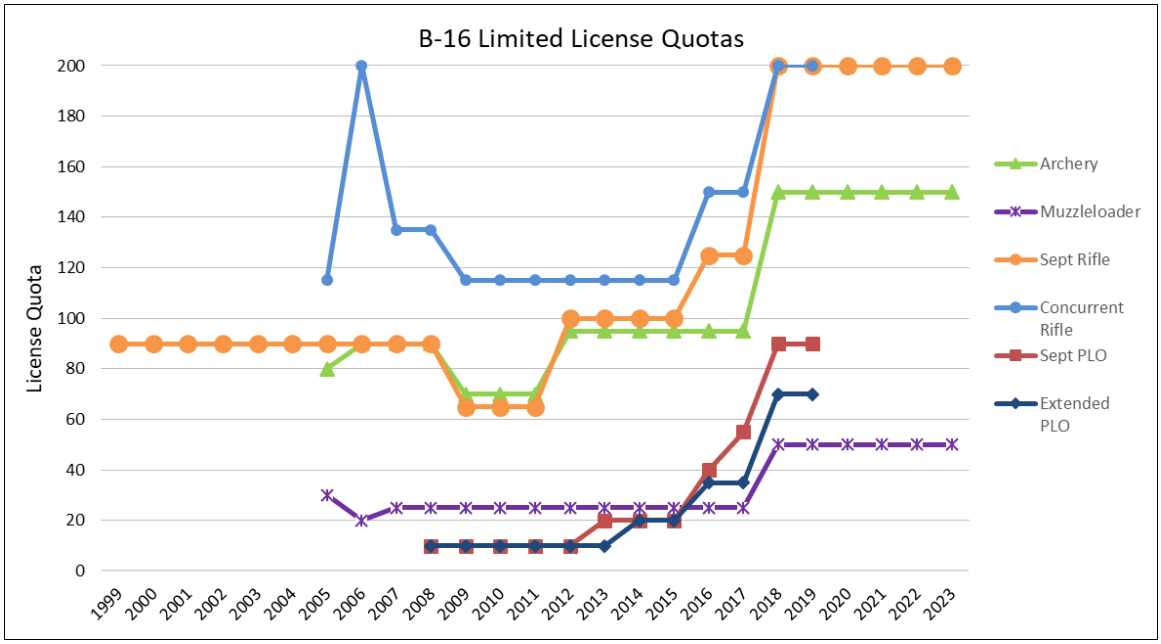

Figure 5. Limited license quota history in B-16 by season, 1999-2023.

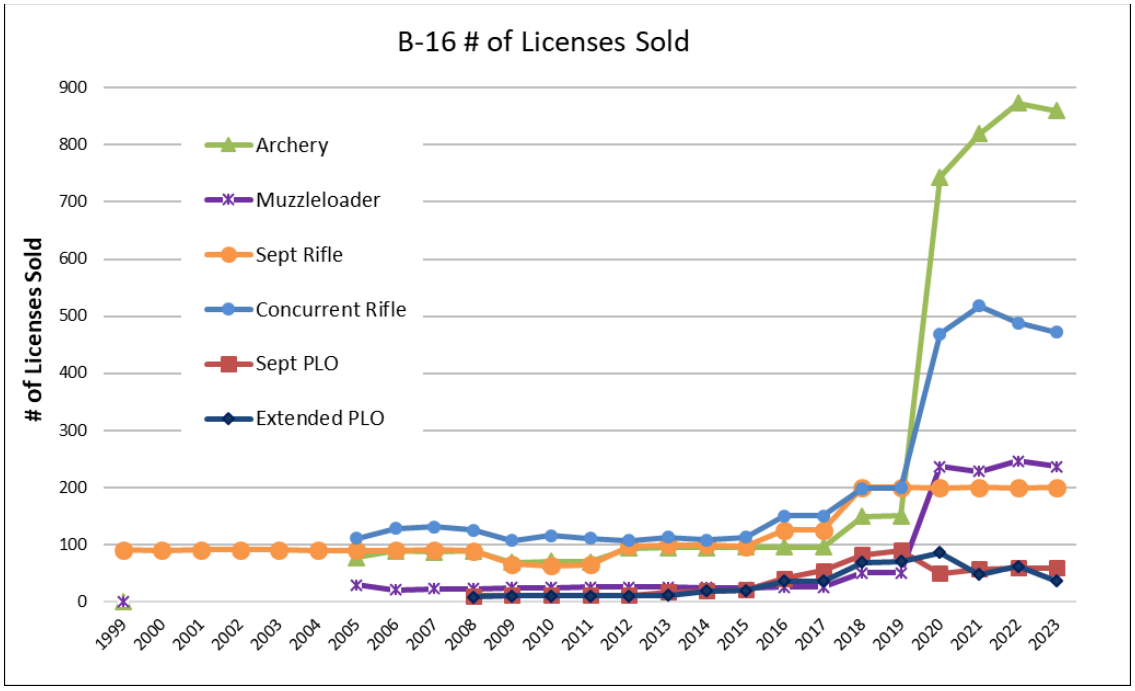

Figure 6. B-16 license sales, 1999-2023.

Mortality: Harvest and Non-Harvest

Biological information from all bear mortalities, including both harvest and non-harvest, is recorded by CPW. In general, overall annual bear mortality in B-16 has increased, specifically over the past 15 years. Since 1979, total bear mortality in B-16 has ranged from a low of 4 in 1994 to a high of 119 in 2020. While the 10-year average of annual bear mortality is 69 bears, the 3-year and 5-year averages are slightly higher at 80 and 86 bears, respectively. This increase is due to higher harvest, control kills, and roadkill mortality in recent years (Figure 7).

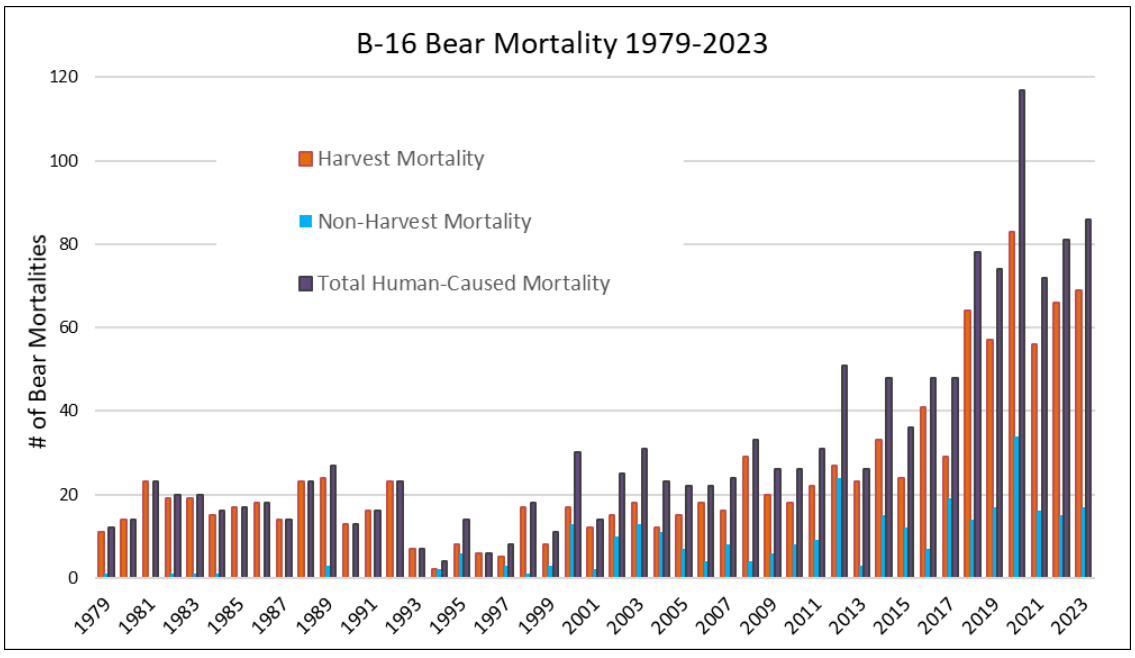

Figure 7. B-16 total annual human-caused bear mortality by type (harvest and non-harvest) in B-16, 1979-2023.

Non-Harvest Mortality

Control mortalities include bears killed for human conflict and damage control purposes by CPW, landowners and their agents, other law enforcement agencies, or U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS)/Animal Damage Control (ADC). The 10-year average of control mortality in B-16 is 7 bears per year, and the 5-year average is 10 bears per year; this average has been increasing since 2015. CPW-killed bears constitute approximately 40% of all control kills, APHIS/ADC-killed bears account for approximately 32%, bears killed by landowners are about 26%, and other law enforcement agencies account for 2% (Figure 8).

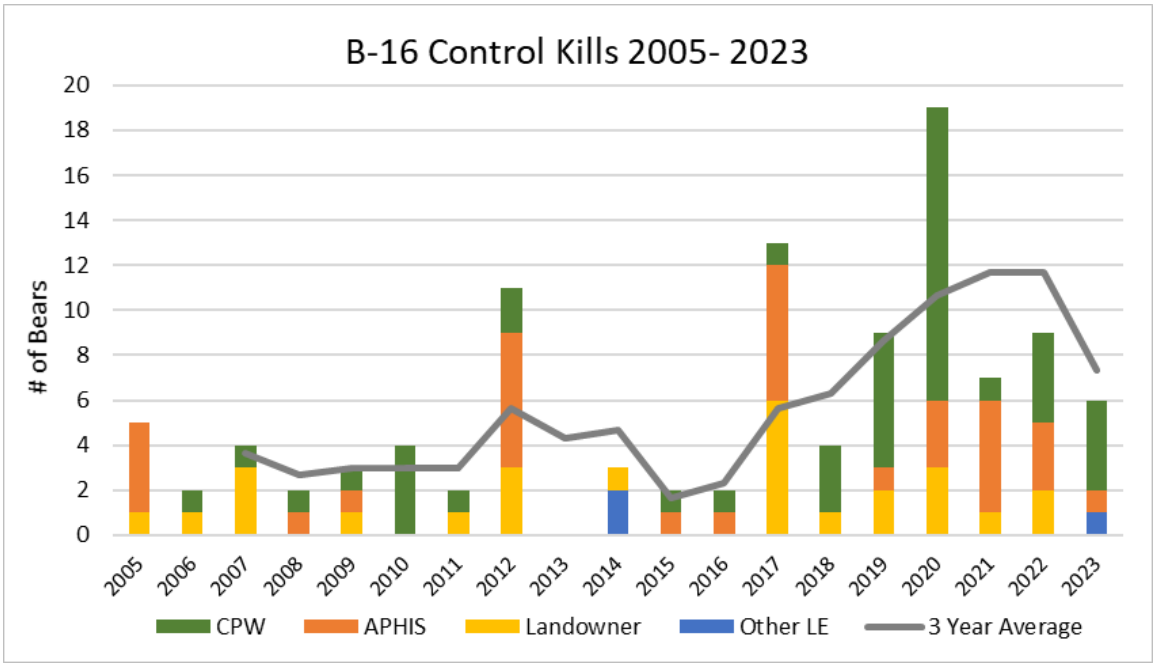

Figure 8. B-16 control kills, 2005-2023.

Beyond control removals, other non-harvest human-caused mortalities are predominantly roadkill bears, but this category also includes mortalities caused by accidents, self-defense and illegal take (collectively less than 0.02% of all mortalities). The 3-year, 5-year and 10-year averages for roadkill mortalities are between 8 to 10 bears/year in B-16. Roadkill and other non-harvest mortalities are higher during years of natural food failures when bears must range more widely in search of food and therefore encounter roads and vehicles more frequently (Figure 9). In 2020, when the fall forage quality rating was below average, there were a total of 36 non-harvest human-caused bear mortalities in B-16 (19 control kills; 16 roadkills; and one illegal take). In contrast, 2021 was the best forage year in the past decade (good years are defined as having a fall forage quality score of >=5), and had a total of 14 non-harvest human-caused mortalities (7 control kills and 7 roadkills). Fall forage quality and mast production is explained in further detail under Population Management Considerations.

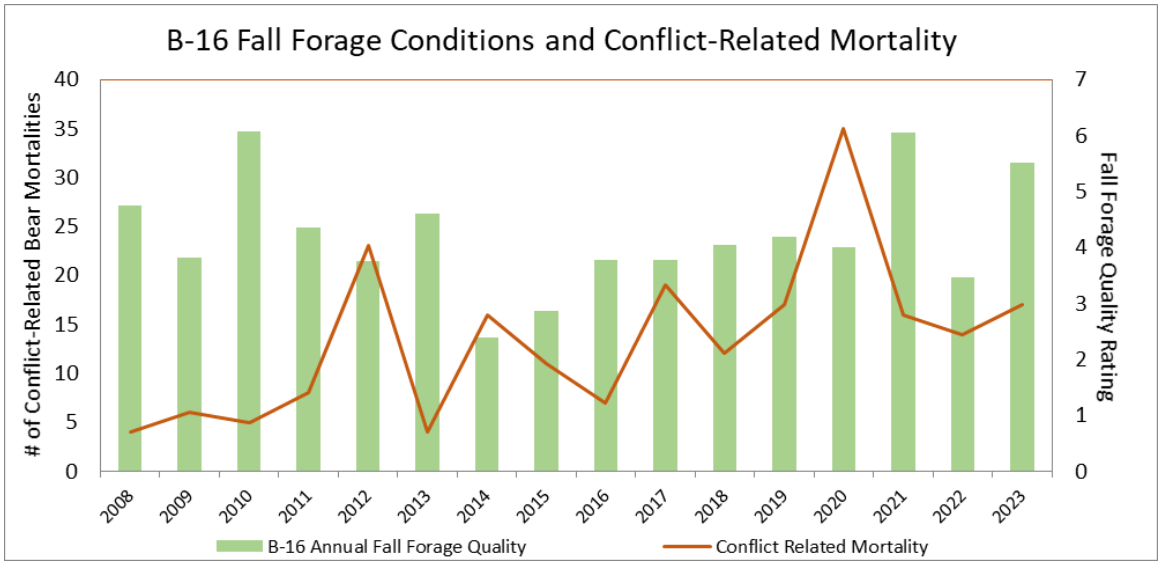

Figure 9. B-16 annual and average fall forage conditions and conflict-related bear mortality, 2008-2023.

Harvest Mortality

Mortality from hunter harvest has increased over the past several years due to the increase in license quotas and unlimited add-on licenses with the current BGSS, and as well as a potential increase in the bear population to support these mortality rates (Figure 10). The 10-year average of harvest mortality is 52 bears per year, and the more recent 3-year average is 64 bears per year. Harvest comprises the majority of overall human-caused bear mortality; however in the 2000s to present, control and other mortalities have also increased in proportion, adding to total human-caused mortality (Figure 7 and Table 1). Since 2010, when significant license quota increases began, harvest has accounted for approximately three-quarters of overall mortality in B-16 (Table 3).

Table 1. Average annual number of bear mortalities in B-16 by decade (N is the sample size).

Decade	Harvest		Control		Roadkill/Other		DAU Total
	N/yr	% of Total	N/yr	% of Total	N/yr	% of Total	N/yr
1980s	19	97%	0.2	1%	0.4	2%	**19**
1990s	11	88%	1	8%	1	5%	**12**
2000s	17	69%	4	16%	4	15%	**25**
2010s	34	73%	5	11%	8	17%	**47**
2020s	69	77%	10	11%	11	12%	**89**

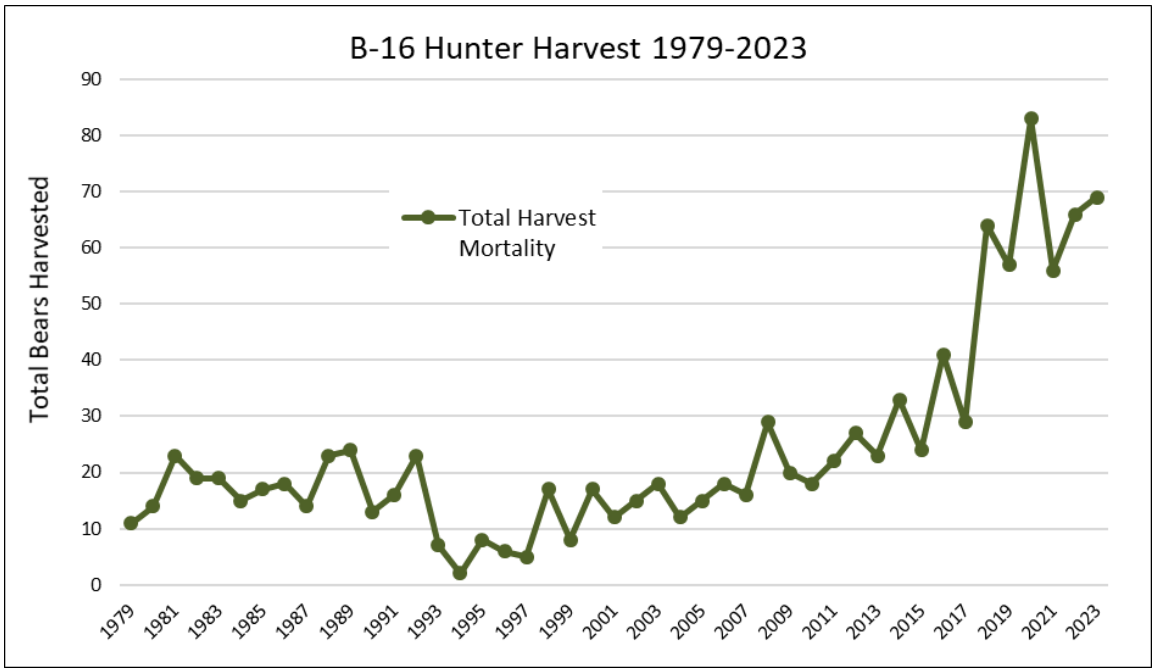

Figure 10. B-16 total harvest mortality, 1979-2023.

Harvest by Method of Take

Among methods of take over the past three years, archery season contributes the highest percentage (33%) of annual harvest, followed by September rifle season (26%), September PLO season (15%), and muzzleloader season (13%). This is a shift from the 10-year averages, where September rifle season contributed the highest percentage of harvest (41%), followed by archery season (24%), September PLO (17%), and muzzleloader season (6%). The lowest harvest contribution currently comes from the 1st - 4th concurrent rifle seasons (7%) and the extended PLO season (5%), which have not fluctuated significantly over time (Figures 11 and 12). The increase in archery season harvest may be attributed to increased opportunity with the current unlimited add-on archery bear licenses, particularly because all of the GMUs in B-16 are OTC for archery elk licenses.

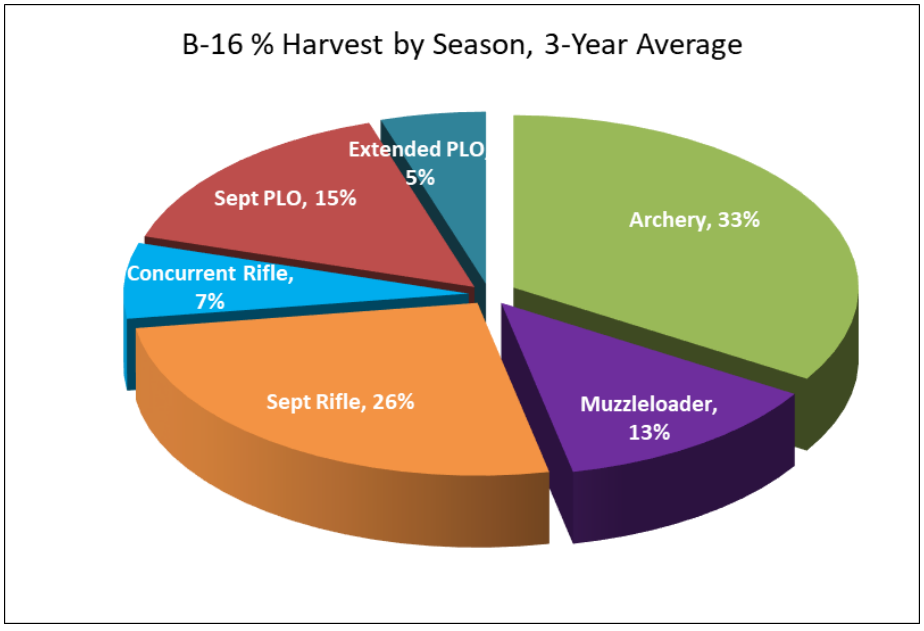

Figure 11. Percent contribution of each season toward total harvest in B-16, 3-year average from 2021-2023.

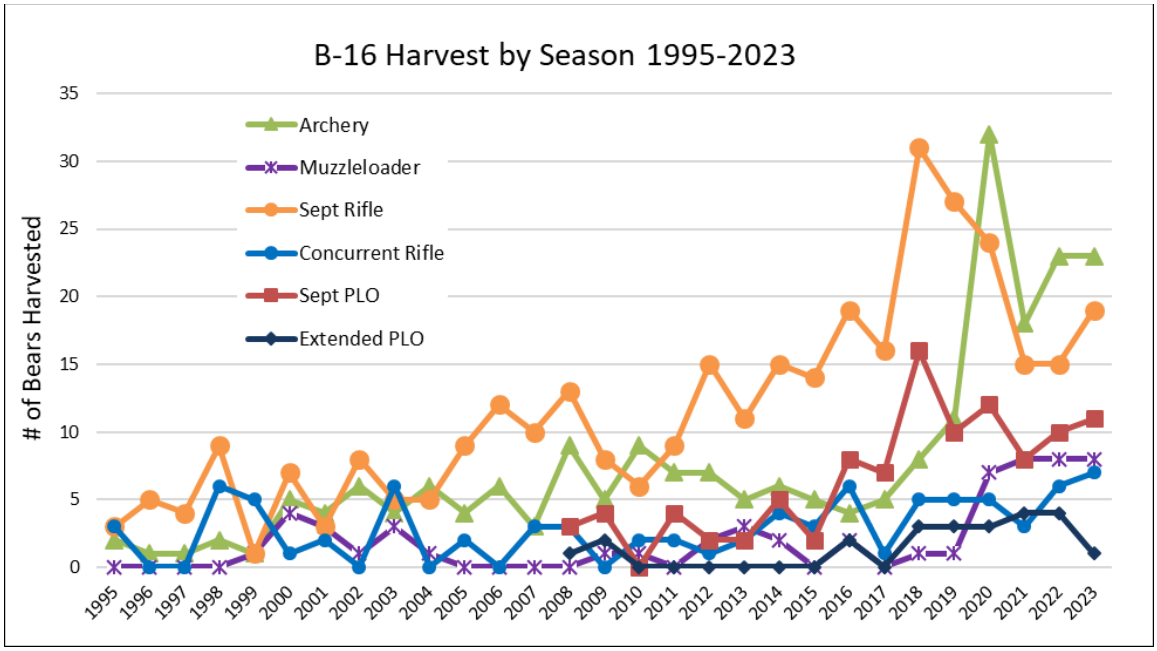

Figure 12. B-16 total harvest by season, 1995-2023.

Hunter success rates can vary annually depending on the quality of natural forage; in poor food years, bears are more mobile while in search of forage, and therefore their encounter rate with hunters is higher. More bear hunters in the field may crowd each other, and because more licenses are now available to hunters, success rates are expected to be lower than past years when there were fewer bear hunters in the field. The majority of harvest occurs during the September (archery, rifle & PLO) seasons due to higher numbers of archery licenses sold (Figure 6) and higher success rates during the September seasons, when bears are most active due to hyperphagia. Harvest and success rates decline in the concurrent rifles seasons as bears transition to hibernation. Success during the 3rd and 4th rifle seasons in November have the lowest success, often nearly zero.

The 3-year average success rate for the September rifle season is 8%, followed by 3-year average success rates for archery and muzzleloader seasons both at 3%, and concurrent rifle seasons are the lowest at an average 1% success rate. The September PLO season has the highest 3-year average success rate of 17%, and has historically had the highest average harvest success of all seasons since 2008. The extended PLO season averages a 6% success rate (Figure 13).

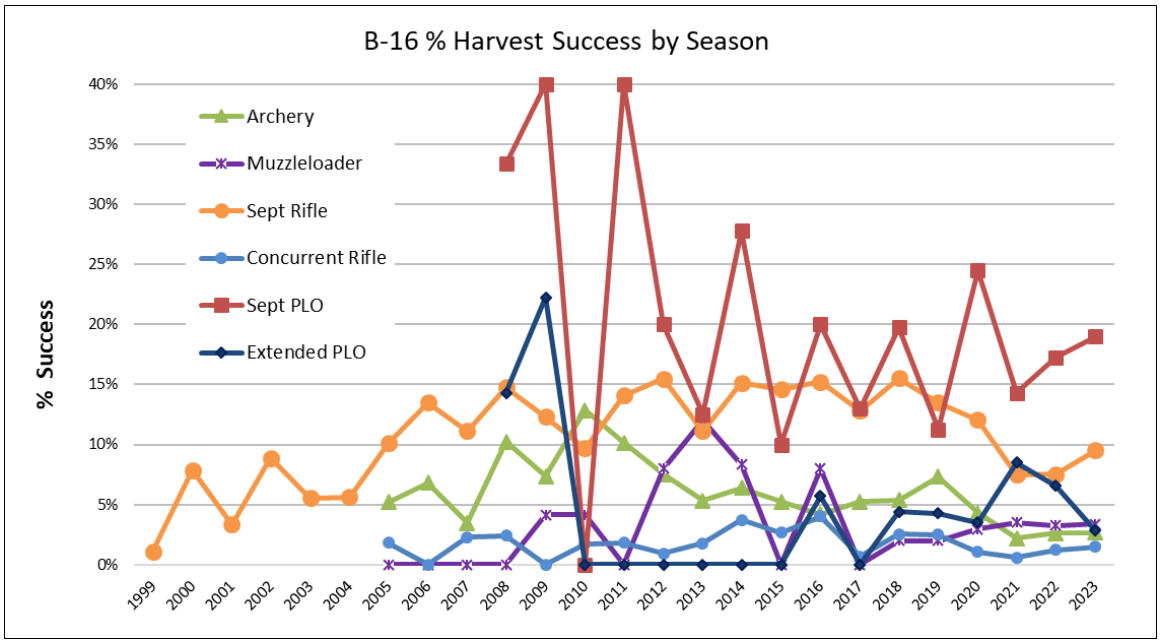

Figure 13. License success rates in B-16 by season, 1999-2023.

Mortality by Age and Gender

Beginning in 2006, a premolar tooth has been extracted from a majority of the bears mortalities handled by CPW at mandatory checks. These teeth are collected and submitted annually for aging via cementum annuli sectioning at Matson's Lab in Montana. The total sample size from 2006-2022 of B-16 bear mortalities whose ages have been determined by this method is 778 bears out of 872 recorded mortalities.

The technique of counting annual rings in cementum of bear teeth is a reliable method for determining ages of black bears (Harshyne et al. 1998, Costello et al. 2004). This is especially true for bears less than five years of age. For bears five years of age or older, errors increased with the age of the bear (McLaughlin et al. 1990, Harshyne et al. 1998, Costello et al. 2004). Since most female black bears in Colorado do not reproduce until their 5th year, classification of females into sub-adult (non-reproducing, 1-4 years) and adult (reproducing, 5+ years) age classes using cementum annuli is quite reliable. Therefore, all female black bears age five and over or those with evidence of having nursed young are considered adults for the purposes of harvest data analyses.

The ages of both harvested bears (Figure 14) and non-harvest mortalities (Figure 15) from 2020-2022 are weighted towards the sub-adult (≤4 years old) age classes. Among known-age harvested bears, 57% were sub-adults (40% males; 17% females); and 43% were adult bears (24% males; 19% females) (Figure 16). Among known-age non-harvested bears, 70% were sub-adults (57% males; 13% females); and 30% were adult bears (15% males; 15% females) (Figure 17). These data on the age and sex composition of harvested bears are used as indicators of population trajectory based on the relative vulnerability of each age-sex class to being harvested (see "Harvest Composition and Management Criteria" section below).

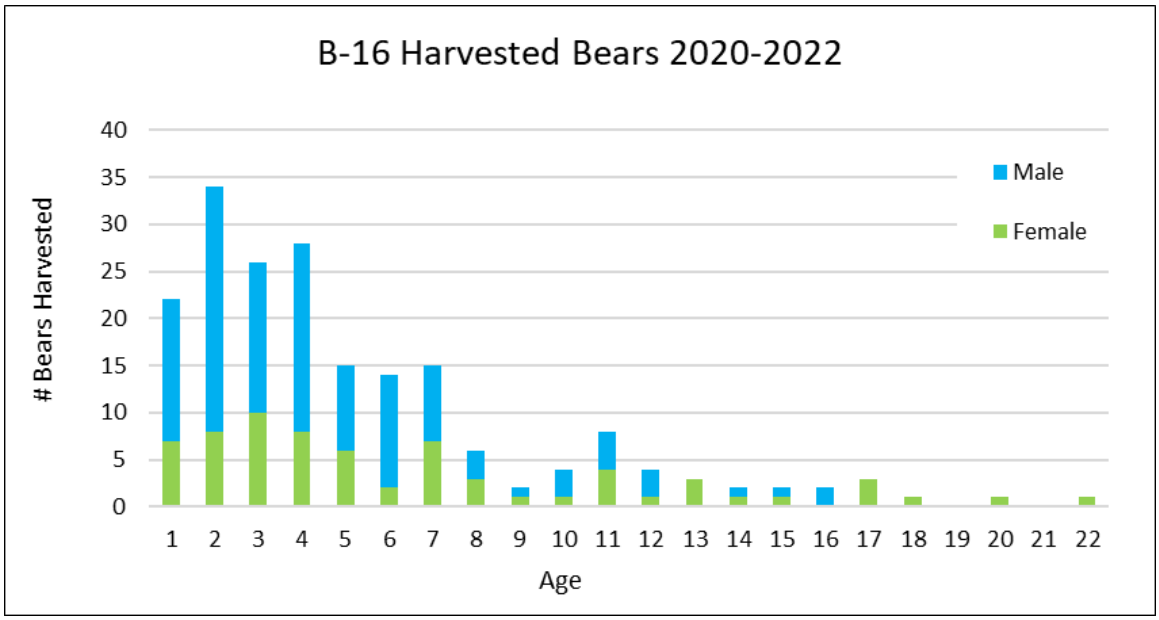

Figure 14. Tooth cementum age distribution of harvested bears in B-16, 2020-2022 (n=193).

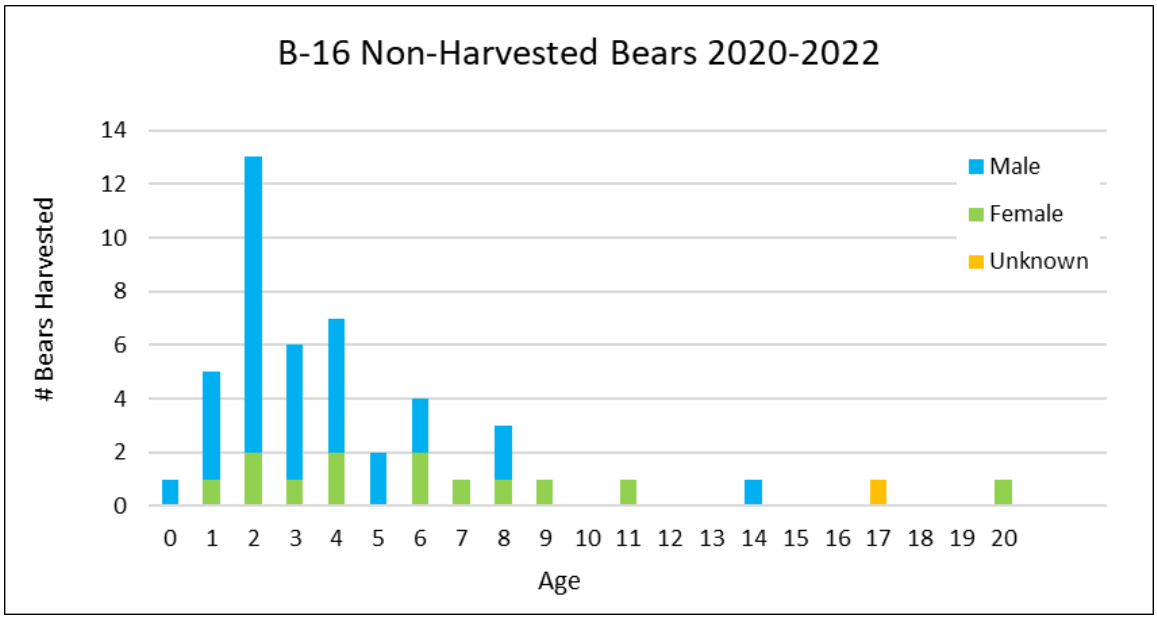

Figure 15. Tooth cementum age distribution of bears from non-harvest mortality sources in B-16, 2020-2022 (n=47).

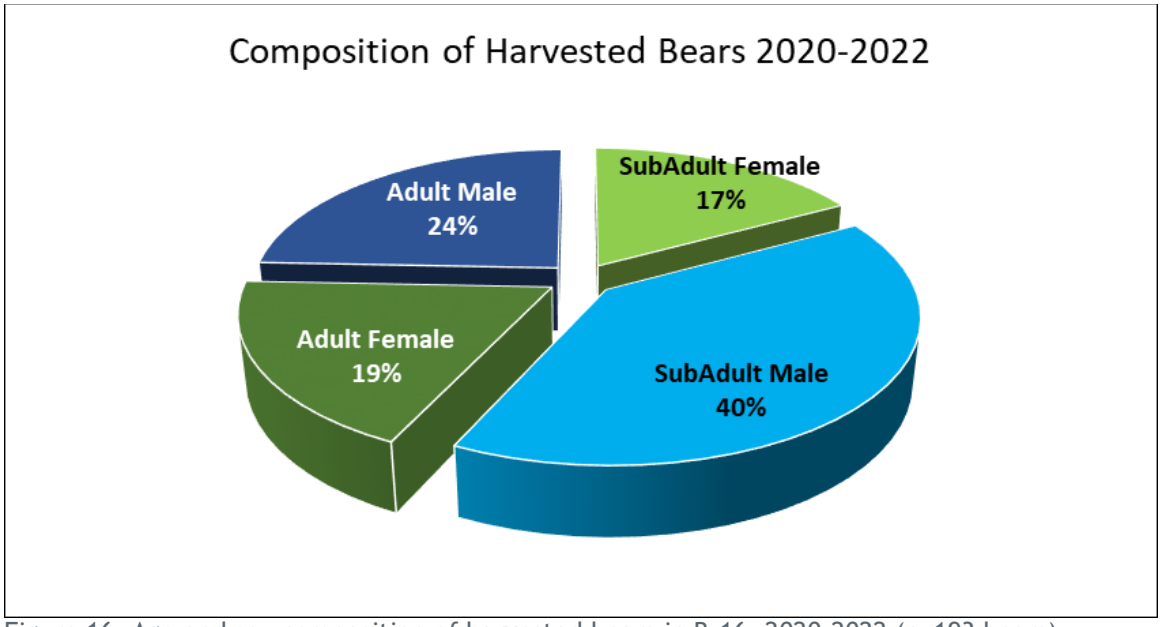

Figure 16. Age and sex composition of harvested bears in B-16, 2020-2022 (n=193 bears).

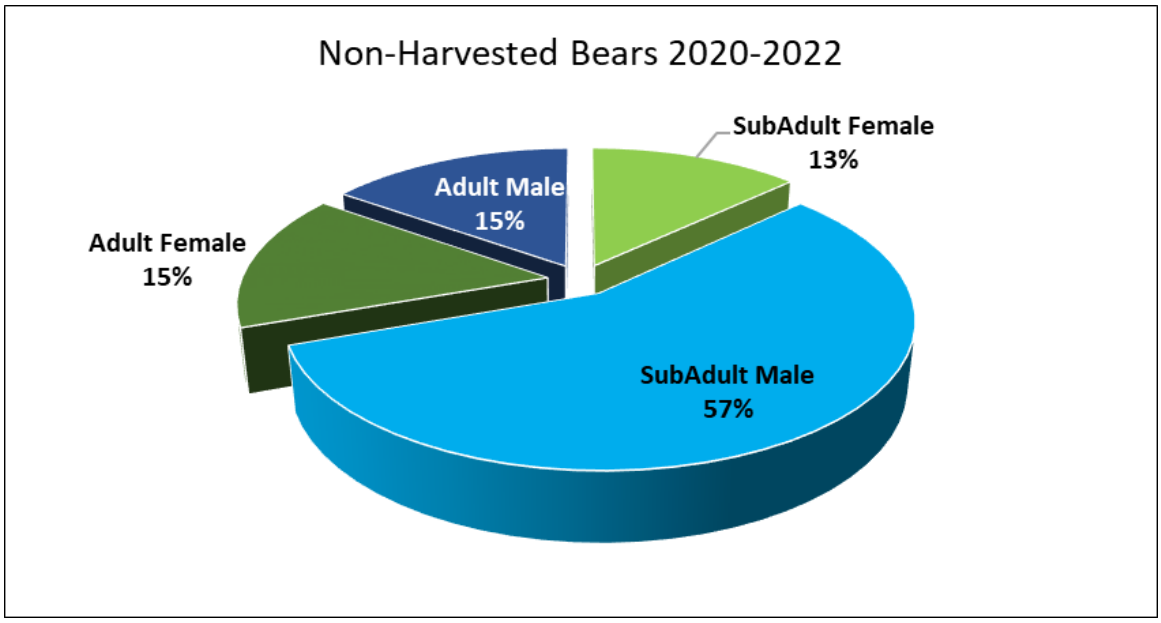

Figure 17. Age and sex composition of non-harvested bears in B-16, 2020-2022 (n=46 bears).

Bear Conflict Management

Human conflicts with black bears in B-16 generally occur more frequently during poor natural food years, when the fall forage quality rating falls below average and bears are more concentrated in areas where human-related attractants remain high (Figure 18). Both bear and human populations have increased over the past several decades, resulting in increased conflicts. During the 1970s through 1990s, development of residential housing encroached upon summer and fall habitats for bears, and over the past several decades, the human population has continued to grow (Appendix A. Human population by county, 1970-2021.), leading to both an increased overlap between bears and humans and an increased availability of human food sources. The tourist-driven resort towns in B-16 have large transient/seasonal human populations, making it challenging to achieve effective public

education of Bear Aware principles, such as securing garbage and keeping doors and windows closed and locked.

While the primary scope of CPW authority lies in the management of bears, it is important to note that the reduction of human-bear conflicts also depends on change in human perception and behaviors. CPW has a history of working closely with municipalities and county governments, land management agencies, trash companies, property managers and other stakeholders in an attempt to alter human behavior. This collaboration has resulted in the implementation of trash storage ordinances in some major towns and cities within B-16 (Appendix D.) In general, consistent application and stricter enforcement of these ordinances is necessary to gain sufficient compliance. As recognized by this plan, these efforts are not effective unless implemented and practiced by all stakeholders. Community-wide participation should be a goal and focus for CPW and our partners. Additionally, efforts must be ongoing. Bear activity in these areas remains high even in good natural forage years, and the transient nature of residents and visitors requires continual educational efforts to ensure everyone is being reached. CPW and community efforts are documented in Appendix E: Bear Aware Efforts in B-16.

Human-Bear Incident Reports

In 2019, CPW launched a new electronic human-bear incident reporting system to help wildlife managers track and quantify bear activity and conflicts across the state. The data collected is used to see overall trends and identify sources of conflict on a localized, regional and statewide level. These incidents range from a report of a bear sighting in a residential or urban area, to a physical interaction between a bear and a person. To distinguish between conflict and non-conflict incidents involving bears, incidents that involved a complaint type[1] of Attack, Aggressive Behavior, Attractants, Property (No Damage), Food Source Property Damage, or Non-Food Property Damage are categorized as a *conflict*, and incidents with a complaint type of Sighting Only or Unsubstantiated are categorized as *non-conflict*. CPW has five years of data to date from the Wildlife Incidents database. From 2019 through 2023, Food Source and Non-Food Source Property Damage accounted for a majority of conflicts at 59%-91.5% of bear conflicts annually, Food Attractant and Property Incidents with *No Damage* accounted for 7%-38% of reported bear conflicts annually and reports of Aggressive Behavior was documented in 2%-5% of all bear conflicts annually (Table 2, Figure 18). No bear attacks were reported in B-16 from 2019 to 2023.

Table 2. Number of conflict and non-conflict reports documented in B-16 Wildlife Incident database, 2019-2023.

Year	CONFLICT					NON-CONFLICT		
	Attack	Aggressive Behavior	Attractant & Property (No Damage)	Food Source & Non-Food Property Damage	Total Conflict	Sighting ONLY	Unsubstantiated Reports	Total Non-Conflict
2019	0	7	11	140	**153**	28	2	**30**
2020	0	6	37	173	**216**	45	1	**46**
2021	0	4	54	83	**141**	35	1	**36**
2022	0	3	31	109	**143**	35	2	**37**
2023	0	4	54	67	**125**	31	4	**35**

[1] *For incidents in which multiple complaint types were selected, we classified the incident by its most severe complaint type, using the following ranking from most severe to least severe complaint type: Attack, Aggressive Behavior, Food Source Property Damage, Non-Food Property Damage, Sighting, Unsubstantiated.*

Reported bear conflicts in B-16 are most highly concentrated in developed areas, primarily the resort towns (Figure 18). While municipal codes exist in some of these towns (Appendix D) to regulate garbage and dumpsters, the high number of tourists, short-term rentals and part-time residents can make enforcement a challenge.

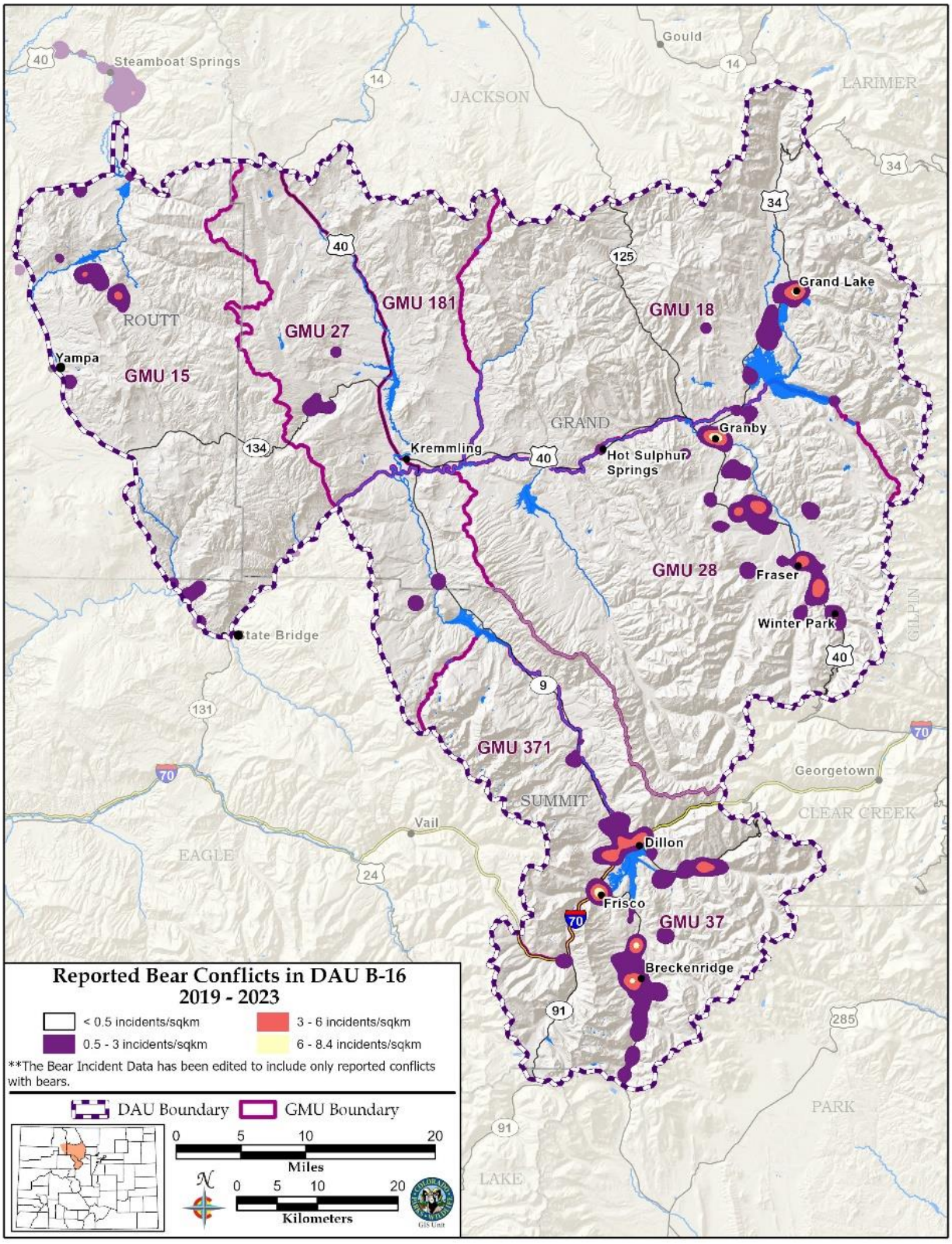

Figure 18. Map of B-16 reported bear conflicts, 2019-2023.

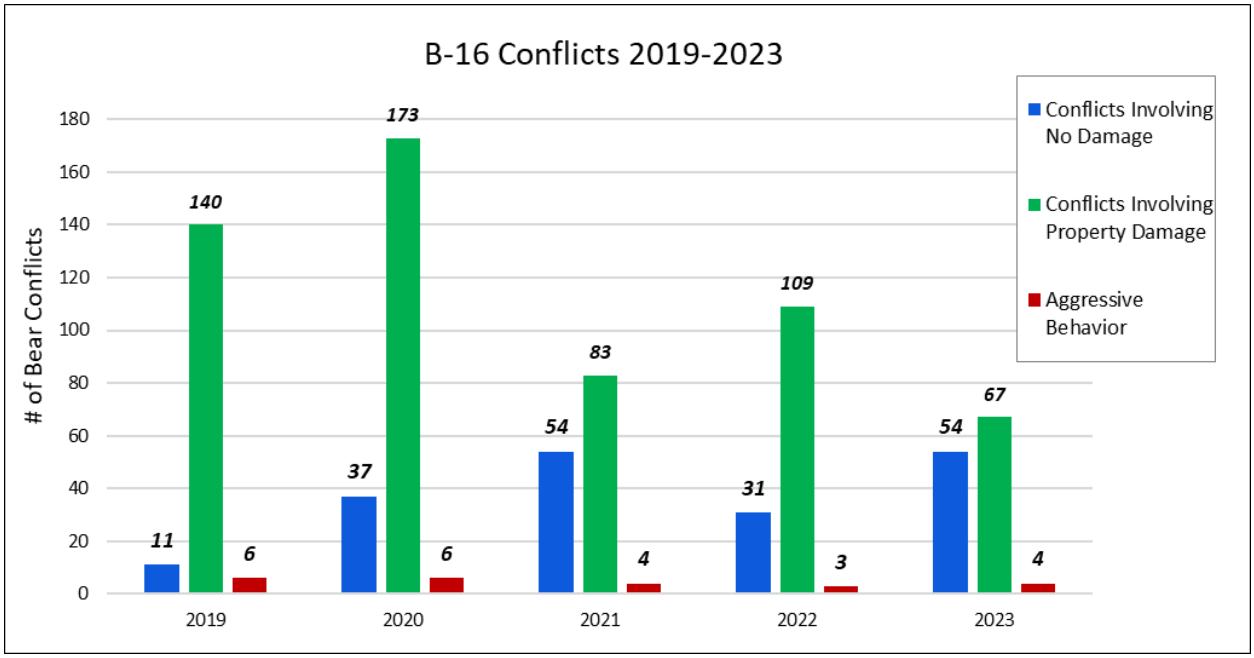

Figure 19. B-16 reported bear conflicts by type, 2019-2023.

Bears involved in conflicts are handled according to CPW policy at the discretion of the field officer or supervisor. CPW staff routinely provides education materials and advice through a phone call and/or site inspection. Depending on the situation, conflict bears may be targeted for hazing or capture. Captured bears are either relocated or euthanized. Relocation of nuisance or conflict bears has become increasingly more challenging over the last decade, as ideal release locations have become less available due to humans on the landscape. From 2019 to 2023, only two bears involved in conflicts in B-16 were relocated, and 22 were euthanized.

Injuries to Humans

There have been 4 recorded incidents within B-16 of bears injuring humans, including one fatal attack in 1971. Nearly all of these incidents occurred while victims were camping (Appendix B. Bear Injuries to Humans in B-16). There have not been any attacks reported since the Wildlife Conflict App was implemented in 2019.

Game Damage

CPW has paid a total of 89 game damage claims in B-16 from 1995 to 2022, totaling $239,202. The overall annual average of bear-related game damage claims has been approximately $8,860 per year (Figure 20). Domestic sheep kills have comprised the overwhelming majority of claims, 52 total (58% of claims) and averaging $7,116/year (80% of total claim payments). Cattle kills comprise the second highest number of claims, 22 total (24% of claims) and averaging $1,210/year (14% of total claim payments). Game damage claims from other livestock (pigs, goats, horses, donkeys, exotics), guard dogs, poultry and beehives have all occurred B-16, but are rare (Figure 21).

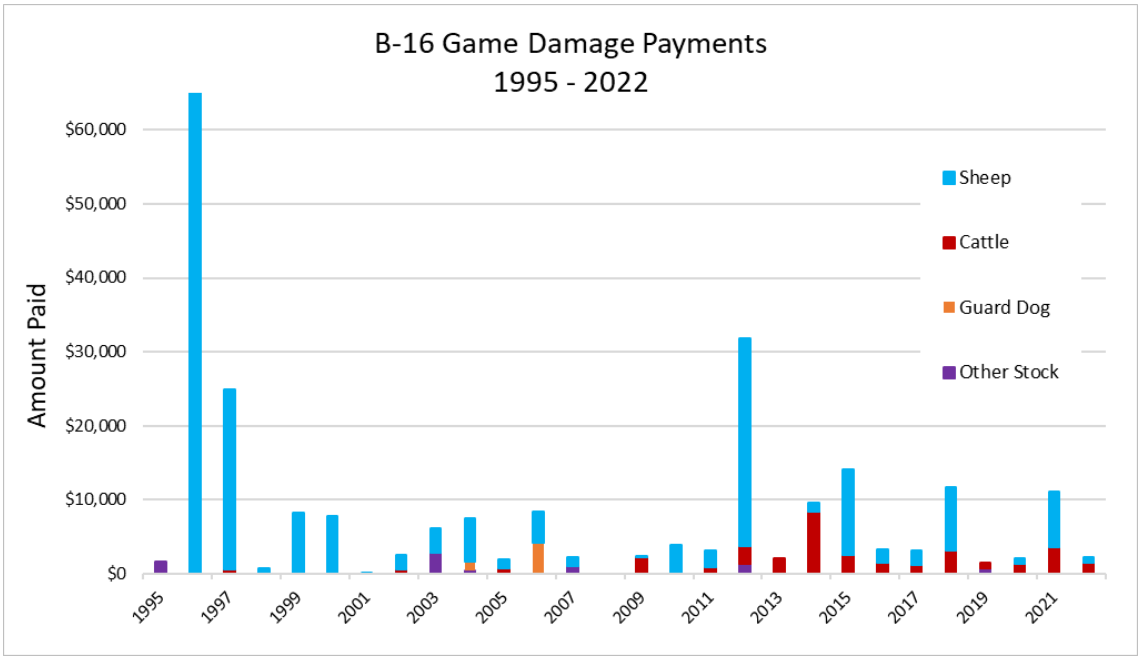

Figure 20. Game damage payments attributed to bears in DAU B-16, 1995-2022.

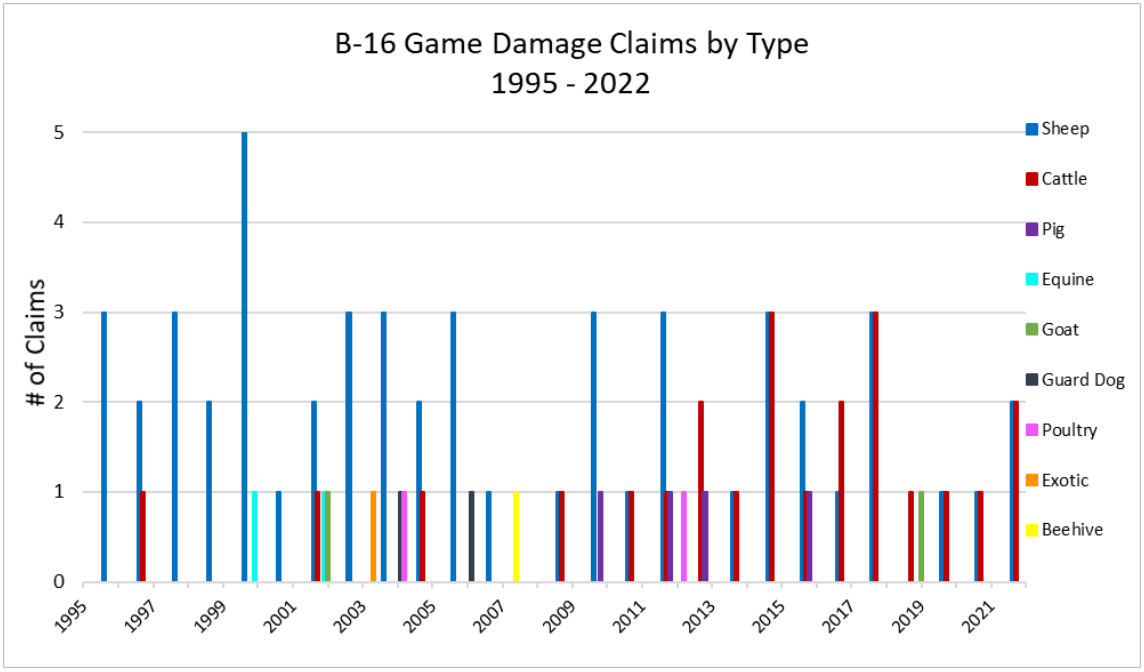

Figure 21. Number of game damage claims in B-16 by type, 1995-2022.

From 1995 through 2022, a total of 14 property damage claims were paid by CPW, totaling $9,086. Ten of the incidents caused damage to buildings and household items, totaling approximately $8,000 in damage and making up a majority of the property damage claims.

POPULATION MANAGEMENT CONSIDERATIONS

Bear Population Estimate

Black bears, being generally solitary (or with cubs) and living at relatively low densities compared to large ungulates, are a challenging species to survey and quantify for population estimation. Various habitat models have been developed to relate bear use, occupancy, and forage value to project possible populations by extrapolating bear densities. The current population projection uses densities derived from relevant Colorado data, supported by local studies as well as research performed elsewhere in North America. Managers apply densities representative of similar habitats and vegetation types in Colorado to develop population projections and ranges which best represent current conditions in the DAU. All population models involve various assumptions about demographic and environmental parameters, such as home ranges, survival rates and population density relative to habitat quality. As methodology in field sampling and analyses have evolved over time, CPW continues to utilize the most recent and scientifically robust data to project bear population density estimates for management applications. The best available data informing the bear population in B-16 comes from recent non-invasive genetic based sampling performed throughout Colorado, including Middle Park. Historical population estimates have been derived from coarse vegetation density extrapolations and mark-resight models, and are discussed in Appendix C.

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.

In 2008, using the DOW (Division of Wildlife) Basinwide GIS Vegetation Classification project data, DOW managers were asked to qualitatively rank each vegetation type for its utility as basic bear habitat (use/occupancy), taking into consideration the relative forage value and the amount of seasonal use of each vegetation type. Use/occupancy was defined at 4 levels: primary, secondary, edge, and non-bear habitat. Use/occupancy terms are defined as follows:

> *Primary* – cover types that bears typically and normally are found at various times of year.
> *Secondary* – cover types that bears occasionally use but is not preferred.
> *Edge* – cover types infrequently used, but bears may be found in when adjacent to Primary cover types.
> *Non-Habitat* – cover types that are not black bear habitat or those in which bears would only travel through.

This analysis resulted in a matrix for assigning habitat quality, and subsequently for applying bear densities to different habitat qualities to extrapolate a potential population. From 2009 to 2015, CPW estimated black bear (*Ursus americanus*) densities among 9 survey areas in Colorado (including Middle Park) over 2 to 4 year periods, using a non-invasive genetic sampling method (Apker et al 2016). The primary purpose in conducting these surveys was to obtain black bear density estimates in different bear habitat types in order to provide an evidentiary basis for population extrapolations in Colorado bear management areas. The results help inform management of black bear in Colorado and improve our efforts to revise the 18 location specific bear management plans and their attendant strategies and objectives, including B-16.

Scent-baited survey stations were used to collect hair samples in the field and DNA was extracted from each sample for individual bear identification. This genetic information was used in a spatially explicit capture-recapture (SECR) analysis to estimate bear densities in each survey area. Tissue samples were also collected from bear mortalities in each of the survey areas for genetic identification. The 9 survey areas were well distributed across Colorado and represent a range of vegetation types and black bear habitat quality. Habitat quality at each survey area was subjectively rated as *low, medium or high*. The project was initiated in Divide Creek and Spanish Peaks (2009), followed by Aspen (2010); the Northern Front Range and Durango (2011); the Greenhorn Mountain, Piedra, and Steamboat Springs (2012); and Middle Park (2014). All field portions of the project were completed in 2015.

A total of 3,837 individual bears were identified across all survey locations during the project. Estimates ranged from 7 bears/100 km^2 to 60 bears/100 km^2, depending upon year, survey area and habitat type. Low-quality bear habitat densities ranged from 7 bears/100 km^2 to 14 bears/100 km^2; medium-quality bear habitat densities ranged from 10 km^2 bears/100 km^2 to 26 bears/100 km^2; and high quality bear habitat densities ranged from 21 bears/100 km^2 to 60 bears/100 km^2 using SECR estimation methods (Table 3). Specifically in the Middle Park study area, bear densities were measured at 11 bears/100 km^2 in 2014, and 14 bears/100 km2 in 2015 (Table 3), with a mean density of 12.5 bears/100 km^2. This project provided density values that can be applied to the different quality levels of bear habitat found in Colorado and provide a more defensible bear population extrapolation in the different bear management areas in the State than has been provided by previous, coarser models.

Table 3. Estimated black bear densities using spatially explicit capture-recapture estimation method. Density (D) is expressed as bear/100 km2. Confidence limit (LCL-UCL) is the 95% interval.

Survey Area	*2009*		*2010*		*2011*		*2012*		*2013*		*2014*		*2015*	
Name	*D*	*lcl-ucl*	*D*	*lcl-ucl*	*D*	*lcl-ucl*	*D*	*lcl-ucl*	*D*	*lcl-ucl*	*D*	*lcl-ucl*	*D*	*lcl-ucl*
Divide Creek	47	*35-62*	40	*30-53*	-		-		-		-		-	
Aspen	-		26	*20-34*	21	*16-25*	-		-		-		-	
Spanish Peaks	44	*34-57*	21	*16-27*	11[a]	*9-23*	26	*21-33*	-		-		-	
Greenhorn Mtn	-		-		-		33	*25-43*	26	*19-35*	-		-	
Northern Front Range	-		-		7	*4-11*	9	*6-14*	14	*9-20*	-		-	
Durango	-		-		34	*25-42*	38	*27-55*	21	*16-28*	23	*16-32*	-	
Piedra	-		-		-		60	*43-82*	46	*35-60*	32	*25-42*	-	
Steamboat Springs	-		-		-		10	*7-15*	10	*6-15*	-		-	
Middle Park	-		-		-		-		-		11	*7-18*	14	*10-20*

These density estimates were used to parameterize the use/occupancy density extrapolation model, in which primary, secondary, and edge habitat were assumed to have 1x, 0.75x, and 0.1x, respectively, of the bear density derived from the mark-recapture surveys. This density extrapolation model yielded a bear population estimate range for B-16 of 477 to 607 bears, with a mean estimate of 542 bears (Table 4). Population sizes derived from extrapolations should be considered a possible population based upon a wide array of assumptions. Management decisions predicated on population extrapolations should be informed by additional management parameters, including harvest and mortality thresholds.

Table 4. B-16 bear population estimate based on use/occupancy density extrapolation.
(Note: The distribution of the bear population across GMUs is reflective of summer distributions based on bear densities measured in the summer months.)

GMU	Bear Habitat (sq km)					Bear Density (bears/100 sq. km.)			Projected Bear Population			
	Primary	Secondary	Edge	Not-Modeled	Total	Primary	Secondary	Edge	Primary	Secondary	Edge	TOTAL
15	774	66	246	188	1274	12.5	9.4	1.3	97	6.2	3.1	**106**
18	1060	14	193	404	1671	12.5	9.4	1.3	133	1.3	2.4	**136**
27	203	7	87	214	510	12.5	9.4	1.3	25	0.6	1.1	**27**
28	1043	14	229	432	1718	12.5	9.4	1.3	130	1.3	2.9	**135**
37	665	8	286	408	1368	12.5	9.4	1.3	83	0.8	3.6	**88**
181	132	3	65	272	471	12.5	9.4	1.3	16	0.3	0.8	**18**
371	253	2	69	0	445	12.5	9.4	1.3	32	0.2	0.9	**33**
Total	**4129**	**115**	**1175**	**1917**	**7457**				**516**	**11**	**15**	**542**

Bear Fall Forage Quality: Mast Production Surveys

Fall mast (berry and acorn) conditions influence bear reproductive success and certain gender- and age-specific survival rates due to changes in vulnerability to mortality (Beck 1991, Costello et al. 2001). Therefore, managers consider forage conditions when formulating annual management recommendations. Mast production surveys have been conducted since 2008 in B-16. Following survey protocols developed by Costello et al. (2001), CPW made slight modifications to provide a basic five-point matrix of fall mast fruit production for Gambel oak, juniper *spp.*, chokecherry, and serviceberry. The annual mast production score is combined with a mast potential rating based upon the type and number of different mast-producing plant species, producing a forage quality score from 1 (worst) to 10 (best) (Table 5).

Table 5. Black bear fall forage quality scores in B-16, 2008-2023 *(grey-shaded years with score <4 are considered "poor food years").*

YEAR	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fall Forage Qualit Score	4.75	3.81	6.07	4.35	3.75	4.60	2.38	2.86	3.77	3.77	4.05	4.18	3.99	6.04	3.46	5.52

These results provide managers with information about relative forage conditions over time, which is utilized in combination with other metrics (including harvest rates and conflicts) to implement management recommendations. The average fall forage quality score in Middle Park is 4.2, and scores that fall below average (>4) can help inform managers of poor forage years when assessing trends in the human-bear conflicts. (Figure 22).

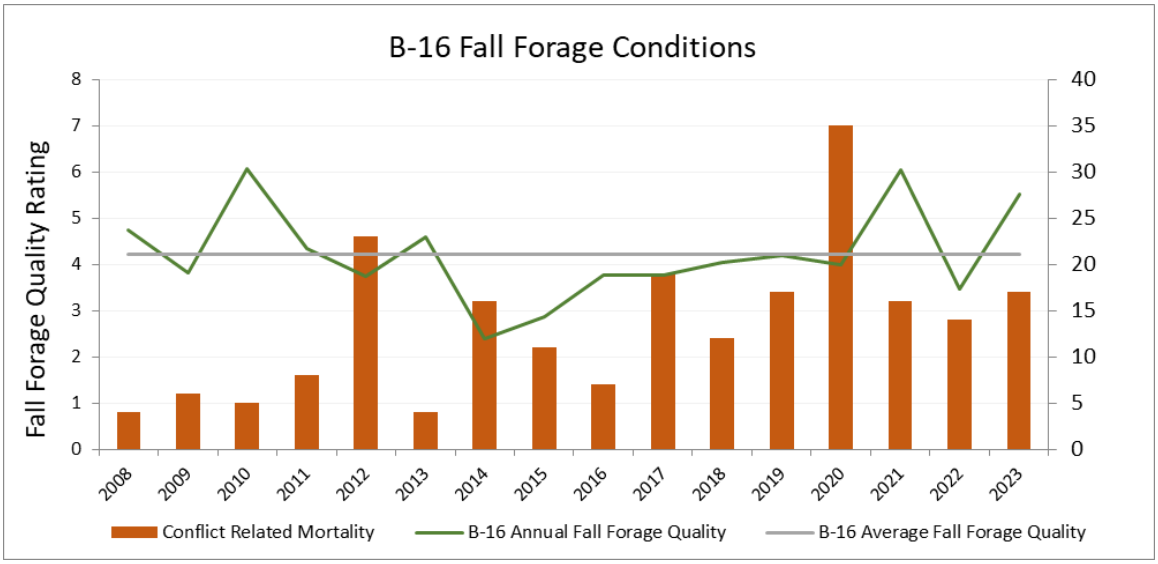

Figure 22. B-16 fall forage conditions and conflict-related mortality, 2008-2023.

Total Mortality Rate

Mortality rate can be useful in standardizing mortality among DAUs with varying habitat suitability. Miller (1990) demonstrated that under optimal conditions of reproduction and survival, maximum sustainable total mortality for black bears could be as high as 14.2%. Beck and White (1996 unpublished) conducted black bear population simulation analyses which, given their assumptions, produced stable bear populations with annual mortality at up to 15%. This range may be useful in gauging current human-caused mortality levels. The actual value of the mortality density thresholds will vary based upon the habitat quality within the DAU and results from the habitat model analysis, but the following guidelines are used as threshold levels in Colorado Bear DAUs:

Increasing	5% - 10% mortality
Stable	10% - 15% mortality
Suppression	15% – 20% mortality

In B-16, the average bear total human-caused bear mortality from 2021-2023 was 79 per year. Assuming that the bear population is approximately 542 bears, the mortality rate over the past three years is estimated to be approximately 14.5% (within the Stable range).

Based upon the current model-estimated population of 542 bears in B-16 and using these guidelines for total mortality rates, a total annual mortality of approximately 27 - 54 bears could allow for an increasing population; 54 - 81 bears could maintain a stable population; and 81 - 108 bears could suppress the population. The actual effect of a specific mortality rate depends on additional factors, including the age and sex composition of mortalities (see below) and the frequency of poor natural food years.

Harvest Composition and Management Criteria

Black bear vulnerability to harvest and other mortality factors varies depending upon differences in habitat, hunter effort or pressure, access, and forage conditions. Bears are less vulnerable where cover is dense and un-fragmented over large geographic areas. Bears are more vulnerable in areas that are fragmented by roads and trails that provide human access. The most significant factor that

influences annual variation in bear vulnerability is forage conditions. When natural forage quality or availability is poor, bears must travel greater distances and more frequently in search of food, especially during the fall hyperphagia period. Increased mobility results in bears being more visible and generally more concentrated in areas where food sources are available. During poor food years, bears are more likely to seek human food sources, have greater potential for damage to crops or livestock, are more likely to encounter hunters, and more frequently cross roads and highways. All of these tendencies can result in higher mortality due to elevated human conflicts, game damage, roadkills and harvest in poor food years compared to good food years.

Not all segments of a bear population are equally vulnerable, however, regardless of other influences. Hunting pressure affects harvest rate, which affects age structure, sex ratios, and densities of black bear populations. Adult males are typically most vulnerable because they are generally bolder and have larger home ranges. Sub-adult males are slightly less vulnerable. Consequently, the adult male segment of a population is the first to be reduced under hunter pressure. As harvest rates increase, the proportion of sub-adult (< 5 years old) black bears in the harvest typically increases, whereas the proportion of adult males declines as the population's age structure changes. A low percentage of adult males (≥5 years old) in the harvest may be an indication of population suppression. This criterion is a more sensitive indicator of black bear population levels than median age (Idaho Dept. of Fish and Game 1998). The mean percent of adult males in the harvest in relatively stable populations in Idaho (Beecham and Rohlman 1994) and New Mexico (Costello et al. 2001) under moderate to high harvest levels was 30% and 28%, respectively. Studies of black bear populations in Alaska, Virginia, and Arizona showed similar relationships between lightly and heavily hunted populations. Therefore, a proportion of 25% to 35% adult males in the harvest is one metric that could indicate a stable black bear population (Wyoming Game and Fish Dept. 2007).

As harvest levels increase and additional adult and sub-adult males are removed from an area, the proportion of females in the harvest begins to increase (Fraser et al. 1982, Kolenosky 1986, Beecham and Rohlman 1994), because female are least vulnerable, especially if accompanied by cubs. The average percentage of females in the harvest of black bear populations under moderate and high hunting pressure in Idaho (Beecham and Rohlman 1994) and New Mexico (Costello et al. 2001) was 35% and 40%, respectively. Beecham and Rohlman (1994) suggest a desired proportion of female harvest of 35% to maintain a stable population, whereas Beck (1991) suggested maintaining <40% females in harvest. Therefore, a range of 30% to 40% females in the total harvest is another metric that could indicate a stable black bear population (Wyoming Game and Fish Dept. 2007).

With increasing harvest of a black bear population, younger females are removed and older females become more common in the harvest. Thus, the proportion of adult females within the overall female harvest should rise with harvest rates, increasing mean age of females in the harvest (Kolenosky 1986, Beecham and Rohlman 1994). This phenomenon is especially important with late-reproducing species like bears, since removing adult females has the dual effect of not only reducing the number of bears in the population, but also decreasing reproductive potential of the population and, thus, its ability to respond to declines. The delayed response of slow reproducing populations to reductions was noted by Harris (1984) and was demonstrated in modeling efforts by Miller (1990), who predicted black bear populations reduced by 50% would take an average of 17 years to recover if hunting pressure was reduced by 25%. The percent of adults within the female harvest, rather than

mean or median age of the females in the harvest, can also be used to gauge the presumed population trajectory. Averaged over a three-year period, this criterion provides a more meaningful measurement of female harvest age structure, especially in areas with small sample sizes. The mean percent of adult females in the harvest of two New Mexico black bear populations under moderate and high harvest pressure was 55% and 70%, respectively (Costello et al. 2001). The mean percent adult females in the Wyoming statewide female black bear harvest from 1994-2005 was 47%, with a range of 32% – 57%, suggesting that an average proportion of 45% – 55% adult female harvest in total harvest could indicate a stable proportion of adult females (Table 8; Wyoming Game and Fish Dept. 2007) in the population.

CPW utilizes a threshold of 30% to 40% total females in all harvest, 45% to 55% total adult females in the female component of the harvest, and 25% to 35% adult males in all harvest, to indicate a stable black bear population. Adult male harvest below 25%, total female harvest above 40%, and total adult females in the female component of harvest above 55% may indicate a decreasing population; and adult male harvest above 35%, total female harvest below 30%, and total adult females in the female component of harvest below 45% may indicate an increasing population (Table 6.) While each index may indicate a given trend when looked at individually, these composition metrics should be considered together in combination with other indicators, including levels of conflict, for management purposes. The two female indices are considered to be more significant than the adult male index, so if the three indices do not correlate with each other, the two female indices are more heavily weighted.

Table 6. Black bear age and gender in harvest composition as indicators of population trend.

Harvest Composition Monitoring Standards			
Age/Gender Class	**Decreasing**	**Stable**	**Increasing**
Total Female Harvest in All Harvest	>40%	30-40%	<30%
Adult Female in Total Female Harvest	>55%	45-55%	<45%
Adult Male Harvest in All Harvest	< 25%	25-35%	>35%

Based on the most recent tooth age data of harvested bears in B-16 from 2020-2022, adult males comprised 23% of the total harvest. This 3-year average proportion of the harvest has been measured consistently between 22-24%, just below the stable threshold, since 2017 and has not changed over time. The proportion of total females in harvest over the past three years averages 37% which is the lowest since 2016 and indicates a stable population (Table 7). Monitoring this criterion helps ensure a stable reproductive portion of the population and the ability of the population to rebound in the event of a decline. The 3-year average adult proportion of female harvest is 54%, this index shows the most variability but has indicated an overall stable population since 2016 (Table 7). Over the past decade of tooth data, the 3-year averages from 2011 through 2015 leaned towards a slightly growing population that stabilized around 2014 to 2016. In 2019 and 2021, the 3-year average indices leaned towards a slightly declining population. The most recent 3-year average indicates a stable population trend, with both female indices within the stable threshold (Table 7 and Figures 23-25).

Table 7. DAU B-16 Harvest Composition 3-Year Averages, 2010-2021.

3-YEAR RANGES	3-YEAR AVERAGES										
	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021	2020-2022
% Total Female Harvest in All Harvest	28%	22%	28%	29%	39%	39%	39%	41%	40%	39%	37%
% Adult Female in Total Female Harvest	47%	63%	59%	68%	51%	49%	48%	55%	54%	58%	54%
% Adult Male Harvest in All Harvest	31%	53%	46%	46%	25%	23%	22%	22%	23%	24%	23%
# of cementum aged bear teeth	21	23	27	26	32	31	44	49	65	63	64
Big Game Season Structure	*2010-2014*			*2015-2019*					*2020-2024*		

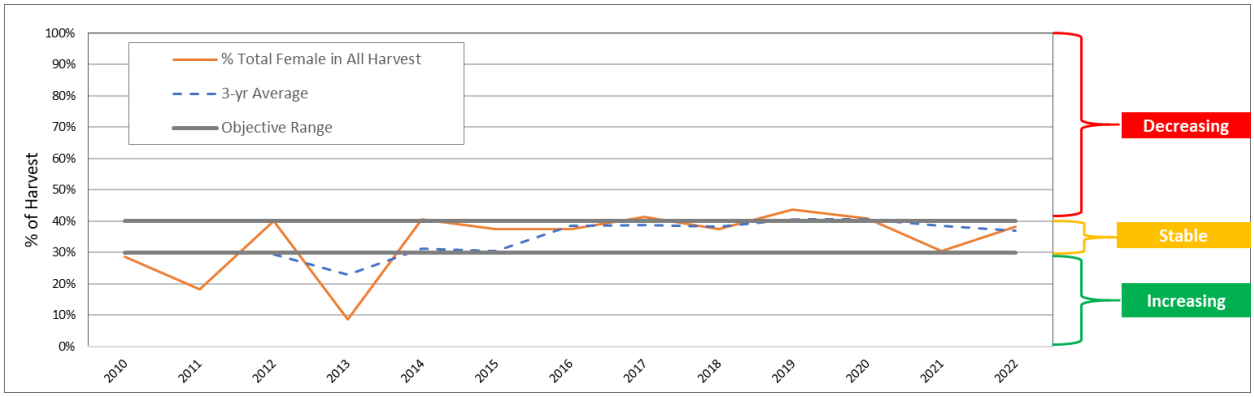

Figure 23. Percent of *total female* harvests in all harvest with respect to stable population, 2010-2022.

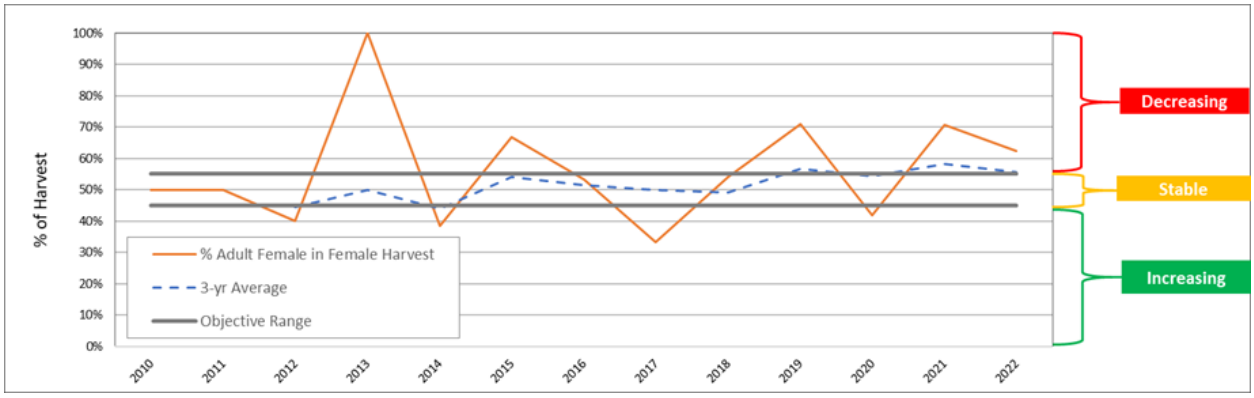

Figure 24. Percent of *adult female* harvests in total female harvest with respect to stable population, 2010-2022.

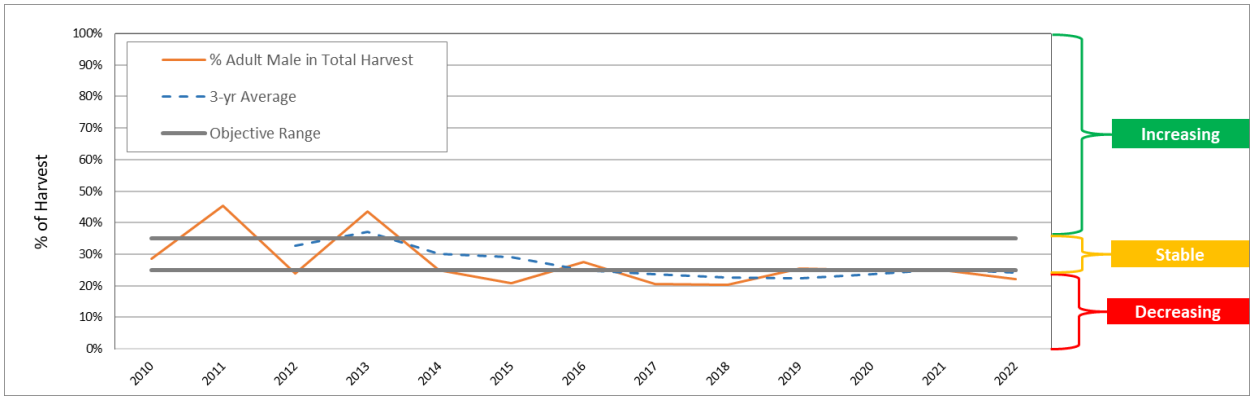

Figure 25. Percent of *adult male* harvests in all harvest with respect to stable population, 2010-2022.

The combination of these three indices of age/sex of harvest together suggest that the bear population in B-16 is trending in a stable direction under current management and harvest levels. To best evaluate future harvest data, changes in license allocation should be set for a minimum of 3-year time periods to allow for a more thorough analysis of the effects of harvest. In order to reduce the influence of high or low annual harvest rates due to environmental or other factors, 3-year running averages will continue to be used in harvest data analyses, rather than analyzing annual data individually. While the evaluation of harvest criteria will be analyzed using a 3-year average, data from 10 year time periods (two black bear generations) or longer will be analyzed periodically to illustrate longer-term trends in harvest, conflict and related population trends.

Social Factors

The social factors that influence management scenarios in B-16 include human conflicts and game damage. As described above in the "MANAGEMENT HISTORY" section, human-bear conflicts during years of natural food failures have been significant, mostly involving bears in trash, or bears entering or attempting to enter a home, outbuilding or vehicle. These conflicts are dealt with by CPW field staff individually depending on severity of the incident and other site-specific qualities, and whether the bear in question had been handled previously for conflict. CPW's Human-Bear Conflict policy provides options for staff to consider when responding to conflict bears. Due to the statewide increase in bear and mountain lion attacks on humans, CPW implemented a predator attack policy to serve as guidance for dealing with these traumatic events.

A major reason that these conflicts persist is that unsecured trash containers and other human food sources continue to be available to bears (e.g., Lewis et al. 2015), despite the adoption of trash ordinances in several towns and counties meant to prevent wildlife-human conflicts. Counties and municipalities have worked with CPW staff to identify novel and non-traditional ways of reaching new publics. The seasonal nature of the workforce and visitors to many of these towns creates a unique challenge in targeting the proper, uneducated audience. Additionally the short-term stay of these audiences makes it difficult to instill a sense of ownership and personal responsibility for the problem.

As long as anthropogenic foods are available, they will continue to be an attractant for bears, leading to conflicts with humans and in some circumstances, removal of the bear. Under such scenarios, urban areas that draw in bears may function as population sinks, in which the mortality rate exceeds the recruitment rate of the population. At the population scale, mortality of adult

females due to conflict removals could negate any improvement in their body condition and cub production gained from feeding on anthropogenic food sources (Lewis et al. 2014).

To ultimately reduce human-bear conflicts, residents and municipalities need to ensure that these potential food sources are made unavailable to bears by strictly enforcing the use of bear-proof trash containers and dumpsters. Doors and windows on houses and vehicles should be kept closed and locked to minimize the possibility of a bear entering in search of food. Bird feeders (including hummingbird feeders) and pet food should be removed and outdoor grills should be cleaned after use from April-November, when bears are not in hibernation.

As stated above in the "MANAGEMENT HISTORY" section, the vast majority of game damage claims involving bears in B-16 were livestock damage. Most of these claims are from producers whose primary source of income is from domestic sheep production.

Predator-Prey Dynamics

Black bears can be highly effective predators upon newborn ungulates, and bear predation is often a major proximate cause of mortality for elk calves (e.g., grizzly and black bear: Singer et al. 1997, Barber-Meyer et al. 2008; black bear: Smith et al. 2006, White et al. 2010). The effects of predation on prey populations are complex and vary with predator and prey densities and species composition, habitat cover and forage conditions, weather, body condition, and other biological and ecological factors (Singer et al. 1997, Smith et al. 2006, White et al. 2010, Griffin et al. 2011). Predator control is often suggested by the public to improve ungulate populations, but its efficacy depends on a wide array of ecological interactions.

Predator control may be effective when prey density is low relative to carrying capacity and when there are not alternate prey species or food sources present to bolster the predator population. For example, in an Idaho elk population thought to be below its carrying capacity, reducing black bear and mountain lion densities boosted summer calf survival (White et al. 2010) and calf ratios going into winter (White et al, 2010).

However, predator control may be ineffective when prey populations are close to carrying capacity and when predation is compensatory to other sources of mortality (Bartmann et al. 1992, Ballard et al. 2001, Zager and Beecham 2006, Hurley et al. 2011). Also, bear reproductive success (e.g., age of first litter, reproductive interval, cub survival rates) can be higher in areas with higher ungulate fecundity (Schwartz and Franzmann 1991), so as deer and elk populations grow (e.g., due to habitat improvements and/or predator reductions), bear populations could subsequently benefit from the additional availability of prey.

STRATEGIC GOALS AND MANAGEMENT OBJECTIVES

Process for Developing Strategic Goals and Management Objectives

The structure of a bear management plan focuses primarily on utilizing hunting as the primary management tool, supported by other tools including public education/outreach, enforcement, game damage mitigation, and habitat modification, to manage the bear population and human-bear conflicts. This plan provides harvest-related monitoring structures to assess the bear population and levels of human-bear conflicts, along with strategic goals to influence and maintain a stable bear population in B-16 while minimizing conflicts.

In reality, human-bear conflicts require more than changes in licensing or hunting structure in order to resolve the problems. In addition to (and probably more effective than) bear population reduction, a drastic reduction in unsecured trash and other human food sources is also necessary to minimize the incentives for bears to forage in urban areas for anthropogenic foods. This is becoming increasingly more important as the human population continues to expand and grow throughout B-16.

Attempts in other North American states and provinces to reduce human-bear conflicts through hunting have been equivocal. Differences among these management attempts could be attributed to a multitude of factors including varying levels of bear harvest relative to bear population size, varying management responses to bear conflicts, and varying compliance with ordinances and recommendations to secure human-source foods and attractants. The variation and complexity among these factors highlight the multi-faceted nature of human-bear conflict management. Some studies found that increasing bear harvest did lead to a reduction in complaints and conflicts (Raithel et al. 2017, Garshelis et al. 2020) and that following high levels of bear harvest, the reductions in both complaints and bear population size were sustained for multiple decades (Garshelis et al. 2020). However, other studies found that increasing bear harvest was not correlated with fewer conflicts (Obbard et al. 2014, Tavss 2005, Treves et al. 2010). Bears that were harvested may not have been the individuals involved in conflicts, or the level of harvest was not enough to reduce the population. More importantly, the underlying cause of the conflicts, namely unsecured trash and other human food sources, went unresolved in those studies.

Bear population reduction alone is unlikely to significantly reduce conflicts if trash and other human food attractants continue to be available to bears. However, studies show that strict enforcement of bear-proof trash storage has resulted in reducing conflicts (Peine 2001, Tavss 2005, Johnson et al. 2018). **It is incumbent upon residents, communities, and other local enforcement agencies to eliminate garbage, birdfeeders, and other attractants in order for the overall management strategy to be effective at reducing human-bear conflicts (see Appendices D, E & F).** Properly securing bear-proof trash containers and dumpsters, unifying the trash pick-up day within each neighborhood, closing and locking windows and doors on homes and vehicles, using round-handled door knobs, and removing birdfeeders seasonally would reduce human food sources available to bears and other wildlife. Supplying and/or subsidizing the purchase of bear-proof trash cans and dumpsters would help residents and communities with the costs of switching to these containers and would increase compliance with trash ordinances (Johnson et al. 2018). CPW will continue to support and encourage local entities to apply for CPW grants as well as external funding for Bear Aware efforts, including reducing cost of bear-resistant containers. To support these community transitions, proactive and consistent enforcement of the ordinances by authorities, with high monetary fines for

non-compliance, are also needed to ensure that trash containers are properly secured (Baruch-Mordo et al. 2011).

Information on CPW's Human-Bear Conflict Reduction Community Grant, Bear Aware programs, and Living with Bears Resources can be found on our web page at:
https://cpw.state.co.us/learn/Pages/LivingwithWildlifeWildBears.aspx

The top management priorities in DAU B-16 are to maintain a stable bear population, continue to provide bear hunting opportunity, and reduce conflicts between humans and bears. Current conflict levels have been relatively consistent over the past several years, and are now being documented electronically. CPW will continue to track all human-bear encounters reported to the CPW and other law enforcement agencies, all non-harvest bear mortalities, and all bears captured, handled, relocated and euthanized. This updated data collection system will be used to inform conflict management efforts, and the data can be correlate with other factors including mast production and harvest to guide annual bear license adjustments.

Bears involved in conflicts in B-16 are handled according to CPW policy at the discretion of the field officer or supervisor. CPW staff routinely provides education materials and advice through a phone call and/or site inspection. Depending on the situation, conflict bears may be targeted for hazing or capture. Captured bears are either relocated or euthanized. Relocation of nuisance or conflict bears has become increasingly more challenging over the last decade, as ideal release locations have become less available due to humans on the landscape. From 2019 to 2022, only two bears involved in conflicts in B-16 were relocated, and 18 were euthanized. Additionally, CPW aims to reduce game damage claims in B-16 and continue to work with producers to identify and minimize bear incidents with livestock, primarily sheep.

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 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 affect change on a scale significant enough to positively influence outcomes. Examples of methods to increase compliance with trash ordinances and to reduce human-bear conflicts include: increasing enforcement through ticketing for violations of trash ordinances, subsidizing the cost of bear-resistant garbage containers for local residents, redesigning dumpsters to make it easier for users to correctly lock, and modifying trash hauling trucks to accommodate this equipment. Additional efforts can be made to identify long term communication strategies for reaching seasonal residents and short term visitors.

B-16 Strategic Goal Alternatives

Alternative 1: Stable Population Trend (Preferred Alternative)

B-16 would continue to be managed for a stable population trajectory, in which the 3-year average trend in age/sex composition of the harvest should be consistent with that of a stable population:

(a) proportion of adult males in all harvest within 25-35%,
(b) total females within 30-40% of all harvest,

(c) adult females within 45-55% of the female harvest.

The average DAU total mortality rate as a proportion of the population should fall in the 10-15% range of 54 - 81 bears annually. To maintain a stable population size, the three age and sex harvest composition metrics would be maintained within the stable parameters through annual adjustments in bear license numbers. Average hunter harvest comprises on average between 70 - 85% of total mortality in B-16, which based on the projected annual mortality would be within the range of approximately 38 - 65 bears harvested annually. Based on the long-term average and range of bear harvests and other human-caused mortalities reported in B-16, a 3-year average harvest of approximately 55-65 bears and total human-caused mortality of approximately 70 - 80 bears would be expected under this strategy.

This alternative is consistent with current bear management in B-16. Under this strategy, bear license availability would remain the same and levels of human-bear conflicts would likely remain similar to recent years, potentially increasing with human population growth and during years of poor natural forage. Vehicle collisions with bears and game damage would also remain similar to current levels, assuming a stable bear population.

Within the framework of an overall stable population, flexibility will be maintained to manage for minimized game damage and human-bear conflicts in localized areas of concern. Not every management index must be in complete agreement, but most indices should point toward a stable population. 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, if the 3-year averages of age/sex composition of the harvest, total harvest or total human-cause mortalities start to indicate a decreasing bear 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, if the *3-year average* number of control kills exceeds 20 bears (the highest recorded is 19 bears in 2020), a review of the B-16 HMP may be warranted before the 10-year cycle is complete.

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: Decreasing Population Trend

B-16 would be managed for a decreasing population trajectory, in which the 3-year average trend in age/sex composition of the harvest should be consistent with that of a decreasing population:

a) proportion of adult males less than 25% of all harvest,

b) total females greater than 40% of all harvest,

c) adult females greater than 55% of the female harvest.

The total human-caused mortality rate as a proportion of the population should fall in the 15-20% range of approximately 81 – 108 bears over a 3-year average. To achieve a decreasing population size, the three age and sex harvest composition metrics would be maintained within the decreasing parameters through annual adjustments in bear license numbers.

Alternative 3: Increasing Population Trend

B-16 would be managed for an increasing population trajectory, in which the 3-year average trend in age/sex composition of the harvest should be consistent with that of an increasing population:

(a) proportion of adult males greater than 35% of all harvest,
(b) total females at less than 30% of all harvest,
(c) adult females at less than 45% of the female harvest.

The total human-caused mortality rate as a proportion of the population should fall in the 5-10% range of approximately 27 - 54 bears over a 3-year average. To achieve an increasing population size, the three age and sex harvest composition metrics would be maintained within the increasing parameters through annual adjustments in bear license numbers.

Public Process

Open Houses

CPW hosted public meetings during April and May 2024, which a total of 18 members of the public attended (Silverthorne: 9; Granby: 4; and Yampa: 5 attendees). Prior to each open house, notices were posted at the Hot Sulphur Springs CPW office and local businesses; press releases were shared in the local newspapers; announcements were made on local radio stations; and notices were posted on local websites, social media, and email newsletters. The open houses presented conflict data and harvest metrics, and most of the public comments and discussion revolved around the need to increase compliance with trash ordinances and to reduce the availability of attractants, reducing the number of bears due to predator conflict with livestock, and the desire for science-based management of black bears.

Public Survey

In addition to the Open Houses, CPW conducted a survey from April 17th – May 10th 2024 to get public input on the B-16 bear population, conflicts, conflict management, and hunting. The survey was available via paper copy (available at open houses and at HSS CPW Office), or google form (shared by QR code or link). The survey was distributed locally within B-16 communities and was shared through local newspapers, notice boards, email newsletters, social media postings and websites. Additionally, all hunters that purchased a B-16 license in the past 3 years received an email link to the survey.

A total of 679 responses were received. A detailed summary of responses can be found in Appendix G. Overall, more than half of respondents desire to have the same number of bears in the population over the next 10 years. Slightly less than a quarter of respondents indicated a preference for fewer bears or more bears, respectively.

Among B-16 residents, approximately half had experienced some type of conflict with bears. Among these conflicts, three-quarters reported bears in trash or dumpsters, slightly less than half had residential conflicts (bears in house, garage, barn, etc), one-quarter reported vehicle damage or break-ins, one-quarter experienced camping or hiking conflicts, and less than 15% had agricultural or livestock conflicts or reported aggressive bear behavior. Regarding local CPW Bear Aware, Living With Bears, and other public education or outreach efforts, a majority (>80%) of B-16 residents and more than half of all CO resident respondents were aware of such efforts. More than half of B-16 residents indicated that these materials and/or efforts were effective in reducing or minimizing conflicts with black bears.

B-16 resident and total Colorado resident respondents indicated that the most effective methods for reducing conflicts between humans and bears over the next 10 years were public education and harvesting more bears. The next most effective methods (in order of preference) were municipal (Town/City/County) laws and regulations for bear-resistant food and trash storage, providing free or low-cost bear-resistant trash containers to residents in B-16, better enforcement of existing regulations for bear-resistant food and trash storage, higher fines for food and trash violations, and State (CPW) and Federal (USFS, BLM) laws and regulations for bear-resistant food and trash storage. Less than 15% of both B-16 and all Colorado residents indicated that euthanizing or relocating conflict bears were effective methods to reduce human-bear conflicts.

Among hunters who responded, 83% of resident hunters and 90% of non-resident hunters had hunted B-16 in the past three years (2021-2023). 90% of resident hunters and 83% of non-resident hunters indicated that they intended to hunt B-16 in the next 10 years. A detailed summary of responses can be found in Appendix H.

30-Day Public Comment Period

The draft B-16 plan was available for a 30-day public comment period from June 1-30. Commenting was made available to anyone from the public via an online survey. A total of 23 valid responses were received; 19 from residents and 4 from non-residents. Respondents were given the option to support population Alternative 1 (stable), Alternative 2 (decreasing), Alternative 3 (increasing), or Other. Among resident respondents, 72% supported a stable bear population, 11% supported a decrease in bear numbers, and 17% supported an increase in bear numbers. Responses were similar among total respondents. A detailed summary of responses and comments can be found in Appendix H.

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APPENDICES

Appendix A. Human population by county, 1970-2021.

https://gis.dola.colorado.gov/population/data/county-data-lookup/
https://demography.dola.colorado.gov/assets/html/sdodata.html

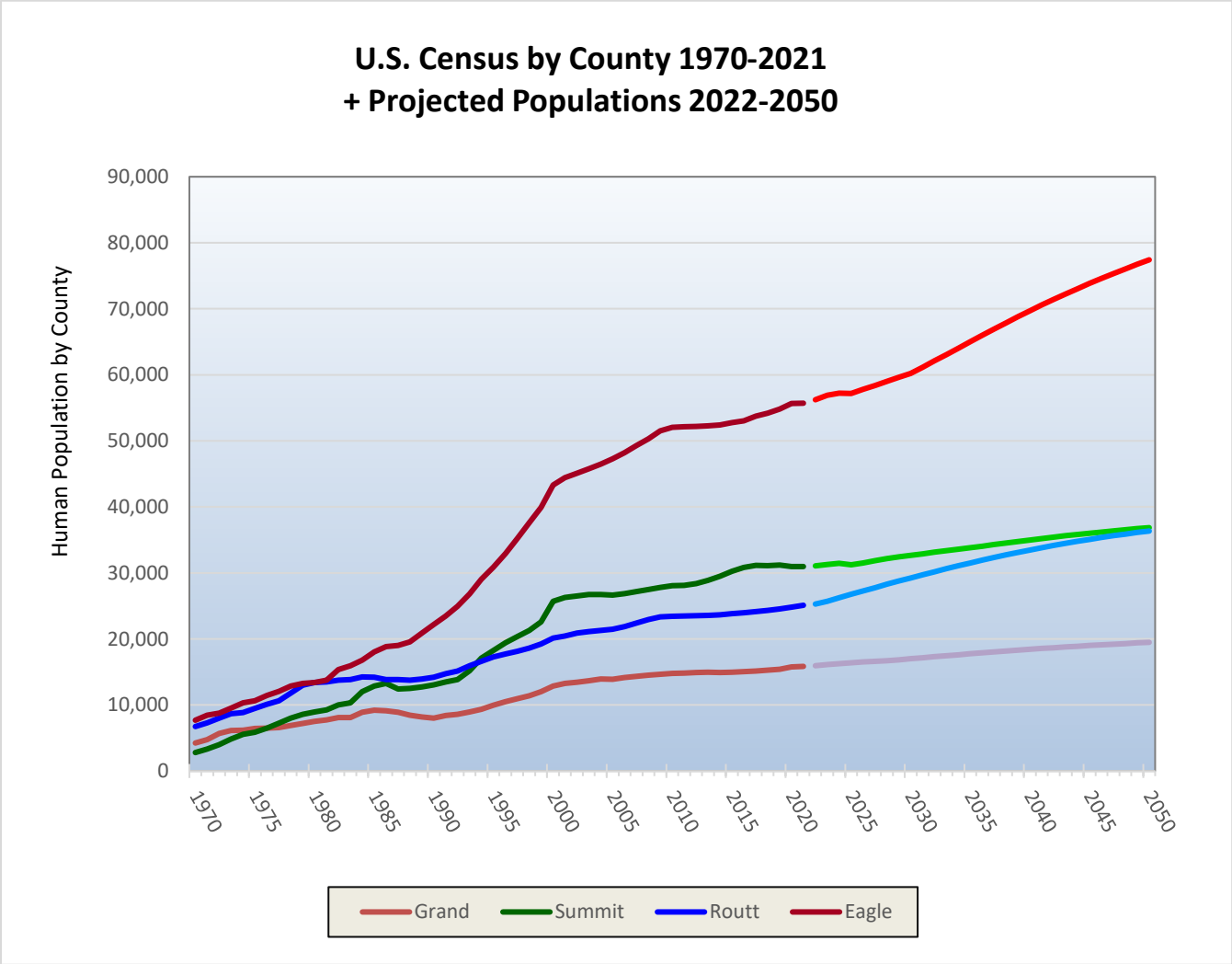

Figure 26. Human population by County in B-16, 2008-2021.

Appendix B. Bear injuries to humans in B-16

**From unpublished CPW file "human-bear contacts.pdf" (8/23/11 version) and updated through 2022.*

July 25, 1971: (Black Bear, GMU 18, Grand Co.) *Fatality:* A honeymooning couple was tent camping near Grand Lake. A large older bear entered the tent, injured the woman and pulled the 31-year-old man away from the campsite. The man was killed. The bear was later found and destroyed. Further examination of the black bear found that it had worn, abscessed teeth and a plastic bucket in its stomach.

August 27, 2001: (Black Bear, GMU 371, Summit Co.) *Injury:* A 41-year-old California woman sleeping in her tent just north of Frisco suffered a cut early in the morning when a black bear swiped through the tent fabric with its paw. About 6 a.m. the woman felt the muzzle of an animal nudging the side of her tent. She pushed at the muzzle thinking it might be a loose dog and the bear responded by swiping through the fabric with its claws. The woman was cut on the forehead. She yelled and the bear backed off. The woman got out of her tent at the opposite end from where the bear had been. She and the bear looked at each other from about 10 feet away. She told the bear to "go away". The animal left the area and the woman walked down the trail to request help from people in a nearby trailer. After the women left, the bear returned and tore apart the campsite, including the woman's tent and sleeping bag. The campsite was reasonably clean, but there were other informal campsites in the area where food was left lying about. A trap was set but no bear was caught.

July 22, 2003: (Black Bear, GMU 28, Grand Co.) *Injury:* A man sleeping in a sleeping bag near his truck was stirred by some noise and woke to a bear looking over him. The man was startled and lifted his head. The bear scratched the man. He jumped into his truck and honked the horn, causing the bear to flee the area. The camper did not require medical attention. The bear was not located.

July 24, 2010: (Black Bear, GMU 28, Grand Co.) *Injury:* At approximately 6 a.m. a 16-year-old boy was awakened by a bear licking the boy's face. The bear then bit the boy's face. The boy sustained minor gashes and several small puncture wounds on his head. He did not require medical attention. A trap was set near the location. An adult female bear matching the description was captured and destroyed within 24 hours of the incident.

Appendix C. Historical Bear Population Models and Estimates

1. Mark-Resight Density Estimate

A black bear re-sighting study was conducted in Game Management (GMU) 18 in Middle Park in 1996 utilizing the frequency of sightings of marked and unmarked individuals to estimate the Middle Park black bear population (Beck 1997). The coniferous forests Colorado's high-elevation parks are subjectively considered to be among the poorest black bear habitats in the state. The 404 km^2 study area was located in mountain areas vegetated with spruce-fir and lodge pole pine, and ranged from 2380m to 3540m in elevation. The west boundary of the study area was the E. Fork of Troublesome Creek; the east boundary was a north-south line over Little Gravel Mountain; the north boundary was just south of the Continental Divide; and the south boundary was the Colorado River. A total of 42 bears were collared within or near the study area during 1996. Weekly aerial radio tracking of collared bears was conducting during the months of June- September 1996. Input data required for each session were: number of marked bears in area, number of marked bears observed, the number of times each marked bear was observed, and the number of unmarked bears observed. The resultant population estimates includes all bears yearling and older. This estimator does not include first-year cubs; this is an important point when comparing to other studies.

The population estimation technique utilized was the Bowden Estimator available through PROGRAM NOREMARK (White 1996) and described by Bowden and Kufeld (1995). The results of this study indicated a density of 8.1 bears/100 km2 (21 bears/100 mi2) in Middle Park (Beck 1997), which includes GMUs 18, 181, 27, 28, 37, and 371. The 2000 B-16 Bear Plan assumed higher densities in GMU 15 (1274 km2) due to higher quality habitat in that area (Wagner 2000). GMU 15 accounts for 17% of the entire B-16 DAU. Extrapolation of the 8.1 bears/100 km2 density across the Middle Park B-16 GMUs (6,183 km2) projects approximately 500 bears in Middle Park, plus an additional 150-200 bears in GMU 15 (1274 km2), for a total of approximately 650-700 bears throughout B-16. This population estimate assumes that all habitats throughout Middle Park are somewhat similar. More recent research efforts have more closely analyzed bear densities within each habitat type, which allow for a more accurate population estimate across all of B-16 and not just the high-elevation park habitat.

2. General Vegetation Density Extrapolation

The first vegetation model was developed by Gill and Beck (1990) in an unpublished report to the Colorado Wildlife Commission and was modified by Apker (2003) in an internal DOW report. This model applies subjective probable black bear densities for different vegetation types to the amount of land area of those vegetation types. The vegetation type amounts for this model were derived from landsat GAP project coarse vegetation types. This vegetation/density model provides a snapshot extrapolation of possible bear population size in Colorado based on current vegetation classes and both measured and projected bear densities in those vegetation classes from the 1990s. This model and its subsequent extrapolation yields an estimated density of approximately 9.5 bears/100 km^2 in B-16, with a projected bear population of approximately 469 black bears (Table). This model assumes that approximately 66% of DAU B-16 to be viable bear habitat based on vegetation classification. More recent vegetation analyses assume 72% of the DAU to be viable bear habitat.

Table 8. B-16 bear population estimated based on vegetation classification and density extrapolation.

Vegetation Class	Square Kilometers of Veg. Class in DAU	Percent of DAU that is Veg. Class	Bear Density (bears/100 km$^{2)}$	Bear Numbers
Aspen	787	10.6%	38.6	304
Bristlecone pine	1	0.0%	3.9	0
Douglas fir	16	0.2%	4.8	1
Forest-dominated wetland/riparian	24	0.3%	3.9	1
Gambel oak	13	0.2%	38.6	5
Lodgepole pine	2481	33.3%	3.9	96
Lodgepole pine clearcut	89	1.2%	3.9	3
Mesic upland shrub	6	0.1%	6.4	0
Mixed forest	16	0.2%	6.4	1
Pinyon Juniper	79	1.1%	4.8	4
Shrub-dominated wetland/riparian	22	0.3%	3.9	1
Spruce fir	1154	15.5%	3.9	45
Spruce-fir clearcut	47	0.6%	3.9	2
Subalpine meadow	176	2.4%	3.9	7
TOTAL	**4911**	**66.0%**	**9.5**	**469**

Appendix D. Municipal Trash Ordinances in B-16

Town of Breckenridge
https://breckenridge.town.codes/Code/5-6-11

5-6-11: Residential Generator Requirements:

A. Except when placed for curbside pick up in accordance with subsection B of this section, all solid waste that is placed, stored, or kept outside of a building, structure, or an approved trash enclosure shall be kept in an outdoor container with a properly secured lid and labeled by contents.

B. Solid waste may be placed at the curbside for pick up by a licensed hauler only in accordance with the following regulations:

1. Solid waste may be placed at the curbside for pick up only when fully contained within a container. No solid waste may be placed at the curbside in a paper or plastic bag, or other receptacle that is not a container.

2. Any container placed for curbside pick up shall be kept closed and secured with no gap between the container and the lid until it has been emptied by the licensed hauler and moved back to its normal location.

3. Containers may be placed at the curbside only after six o'clock (6:00) A.M. on the day of pick up. After pick up, each container must be moved back to its normal location by ten o'clock (10:00) P.M. of the same day.

C. The owner of real property and any other person who causes the accumulation of solid waste at the owner's property are both individually responsible for any solid waste placed, stored, or kept at such property in violation of this section. (Ord. 25, Series 2022)

Town of Dillon
https://library.municode.com/co/dillon/codes/municipal_code?nodeId=DIMUCO_CH7HESAAN_ARTIIIGARE

ARTICLE III - Garbage and Refuse

Sec. 7-3-10. - Accumulation of refuse prohibited.

Any accumulation of refuse or other material on any premises, improved or unimproved, in the Town is prohibited and is hereby declared to be a nuisance. (Ord. 02-02)

Sec. 7-3-20. - Keeping in containers.

Garbage, trash and other refuse shall be deposited in a receptacle which is equipped with a lid or other device designed and effective to control the odors thereof and to prevent flies or other insects from accumulating thereon. (Ord. A-1; prior code 9-1)

Sec. 7-3-30. - Placement of containers.

No person shall leave for more than twenty-four (24) hours any garbage or trash container or receptacle within fifteen (15) feet of any dedicated street or on any public parking area without specific approval of the Town Clerk. (Ord. 6-1974; prior code 9-2; Ord. 02-02)

Sec. 7-3-60. - Responsibility for refuse on premises.

It shall be the duty of every person, whether owner, lessee or renter of any vacant lot, building or premises, including any place of business, hotel, restaurant, dwelling house, apartment, tenement or any other establishment, at all times to maintain the premises in a clean and orderly condition, permitting no deposit or accumulation of refuse or materials other than those ordinarily attendant upon the use for which such premises are legally intended. (Ord. 02-02)

Town of Fraser
https://library.municode.com/co/fraser/codes/municipal_code?nodeId=CH7HESAAN_ART7WIPR

CHAPTER 7 - Health, Sanitation and Animals, ARTICLE 7 - Wildlife Protection

Sec. 7-7-10. - Purpose.

The purpose of this Article is to protect and maintain wildlife in the Town and surrounding areas and to minimize the risk of dangerous interaction between humans and wildlife. (Ord. 344 Part 1, 2008)

Sec. 7-7-20. - Definitions. For the purpose of this Article, the following definitions shall apply:

Attractant means any substance which could reasonably be expected to attract wildlife or does attract wildlife, including but not limited to food products, pet food, feed, grain or salt.

Dumpster enclosure means a fully enclosed structure consisting of four (4) sides and a secure door or cover, which shall have a latching device of sufficient strength and design to prevent access by wildlife. Dumpster enclosures are subject to all planning and zoning requirements and building codes. An enclosure of less than one hundred twenty (120) square feet shall not require a building permit. An enclosure of one hundred twenty (120) square feet or larger requires a building permit.

Refuse means any waste that could reasonably attract wildlife, which includes, but shall not be limited to, kitchen organic waste, food, food packaging, toothpaste, deodorant, cosmetics, spices, seasonings and grease.

Refuse container means any trash can, Dumpster or similar device used for the collection and storage of solid waste.

Resident means any person, firm, corporation or organization within the Town or on Town-controlled land.

Special event means an outdoor gathering such as a concert, conference or festival, whether occurring on public land or private.

Wildlife means any undomesticated animal, including but not limited to elk, deer, sheep, lynx, skunks, magpies, crows, bears, raccoons, coyotes, beavers, porcupines, mountain lions, bobcats and foxes.

Wildlife-proof refuse container means a container used for the storage of refuse that has been certified to be wildlife-proof by the Colorado Division of Wildlife, the U.S. Park Service or the U.S. Forest Service. A container not so certified is considered a wildlife-proof refuse container if it is fully enclosed, of sturdy construction and includes a latching mechanism suitable to prevent wildlife from opening the container. Latching mechanisms shall allow a gap between the container lid of no more than one-half (½) inch. Latching mechanisms shall keep the lid closed in the event the container is turned on its side or upside down. Wildlife-proof refuse containers may include drain holes no larger than one (1) inch in any dimension. (Ord. 344 Part 1, 2008)

Sec. 7-7-30. - Residential refuse disposal.

(a)All residential containers that receive refuse edible by wildlife must be secured inside the home or garage. Residents unable to keep their refuse containers inside the home or garage shall store their refuse in a wildlife-proof refuse container or enclosure approved by the Town Building Official.

(b)Residents with curbside pickup shall place refuse containers at the curb, alley or public right-of-way at or after 6:00 a.m. on the morning of scheduled pickup. After pickup, all containers must be removed from the curb, alley or public right-of-way by 8:00 p.m. on the same day.

(c)Other household waste that cannot reasonably be considered refuse or an attractant as defined in this Article, including but not limited to nonedible yard maintenance waste, household items and cardboard, shall not require the use of wildlife-proof containers when not commingled with refuse or any other attractant.

(d)Multi-family housing developments and other types of clustered residential housing, utilizing centralized refuse containers, must use either a wildlife-proof refuse container or a Dumpster enclosure for all refuse. The container or enclosure shall be kept closed in a secure manner except when refuse is being deposited. (Ord. 344 Part 1, 2008)

Sec. 7-7-40. - Maintenance and operation of all refuse containers and enclosures.

(a)All refuse containers defined in this Article shall be kept closed and secured when refuse is not being deposited. Any container which is overfilled so as to prevent a container's designed latching is not a wildlife-resistant or wildlife-proof refuse container within the meaning of this Article.

(b)If a container or enclosure is damaged, allowing free access by wildlife, repairs must be made within forty-eight (48) hours after written notification by Town Police Department personnel. (Ord. 344 Part 1, 2008)

Sec. 7-7-50. - Special event refuse disposal.

Outdoor special event sites shall be kept free from the accumulation of refuse. Refuse must be collected from the grounds at the close of each day's activities and shall be deposited into appropriate wildlife-resistant, wildlife-proof containers or wildlife-resistant enclosures as provided in this Article, or shall be removed to an appropriate disposal site. (Ord. 344 Part 1, 2008)

Sec. 7-7-60. - Construction site refuse disposal.

All construction sites must have a designated refuse container which receives refuse or attractants as defined by this Article. This container shall be a wildlife-proof refuse container. (Ord. 344 Part 1, 2008)

Sec. 7-7-70. - Commercial refuse disposal.

(a)All refuse containers receiving refuse from commercial establishments and restaurants shall be in wildlife-proof containers or shall be secured in a Dumpster enclosure.

(b)Container lids and Dumpster enclosure doors shall be kept closed and latched at all times, except when loading or removing refuse. The area around the container or enclosure must be kept free from refuse at all times.

(c)Notwithstanding the foregoing, this requirement shall not apply to municipal refuse containers which are emptied at the end of each day or multiple times per day. (Ord. 344 Part 1, 2008)

Sec. 7-7-80. - Compactors.

Trash compactors are compliant with this Article when no refuse is exposed. Compactor doors must be kept closed at all times, except when loading or removing refuse, and the area around the compactor must be kept clean of refuse and debris. (Ord. 344 Part 1, 2008)

Sec. 7-7-90. - Feeding of wildlife prohibited.

(a)Intentional or unintentional: No person shall intentionally or unintentionally feed or provide food in any manner for wildlife on public or private property within the Town. A person will be considered to be in violation of this Article if they leave or store any garbage, refuse or attractant in a manner which would create or does create a lure or enticement for wildlife.

(b)Bird feeders: Bird feeders are allowed. However, between the dates of April 15 and October 15, all bird feeders must be suspended on a cable or other device so that they are inaccessible to bears, and the area below the feeders must be kept free from accumulation of seed debris.

(c)Gardens: Flower and food gardens are permitted. (Ord. 344 Part 1, 2008)

Sec. 7-7-100. - Exceptions. The following entities or actions are exempt from the requirements of this Article:

(1)Any individual, company or corporation that is duly licensed by the State or is entitled under law to possess wildlife of any kind.

(2)Any action that is officially sanctioned by the State, federal agencies or the Town that would require feeding, baiting or luring of wildlife (i.e., capturing and tagging wildlife for relocation or scientific projects and study). (Ord. 344 Part 1, 2008)

Sec. 7-7-110. - Enforcement.

Compliance with this Article notwithstanding, the Town police and code enforcement officers may issue a "Notice of Violation" and order any resident to purchase and use a wildlife-proof refuse container for all storage of refuse that is attractive to or edible by wildlife if the Town receives one (1) documented, substantiated report that any animal, whether wild or domestic, has entered into or removed refuse from a refuse container located on the property or placed at the property curbside for pickup. Such order shall:

(1)State that a wildlife-proof container shall be obtained for the property within seven (7) days.

(2)Be served either personally or by means of posting on the premises upon which the nuisance exists. If notice is served by posting, a copy of the notice shall also be mailed by certified mail, return receipt requested, to the owner of record of the property given to any Town or county government office. If the identity of the resident is not known, the entity responsible for payment of the garbage removal services for the subject location will be held responsible for complying with this Article and for any penalties assessed pursuant to the same. (Ord. 344 Part 1, 2008; Ord. 483 Part 1, 2021)

Sec. 7-7-120. - Violations and penalties; penalty assessment.

(a)Offenders who continue to violate this Article or continue to fail in achieving timely compliance as set forth in any previous Notice of Violation may be issued a Second Notice of Violation, which shall be in the form of a citation or summons. Such summons shall be subject to a graduated fine schedule as set forth below.

(b)Penalties: Any person who or entity that is issued a citation or summons shall be punished as follows:(1)A fine not exceeding one hundred dollars ($100.00) for a first offense.(2)A fine not

exceeding two hundred dollars ($200.00) for a second offense.(3)A third violation shall constitute a misdemeanor and will require a mandatory appearance in Municipal Court. Punishment shall be in accordance with Subsection 1-4-10(b) of this Code.
(c)The penalties outlined above may be reduced or suspended upon the offender showing proof that he or she has purchased or installed a wildlife-proof refuse container or Dumpster enclosure. (Ord. 344 Part 1, 2008)

Sec. 7-7-130. - Violator's responsibility.
In addition to the penalties outlined in this Article, violators may be require to perform all necessary actions to remove or abate attractants of wildlife. This may include, but shall not be limited to, the removal of bird feeders or pet food, cleaning or appropriate storage of barbecue grills, additional storage requirements for refuse containers and/or the required use of wildlife-proof containers and/or Dumpster enclosures. (Ord. 344 Part 1, 2008)

Sec. 7-7-140. - Compliance required and time period.
(a)Any container required by this Article shall be brought into conformity with the provisions of this Article by September 1, 2008.
(b)Effective September 1, 2008, any trash hauler licensed by the Town who provides a new refuse container to a Town customer shall only provide wildlife-proof containers.
(c)Effective the date of the signing of this Article, all new Dumpster enclosures built within the Town shall meet the requirements specified in Section 7-7-20 of this Article. Current Dumpster enclosures which do not meet these requirements may remain in existence, unless found in violation of this Article in accordance with Section 7-7-110 above. Any Dumpster enclosure which is replaced shall meet the requirements specified in Section 7-7-20 at the time of replacement.
(d)Upon application to the Town Manager, and showing of hardship by an owner of an enclosure or container required hereunder, the Town Manager may grant an extension, for a reasonable period of time, with which to comply with the provisions of this Article. (Ord. 344 Part 1, 2008)

Town of Frisco
https://library.municode.com/co/frisco/codes/code_of_ordinances?nodeId=CH127OF_S127-17REREPLREGACARE

§ 127-17. - Receptacles required; placement and removal of garbage cans and receptacles.
A. It shall be the duty of every person in charge of private real property to provide and keep one or more garbage cans in which all garbage shall be kept and to maintain and store such can(s) in accordance with the requirements of subsection (B) of this section.
B. All garbage cans provided and kept in accordance with the requirements of subsection (A) of this section shall have a lid that prevents access to the contents of the can by birds and small animals. Except during those times when a garbage can is in immediate, active use for filling or emptying, the lid of the can shall be maintained in a completely closed position.
C. Any person in charge of real property within the town that is served by curbside garbage pickup shall place a garbage can or similar refuse receptacle at the curb only on the day of pickup. After pickup, the garbage can or similar refuse receptacle must be removed from the curb and secured in accordance with subsection B of this section by not later than 10:00 p.m. on the day of pickup.
D. Any other provision of this section notwithstanding, in the event that a person violates or fails to conform to any requirement of subsection (C) of this section during a week in which curbside garbage pickup is occurring on a day other than the normal, regularly scheduled pick up day for the subject location, this section shall be enforced only by the provision of a verbal or written warning by a law enforcement officer.
E. For purposes of this section, the terms "person in charge of private real property" shall mean and include any person owning or having or being entitled to possession or control of any private real property, leasehold, residence, building or premises, or any part thereof, within the town, including the agent or agents of such person. For purposes of this section, the term "garbage" shall mean all putrescible animal or vegetable matter resulting from the processing, preparation, cooking, serving, sale or storage of meats, fowl, fish, fruits or vegetables. For purposes of this section, a "can" shall mean a water-tight receptacle made of galvanized metal or other non-absorbant material. (Ord. No. 08-04, 2-12-08)

Town of Granby
https://www.codepublishing.com/CO/Granby/#!/html/Granby05/Granby0520.html

Chapter 5.20 SHORT-TERM RENTAL Rules and regulations. Revised 4/24

(f) A clearly defined trash storage area, an adequate number of trash containers and a trash company hired for regular pickup must be identified. Wildlife-proof trash containers shall be provided by the applicant. The owner or complex shall maintain weekly residential trash collection services. Garbage containers that are placed for street pickup shall not be left out for more than a 24-hour period. The property shall be free of trash and debris.

Town of Grand Lake
https://library.municode.com/co/grand_lake/codes/code_of_ordinances?nodeId=CH7PORE_ART6NUOF_7-6-12WADI

ARTICLE 6. - NUISANCE OFFENSES 7-6-12 - Waste Disposal.

(A) *Purpose*.

Elk, deer, moose, bears, foxes, mountain lions, coyotes, skunks, raccoons, squirrels, magpies, and crows are a few of the wildlife species which live within close proximity to the people of Grand Lake. The feeding of these and other animals, whether inadvertent or otherwise, dramatically increases the possibility of conflict between these animals and humans. The purpose of this Code is to protect the public health and welfare by controlling the type of refuse containers to be used.

(B) *Definitions*.

1. ***Dumpster*** means a large metal refuse container of standardized dimensions with a capacity of one (1) cubic yard or greater.
2. ***Premises*** means property owned, occupied, leased, or expressly permitted to be used by a resident, including any confined area or locality such as a residence, business, room, shop, building, motor vehicle, or refuse container or dumpster enclosure.
3. ***Person*** means any person, resident, occupier, firm, governmental entity, corporation, or organization.
4. ***Refuse, rubbish, or trash*** means any waste materials including, but not limited to, grass clippings, leaves, hay, straw, manure, shavings, glass, cans, bottles, garbage, paper, food, grease, and any other waste material of any kind or nature commonly known or referred to as refuse, rubbish, or trash.
5. ***Refuse container*** means a fully enclosed container for refuse.
6. ***Refuse enclosure*** means a fully enclosed area used for the storage of refuse or refuse containers.
7. **Wildlife** means any undomesticated and unrestrained animal, including, but not limited to elk, deer, moose, bears, foxes, mountain lions, coyotes, skunks, raccoons, squirrels, magpies, and crows.
8. **Wildlife-*proof refuse container (WPRC)*** means a fully enclosed container constructed of non-pliable material (e.g., metal) which prevents access by wildlife and meeting the standards of testing by the Living with Wildlife Foundation and approved by the Interagency Grizzly Bear Committee as bear resistant for thirty (30) minutes. A dumpster or other refuse container of similar construction may be a WPRC. The container must employ a latching mechanism on the access door sufficient to defeat attempts by wildlife to enter.
9. **Wildlife-*resistant refuse container (WRRC)*** means a fully enclosed container which can be constructed of pliable materials, but must be reinforced to deter access by wildlife and meeting the standards of testing by the Living with Wildlife Foundation and approved by the Interagency Grizzly Bear Committee as bear resistant for thirty (30) minutes. The container must employ a latching mechanism on the access door or lid sufficient to defeat attempts by wildlife to enter.
10. **Wildlife-*resistant refuse enclosure*** means a fully enclosed area used for the storage of refuse or refuse containers which deters access by wildlife.

(C) *Acceptable Refuse Containers*.

1. The Town requires people to utilize a refuse container or dumpster which meets the guidelines established in this Section as a Wildlife-Proof Refuse Container or a Wildlife-Resistant Refuse Container unless the refuse container is enclosed by a wildlife-resistant refuse enclosure.

(a) A communal refuse container or dumpster may be shared by multiple users.

2. All refuse containers and enclosures must be kept in good repair and function properly in order to maintain the effectiveness of the container.
3. All refuse containers and enclosures must be kept secured and latched properly at all times when not being immediately filled.
(a) All refuse must be placed into the refuse container and not placed on top of, under, or beside the refuse container.
4. Effective date: This ordinance shall be effective for residential locations beginning March 31, 2021 and shall be effective for commercial locations beginning September 1, 2020.

(E) Refuse containers may only be placed adjacent to the street in front of the residence for pick-up from 6:00 a.m. until 7:00 p.m. on the day of trash pick-up service. At all other times the containers shall not be on the public right-of-way. (Ord. No. 10-2020, § 1, 7-13-2020)

Summit County Land Use & Development Code
https://library.municode.com/co/summit_county/codes/land_use_and_development_code?nodeId=LAND_USE_DEVELOPMENT_CODE_CH3ZORE

Chapter 3- provisions in zoning ordinance:
3505.03: - Dumpsters
G. Animal Resistant Construction: Where food debris is a part of the waste stream for the dumpster, such dumpster shall be covered and capable of excluding unwanted animals such as rodents, bears, birds, etc.

3508: - Maintenance of Common Areas
Whenever a development project includes streets, common open space, common driveways (except common driveways serving two (2) or fewer residential units), parking areas or pathways or common recreational facilities, the developer shall provide for the continued maintenance and repair of such land and improvements through the formation of an owners association. The articles of incorporation, association bylaws and Covenants, Conditions & Restrictions ("CC&Rs") shall be submitted to the Planning Department with submittal of the first plat for the development. No plat shall be approved unless the BOCC determines that the CC&Rs contain adequate provisions for maintenance and repair of common areas. The articles of incorporation, association bylaws and CC&Rs shall be recorded prior to or concurrent with recordation of the plat. The CC&R's shall, at minimum, address the maintenance of such common elements, including, but not limited to:
- Trash and recycling collection, including limitations on placing containers outside overnight.

3802.02: Zoning Districts Where Animals Allowed; Numbers Allowed
C. Chickens: 4.Chicken Coops and Runs:
f. All chicken feed must be kept in an airtight, rodent and wildlife proof container.
D. Goats: 3.Additional Provisions:
a. Feed shall be kept in a bear and rodent proof container if located outdoors.
E. Beekeeping: 4.Protection of Hives from Bears and other Wildlife:
a. All hives shall be protected by an electric fence or ratchet straps in accordance with the following provisions:
I .Fences should be solar charged or 110 volt electric fencing.
ii. Electric fences must be well grounded, sufficiently charged at all times, and maintained on a regular basis. Maintenance includes clipping or applying herbicide to vegetation growing under the fence and ground mat, recharging the battery, and checking wire voltage with a voltmeter.
iii. Wire strands on a permanent electric fence should be no more than 8 inches apart, and no more than 12 inches apart on a temporary electric fence. For both permanent and temporary electric fences, the bottom wire should be no more than 8 inches above the ground. The top wire does not need to be more than 3½ feet high.
iv. Hives should be located at least 3 feet from the electric fence.

3807.05: Special Events -Trash Control and Removal
Trash receptacles shall be provided in sufficient number and shall be distributed on the event site in order to prevent the accumulation of uncontained rubbish. All outdoor trash receptacles shall either be

bear proof or located in an area inaccessible to bears when not being used for the special event. All special events greater than 75 guests shall utilize zero-waste strategies.

Town of Winter Park
https://codelibrary.amlegal.com/codes/winterparkco/latest/winterpark_co/0-0-0-1873

Chapter 10 - Wildlife Regulations

4-10-1: PURPOSE:
The purpose of this chapter is to protect and maintain wildlife in the town of Winter Park and surrounding areas and to minimize the risk of dangerous interaction between humans and wildlife. (Ord. 409, Series of 2008)

4-10-2: DEFINITIONS:
For the purpose of this chapter, the following definitions shall apply:

ATTRACTANT: Any substance which could reasonably be expected to attract wildlife or does attract wildlife, including, but not limited to, food products, pet food, feed, compost, grain or salt.
DUMPSTER ENCLOSURE: A fully enclosed structure consisting of four (4) sides and a secure door or cover, which shall have a latching device of sufficient strength and design to prevent access by wildlife. Dumpster enclosures are subject to all planning and zoning requirements and building codes. An enclosure of less than one hundred twenty (120) square feet shall not require a building permit. An enclosure of one hundred twenty (120) square feet or larger requires a building permit.
REFUSE: Any waste that could reasonably attract wildlife which includes, but shall not be limited to, kitchen, organic waste, food, food packaging, toothpaste, deodorant, cosmetics, spices, seasonings and grease.
REFUSE CONTAINER: Any trash can, dumpster, or similar device used for the collection and storage of solid waste.
RESIDENT: Any person, firm, corporation or organization within the town of Winter Park or on town controlled land.
SPECIAL EVENT: An outdoor gathering such as a concert, conference or festival, whether occurring on public land or private.
WILDLIFE: Any undomesticated animal, including, but not limited to, elk, deer, sheep, lynx, skunks, magpies, crows, bears, raccoons, coyotes, beavers, porcupines, mountain lions, bobcats and foxes.
WILDLIFEPROOF REFUSE CONTAINER: A container used for the storage of refuse that has been certified to be wildlife proof by the Colorado division of wildlife, the U.S. park service, or the U.S. forest service. A container not so certified, is considered a wildlife proof refuse container if it is fully enclosed, of sturdy construction, and includes a latching mechanism suitable to prevent wildlife from opening the container. Latching mechanisms shall allow a gap between the container lid of no more than one- half inch (1/2"). Latching mechanisms shall keep the lid closed in the event the container is turned on its side or upside down. Wildlife proof refuse containers may include drain holes no larger than one inch (1") in any dimension. (Ord. 409, Series of 2008)

4-10-3: RESIDENTIAL REFUSE DISPOSAL:
A. All residential containers that receive refuse edible by wildlife must be secured inside the home or garage. Residents unable to keep their refuse container inside the home or garage shall store their refuse in a wildlife proof refuse container or enclosure approved by the town of Winter Park building official or his designee.
B. Residents with curbside pickup shall place refuse containers at the curb, alley, or public right of way at or after six o'clock (6:00) A.M. on the morning of scheduled pick up. After pick up, all containers must be removed from the curb, alley or public right of way by eight o'clock (8:00) P.M. on the same day.
C. Other household waste that cannot reasonably be considered "refuse" or an "attractant" as defined in this chapter, including, but not limited to: nonedible yard maintenance waste, household items, and cardboard, shall not require the use of wildlife proof containers when not commingled with refuse or any other attractant.
D. Multi-family housing developments and other types of clustered residential housing, utilizing centralized refuse containers, must use either a wildlife proof refuse container or a dumpster

enclosure for all refuse. The container or enclosure shall be kept closed in a secure manner except when refuse is being deposited. (Ord. 409, Series of 2008)

4-10-4: MAINTENANCE AND OPERATION OF ALL REFUSE CONTAINERS AND ENCLOSURES:

A. All refuse containers defined in this chapter shall be kept closed and secured when refuse is not being deposited. Any container which is overfilled so as to prevent a container's designed latching is not a wildlife resistant or wildlife proof refuse container within the meaning of this chapter.

B. If a container or enclosure is damaged, allowing access by wildlife, repairs must be made within forty eight (48) hours after written notification by town of Winter Park police department personnel. (Ord. 409, Series of 2008)

4-10-5: SPECIAL EVENT REFUSE DISPOSAL:

Outdoor special event sites shall be kept free from the accumulation of refuse. Refuse must be collected from the grounds at the close of each day's activities and shall be deposited into appropriate wildlife proof containers or dumpster enclosures as provided in this chapter, or shall be removed to an appropriate disposal site. (Ord. 409, Series of 2008)

4-10-6: CONSTRUCTION SITE REFUSE DISPOSAL:

All construction sites must have a designated refuse container which receives "refuse" or attractants as defined by this chapter. This container shall be a wildlife proof refuse container. (Ord. 409, Series of 2008)

4-10-7: COMMERCIAL REFUSE DISPOSAL:

A. All refuse containers receiving refuse from commercial establishments and restaurants shall be in wildlife proof containers, or shall be secured in a dumpster enclosure.

B. Container lids and dumpster enclosure doors shall be kept closed and latched at all times except when loading or removing refuse. The area around the container or enclosure must be kept free from refuse at all times.

C. Notwithstanding the foregoing, this requirement shall not apply to municipal refuse containers which are emptied at the end of each day, or multiple times per day. (Ord. 409, Series of 2008)

4-10-8: COMPACTORS:

Trash compactors are compliant with this chapter when no refuse is exposed. Compactor doors must be kept closed at all times, except when loading or removing refuse and the area around the compactor must be kept clean of refuse and debris. (Ord. 409, Series of 2008)

4-10-9: FEEDING OF WILDLIFE PROHIBITED:

A. Intentional Or Unintentional: No person shall intentionally or unintentionally feed or provide food in any manner for wildlife on public or private property within the town of Winter Park. A person will be considered to be in violation of this chapter if they leave or store any garbage, refuse or attractant in a manner which would create or does create a lure or enticement for wildlife. (Ord. 409, Series of 2008)

4-10-10: EXCEPTIONS:

A. The following entities or actions are exempt from the requirements of this chapter:

1. Any individual, company or corporation that is duly licensed by the state of Colorado or is entitled under law to possess wildlife of any kind.

2. Any action that is officially sanctioned by the state of Colorado, federal agencies, or the town of Winter Park that would require feeding, baiting, or luring of wildlife (i.e., capturing and tagging wildlife for relocation or scientific projects and study).

3. Bird feeders are allowed provided that, between April 1 and December 1 of each year, all bird feeders must be suspended on a cable or other device at a height above the ground or structure so as to be inaccessible to bears. (Ord. 409, Series of 2008; and. Ord. 542, Series of 2020)

4-10-11: ENFORCEMENT:

A. Compliance with this chapter notwithstanding, the town of Winter Park police and code enforcement officers may issue a "notice of violation" and order any resident to purchase and use a

wildlife proof refuse container for all storage of refuse that is attractive to or edible by wildlife if the town receives a documented, substantiated report that any animal, whether wild or domestic, has entered into or removed refuse from a refuse container located on the property or placed at the property curbside for pick up. Such order shall:

1. State that a wildlife proof container shall be obtained for the property within seven (7) days.
2. Shall be served either personally or by means of posting on the premises upon which the nuisance exists. If notice is served by posting, a copy of the notice shall also be mailed by certified mail, return receipt requested, to the owner of record of the property given to any town of Winter Park or Grand County government office. If the identity of the resident is not known, the entity responsible for payment of the garbage removal services for the subject location will be held responsible for complying with this chapter and for any penalties assessed pursuant to the same. (Ord. 409, Series of 2008; and. Ord. 542, Series of 2020)

4-10-12: VIOLATIONS AND PENALTIES; PENALTY ASSESSMENT:

A. Second Notice of Violation: Offenders who continue to violate this chapter or continue to fail in achieving timely compliance as set forth in any previous notice of violation may be issued a second notice of violation, which shall be in the form of a citation or summons. Such summons shall be subject to a graduated fine schedule as set forth below.

B. Penalties: Any person who or entity that is issued a citation or summons shall be punished as follows:

1. A fine not exceeding one hundred dollars ($100.00) for a first offense.
2. A fine not exceeding two hundred dollars ($200.00) for a second offense.
3. A third violation shall constitute a misdemeanor and will require a mandatory appearance in municipal court. Punishment shall be in accordance with subsection 1-4-1B of this code.

C. Suspension Of Penalties: The penalties outlined above may be reduced or suspended upon the offender showing proof that he/she has purchased or installed a wildlife proof refuse container or dumpster enclosure. (Ord. 409, Series of 2008)

4-10-13: VIOLATOR'S RESPONSIBILITY:

In addition to the penalties outlined in this chapter, violators may be required to perform all necessary actions to remove or abate attractants of wildlife. This may include, but shall not be limited to: the removal of bird feeders or pet food, cleaning or appropriate storage of barbecue grills, additional storage requirements for refuse containers and/or the required use of wildlife proof containers and/or dumpster enclosures. (Ord. 409, Series of 2008)

Appendix E. Bear Aware Efforts in B-16

To supplement municipal efforts, CPW has had an ongoing bear education and outreach programs throughout B-16 since the early 2000's. In Summit County, a dedicated group of Bear Aware volunteers work with CPW to teach human responsibility in removing attractants in order to reduce conflicts with black bears. Efforts aim to reduce or eliminate bear conflicts through education, aversive conditioning and community action. Volunteers assist staff by distributing bear aware information in neighborhoods where conflicts occur, going door to door, posting signs, sharing at information local events, and airing PSA's (Public Safety Announcements) on local radio stations and social media. Currently, CPW is working with Summit County Government to apply for grant funding to support a new project called Bear Safe Summit, which combines a bear proof enclosure program with community education. CPW also works with the Dillon Ranger District (DRD) of the White River National Forest (WRNF) to provide wildlife training annually to all seasonal camp hosts and trail ambassadors, so that they can pass information on to recreationists.

Human-Bear Conflict Reduction Community Grant

Human-bear conflicts have increased in recent years throughout Colorado, resulting in property damage and increased demands on time and effort to respond to the conflicts by CPW and local government personnel. Expanding existing conflict reduction efforts or developing new approaches will help reduce the impact on bear populations and improve public safety. In an effort to help communities co-exist with bears, CPW recently implemented the Human-Bear Conflict Reduction Community Grant Program which provides financial resources to support efforts that reduce human-bear conflicts. This grant program provides a unique opportunity for communities working to reduce human-bear conflict and encourages local governments, organizations and individuals to develop projects that will reduce human-bear conflict and apply for funding. Local governments, NGOs, HOAs, community groups, businesses, tribes, universities and individuals are all eligible to receive funding for grants between $50,000 and $500,000. Eligible and competitive projects should have local support, be designed to prevent conflict with bears, and have tangible outcomes with realistic timelines. Local support can be demonstrated through cost sharing, in kind contributions, letters of support, participation in public meetings, membership in local organizations and partnerships. Ideal projects will model solutions to reduce conflict and are replicable by other communities, involve multiple partners, fill a need in an area with high conflict, and be innovative.

In 2022 and 2023, CPW awarded nearly $1 million each year in funding to local communities, municipalities, businesses and nonprofit organizations for projects working to create innovative ways to reduce human-bear conflicts and keep communities safe. Communities within B-16 have received three of these grants.

Human-Bear Conflict Reduction Grant Recipients in B-16

2022: $50,000 awarded to Town of Frisco - Frisco Main Street Dumpster Enclosure Program

The Town of Frisco offers recycling receptacles located at the Frisco Town Hall, which primarily serves Frisco Main Street public trash and recycling needs as a central drop-off point for Frisco Public Works. There are residential units surrounding this area, and the potential for human-bear

interactions is significant. This funding was allocated to Town of Frisco to build a secure dumpster, recycling, and composting enclosure to greatly decrease the potential of attracting bears to this area, and has subsequently reduced the possibility of human-bear interactions in the core of Frisco's Main Street business area and the surrounding residential areas.

2023: $145,000 awarded to Summit County - Bear Safe Summit Program

As a rural resort community located within an urban-wildlife interface, bears and humans in Summit County live and recreate in the same areas making the potential for conflicts high. Unsecured trash is the most common driver of conflict with bears. Despite ordinances requiring trash to be securely stored, bears have learned the garbage collection routes and enter residential areas to search for food in regular trash containers prior to pickup. While Summit County residents want to do the right thing, the high cost of living and especially high property costs create financial barriers for both residents and businesses, limiting their ability to include bear-safe measures in their budgets. Therefore, Summit County will implement a new reimbursement program targeted specifically at reducing barriers for residents and businesses to practice bear aware techniques. This new program called Bear Safe Summit will reduce garbage and food refuse related human-bear interactions throughout Summit County by combining a bear-resistant container or trash enclosure reimbursement program with community education.

2023: $8,500 awarded to Granby Rec District - Main Street Bear Trash Cans

$8,500 awarded - The Town of Granby is in the middle of bear country. The rural community is small, but recent growth and development has led to an explosion of human-bear conflicts related to trash as a food source. Knowing that a community always benefits from trash being secured, Granby has begun to replace traditional trash cans in public places with bear-resistant containers. Bear foraging behavior for natural food sources is encouraged by not having easily accessible trash, and the potential for conflicts and possibly dangerous interactions (as well as car accidents along Main Street) is reduced. When the public sees the town leading by example with bear-resistant trash containers throughout the community, residents and visitors alike are reminded that they are in bear country and hopefully will be mindful of how they dispose of their trash. Grant funding will be used to continue to replace standard trash cans with bear-resistant trash containers at public parks and along Main Street.

Appendix F. Public Survey Results

A total of 679 responses were received. Results are summarized below.

Residency:
76% of total respondents were residents of Colorado; 24% were non-residents (Figure 27). Among the Colorado Resident respondents, 27% reside within DAU B-16 and 73% live outside of B-16 (Figure 28).

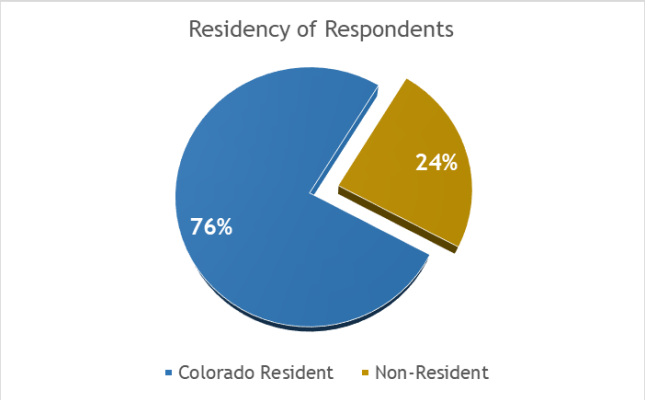

Figure 27. Residency of all survey respondents.

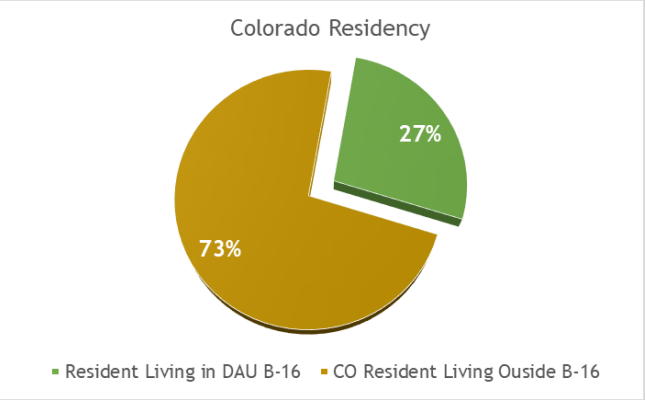

Figure 28. Percent of Colorado Resident respondents living in B-16 vs. outside of B-16.

B-16 Bear Population Preference:
Among residents of DAU B-16, 51% desire the same number of bears, 27% would prefer fewer bears, and 22% would prefer more bears (Figure 29). Among Colorado resident living outside of B-16, 56% desire to have the same number of bears in B-16 over the next ten years; 14% would prefer fewer bears, and 30% would prefer more bears (Figure 30).

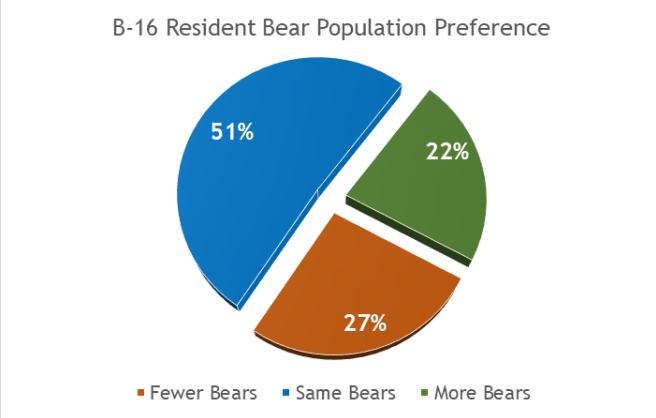

Figure 29. Bear population preference for the next 10 years from B-16 resident survey respondents.

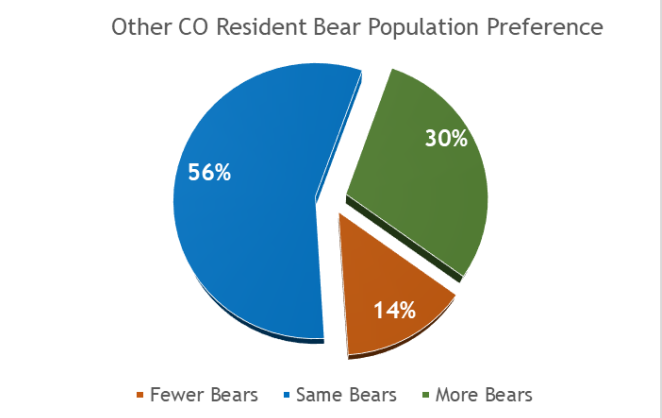

Figure 30. Bear population preference for the next 10 years from CO residents living outside of B-16.

Among B-16 residents, 53% had experience conflict with and 47% indicated no conflicts or only sightings. Of the 53% of B-16 residents who experienced conflicts, 73% reported bears in trash or dumpsters, 45% had residential conflicts (bears in house, garage, barn, etc), 26% reported vehicle damage or break-in, 26% experienced camping or hiking conflicts, 10-14% had agricultural or livestock conflicts, and 12% reported aggressive bear behavior (Figure 31).

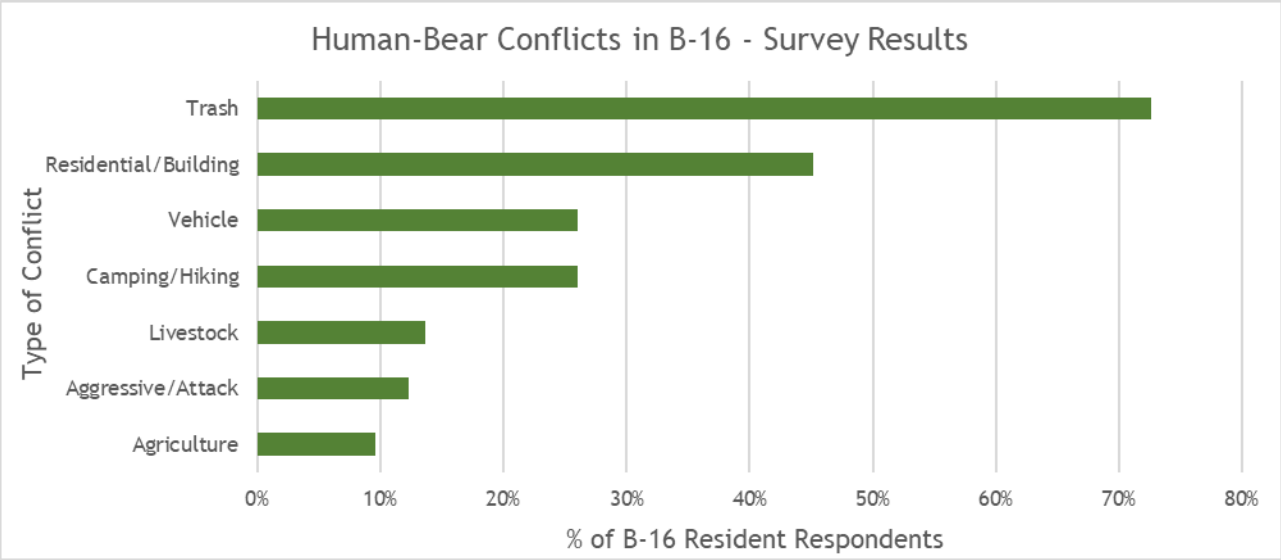

Figure 31. Survey responses for types of human-bear conflicts experienced by residents of B-16.

Regarding local CPW Bear Aware, Living With Bears, and other public education or outreach efforts, 83% of B-16 residents (57% of all CO residents) were aware of such efforts and 57% of B-16 residents (43% of all CO residents) indicated that these materials and/or efforts were effective in reducing or minimizing conflicts with black bears.

Effective Methods to Reduce Human-Bear Conflict in B-16

Both B-16 resident and total Colorado resident respondents indicated that the most effective methods for reducing conflicts between humans and bears over the next 10 years were public education (60% of B-16 residents and 56% of all CO residents) and harvesting more bears (54% of B-16 residents and 58% of all CO residents). The next most effective methods were Municipal (Town/City/County) laws and regulations for bear-resistant food and trash storage (47% of B-16 residents and 35% of all CO residents) and better enforcement of existing regulations for bear-resistant food and trash storage (38% of B-16 residents and 35% of all CO residents), followed by higher fines for food and trash violations (35% of B-16 residents and 31% of all CO residents). These methods were followed by providing free or low-cost bear-resistant trash containers to residents in B-16 (42% of B-16 residents and 28% of all CO residents) and State (CPW) and Federal (USFS, BLM) laws and regulations for bear-resistant food and trash storage (24% of B-16 residents and 20% of all CO residents). Less than 15% of both B-16 and all Colorado residents indicated that euthanizing or relocating conflict bears were effective methods to reduce human-bear conflicts, and less than 1% listed public land closures (trails, campgrounds, etc) when bears are active as an effective method. The number of respondents for each method of conflict reduction are summarized in Figure 32.

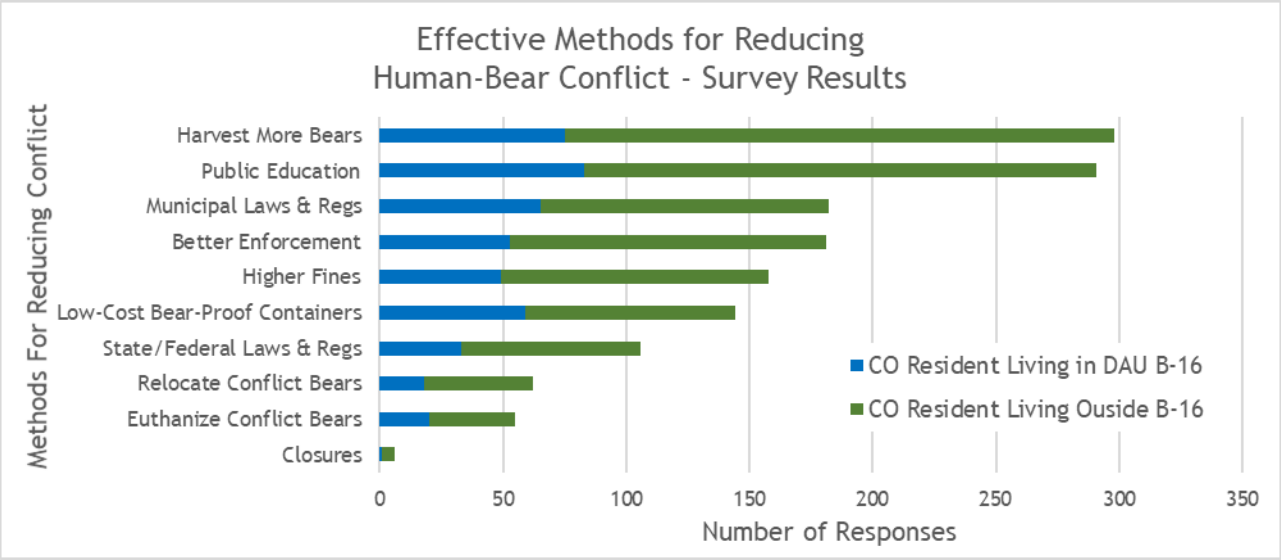

Figure 32. Survey responses to effective methods for reducing human-bear conflict in B-16.

Among hunters who responded, 83% of resident hunters and 90% of non-resident hunters had hunted B-16 in the past three years (2021-2023). 90% of resident hunters and 83% of non-resident hunters indicated that they intended to hunt B-16 in the next 10 years.

Appendix G. 30-Day Comment Period Results and Comments

A total of 24 valid responses were received. Results are summarized below.

Residency:
80% of total respondents were residents of Colorado; 20% were non-residents. Among the Colorado Resident respondents, 72% support Alternative 1, managing for a stable bear population. 11% support Alternative 2, managing for fewer bears, and 17% support Alternative 3, managing for more bears (Figure 33).

Among all respondents (resident and non-resident), 73% support Alternative 1, managing for a stable bear population. 9% support Alternative 2, managing for fewer bears, and 18% support Alternative 3, managing for more bears (Figure 34).

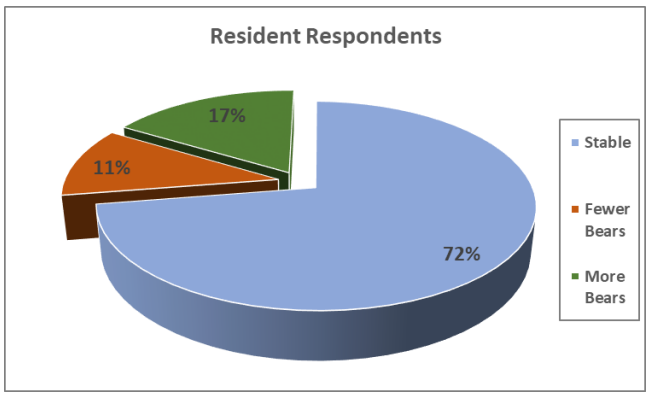

Figure 33. Bear population preference for the next 10 years from CO resident survey respondents.

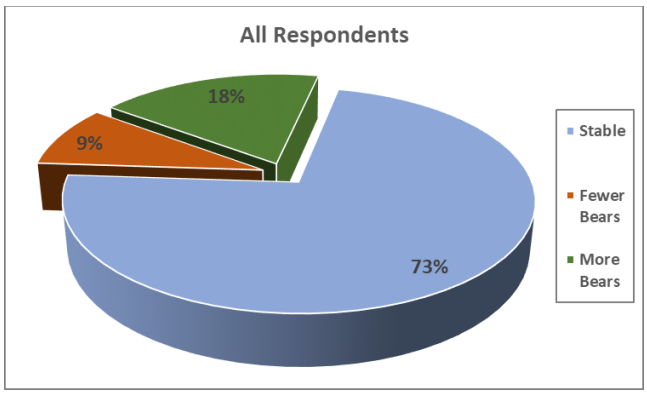

Figure 34. Bear population preference for the next 10 years from all respondents.

Comments:
Note: For privacy reasons, individuals' names, email addresses, and mailing addresses were redacted from the comments below:

"I have several interactions with bears each year. Both through my employment as a law enforcement officer and recreating in the Middle Park area. I am fully supportive of Plan 1 in the draft plan. I would like to see more bear safe garbage containers and more enforcement of those not following the laws and ordinances already in place. I look forward to continuing to hunt bears and passing that along to my children as they grow. Anything that would decrease bear hunting would be highly undesirable by the vast majority of the sportsmen and sportswomen who fund CPW. "

"I would recommend the preferred management plan of maintaining the bear population at current levels with emphasis on public education to minimize human/bear conflicts."

"Please continue the management strategy for a sustainable population as is. Thanks for the great job CPW. Management by biological and sound scientific methods not ballot box. The hunters of CO support you."

"Given the increasing human population and the prevalence of seasonal/short term residents, might part of the efforts to reduce human-bear conflicts include mandatory acknowledgement of trash and vehicle regulations? Perhaps part of every STR agreement and home purchase/lease paperwork could be a

signature acknowledging having read best practices for living in bear (moose, elk, wolf, etc.) country. When we lived in Winter Park Ranch, STR occupants would often put trash outside because they didn't want it in the garage. Rental owners/management companies should be accountable for violations as should full-time residents and businesses."

"Requiring one consistent trash pick-up day in a neighborhood would be helpful as well. I honestly believe we have a people problem most of the time. Bears are just trying to survive in a fragmented environment."

"In the really big picture, I would hope to see CPW engaged in large-scale efforts to conserve and connect habitat for all wildlife. Thank you for your difficult work."

"Much work to be done to prevent unwanted conflicts, local regulations requiring trash storage are behind in Colorado in my opinion. We have bears in our neighborhood and have secure trash storage, there are people who let bears get into their trash every year before they decide to lock it up in the shed, the conflicts are poor human behavior mostly."

"People who have short term rental properties should be required to inform renters of the trash regulations and the reason for them. When I lived on Peak 7, the large house across the road left as many as 12 bags of trash out overnight next to their trash containers. If not rented, these landlords should be required to employ a service to put out their trash on the morning of collection and return them that evening. This service exists here as one of my neighbors in Silverthorne uses it."

"Do nothing, but monitor for more reliable data, and options."

"If managing for a stable, or lower, bear population means killing them, or allowing hunters to do so, then no, I don't think we should do either. It pains me that animals are killed needlessly, or for sport. However, I do have a few suggestions on how to reduce human-bear conflicts caused by food that can lead to people being hurt and bears being put down. Mainly they are about addressing objections to the various programs already in place. In sharing them with you, I hope you will in turn send them out to your partners and the community.
1-Make bear-proof bins mandatory, and give people a discount or rebate on them. We have one, but they are expensive, and many of my neighbors don't have them. I understand this may be hard to mandate or enforce in some communities. But in areas like mine in Silverthorne (single family homes), I think it could work, especially if people were offered the bins at a discount, as I think the expense is the main objection. Is it worth it to the community to subsidize this? It is to me.
2-Strongly encourage people to use the community composting facilities, as it keeps food waste out of garbage cans. My family utilizes this service and we think it's terrific. As a result, we have almost no food garbage in our bin. I think the main objections to composting are that the food rots and smells in the fridge til you can take it to SCRAP, and the fact that it is unpleasant to drop the compost off. Tip: To make it easier to manage, we keep our ""future compost"" in ziplock bags in the freezer. This means we can accumulate it for months before taking it there.
3- Items destined for recycling need to be rinsed first--the food left in containers obviously attracts bears, too, and those bins aren't bear proof! Plus, a bear that gets cut on a can or glass might get angry. Tip: it uses less water and less effort to run cans and bottles through a dishwasher load than to rinse them individually.
4-Incent people to divert more of their trash by expanding 'pay as you toss programs' that charge lower collection fees for less trash . It's been implemented in some towns in Summit Cty (Breck and Frisco, I think), but not mine. Between recycling and composting, my family has very little ""regular"" garbage at all. Good luck."

“The bear population should come before tourism. We are the ones encroaching on their territory, let their population grow.”

“Please institute the policy of not killing female bears who are protecting their cubs.”

“Please, reinstate the spring hunting season. Look at the incidents before and after that time frame.”

“I am In favor of alternative 1, to maintain a stable population.”

“I LIKE Alternative 1!”

“As a nonresident hunter who spends about 7 to 10 days each year in this zone I have seen multiple bears, just haven’t been able to harvest one. I enjoy the add on bear tag, it's affordable option with in my opinion a reasonable chance at seeing a couple.”

Appendix H: Comment Letters

June 25, 2024

Elissa Slezak
Terrestrial Biologist – Area 9
Northwest Region
Colorado Parks and Wildlife
346 County Road 362
Hot Sulphur Springs CO 80451

Re: draft DAU B-16 Black Bear Management Plan

Dear Ms. Slezak:

Thanks for the opportunity to comment on the important draft DAU B-16 Black Bear Management Plan. Colorado Wildlife Federation (CWF) supports the Colorado Parks and Wildlife (CPW) well-developed and substantiated preferred management priorities.

The plan provides the extensive list of governmental entities and other stakeholders who have been working with CPW to reduce the conflicts. Perhaps the Grand Places 2050 Regional Partnership, Routt Recreation Roundtable, and Summit County Outdoor Coalition too, can be helpful in generating additional peer pressure among residents. The purpose of the regional partnerships is to work to ensure Colorado's land, water, and wildlife thrive while providing for equitable and quality outdoor recreation experiences.

Possibly these coalitions also can assist in tackling the overarching problem of gaining a sense of personal responsibility among short-term renters, part-time residents and tourists. CWF was interested to learn that construction sites are largely noncompliant at 70 percent, and we presume this disregard occurs despite the trash ordinances that municipalities have developed as cited in Appendix D. CPW could present a summary of the excellent information in Appendices D, E and F of the plan to the steering committees of these regional partnership coalitions to generate a productive discussion. In addition, we presume the Colorado Tourism Office is well positioned to help educate travelers to these very popular areas.

The public survey results were interesting. We are curious whether the 53 percent majority of respondents who said they experienced conflicts have made changes to their personal practices relating to the conflict.

The draft notes that the most significant factor that influences annual variation in bear vulnerability is forage conditions, particularly during the hyperphagia stage. Climate

change likely will affect the forage quality and quantity of natural foods and it is unclear if the draft plan takes that into account in the analysis: one would think the number of non-harvest human-caused bear mortalities may trend toward the 2020 statistics becoming a new normal.

The plan states, based upon the model-estimated population of 542 bears in B-16 pursuant to the Survey 2009-2015, total annual mortality of approximately 54 - 81 bears could maintain a stable population. The average bear total human-caused mortality from 2021-2023 was 79 per year in B-16. Although in the stable range, this number falls close to the low end of the population suppression range that begins at 81 per year (and extends to 108). We appreciate that under the preferred management priorities, CPW will continue to monitor harvest and evaluate license sales to ascertain any indications of a changing population that may necessitate consideration of a limited licensing structure particularly if the frequency of poor natural food years increases.

Reference was made to an additional tool of habitat modification under the preferred management strategy. Clarification concerning the use of this tool would be helpful.

We will offer these comments at the July CPW Commission meeting in July. If you wish to discuss in advance, please contact me.

Sincerely,

303 E. 17th Ave., Suite 230 Denver, CO 80203

Phone (303) 987-0400 www.coloradowildlife.org cwfed@coloradowildlife.org

USDA United States Department of Agriculture | Forest Service | Dillon Ranger District

680 Blue River Parkway
P.O. Box 620
Silverthorne, CO 80498-0620
970-468-5400
Fax: 970-468-7735

File Code: 2600
Date: June 25, 2024

Colorado Parks and Wildlife
Elissa Slezak
346 County Road 362
PO Box 216
Hot Sulphur Springs, CO 80451

Dear Elissa Slezak,

On behalf of the White River National Forest, I would like to provide support for the Black Bear Population Management Plan for Data Analysis Unit B-16. The Middle Park Game Management Unit overlaps the entire Dillon Ranger District on the White River National Forest and a small portion of the Eagle-Holy Cross Ranger District. The plan covers Grand and Summit County as well as portions of Routt and Eagle Counties. I understand there is not a current management plan for this bear unit, so the proposed plan will document the continued management of bears that has been done over the last decade. The plan outlines goals for maintaining a stable bear population, monitoring bear population trends, and minimizing human-bear conflict.

The plans flexibility allows Colorado Parks and Wildlife to adjust harvest needs based on bear populations and human-bear conflict changes. Summit County has large areas of human-bear conflict overlapping black bear summer concentration range. We have anecdotal evidence supporting CPW's findings that bear mortality has increased over the last few decades, especially roadkill mortality. I agree with the management objective to address human safety concerns by reducing human-bear conflicts in this Management Unit through continued monitoring of bear population changes and total human-caused mortalities.

The White River National Forest continues to support and assist CPW in public education of Bear Aware principles including an annual training for seasonal camp hosts and trail ambassadors with the Dillon Ranger District. The White River National Forest also maintains a Food Storage Order requiring bear-resistant food storage while camping in developed and dispersed campsites on the forest from May 15th to October 1st. Thank you for the opportunity to share my support and comment on the plan. If you have any questions or would like to discuss further, please contact Lindsay Martinez at (970) 531-1204.

Sincerely,

ADAM BIANCHI Digitally signed by ADAM BIANCHI Date: 2024.06.25 09:59:25 -06'00'

ADAM BIANCHI
District Ranger

cc: Lindsay Martinez, Natasha Goedert

Grand County BOARD OF COMMISSIONERS
Colorado

308 Byers Ave., P.O. Box 264 | Hot Sulphur Springs, CO 80451 | 970-725-3347

Richard D. Cimino
District I, Fraser 80442
Merrit S. Linke
District 2, Granby 80446
Randal F. George
District 3, Kremmling 80459

Email: grndcty1@co.grand.co.us
Phone: 970-725-3100
Edward Moyer
County Manager
Maxine LaBarre-Krostue
County Attorney

June 11, 2024

Colorado Parks and Wildlife
Attn.: Elissa Slezak, Terrestrial Biologist, NW Region
PO Box 216
Hot Sulphur Springs, CO 80451

Delivered via electronic mail to: elissa.slezak@state.co.us

Re: Draft Black Bear and Elk Herd Management Plans within Grand County

To whom it may concern,

Please accept the following comments from the Grand County Board of County Commissioners concerning Colorado Parks and Wildlife's draft Black Bear and Elk Herd Management Plans within Grand County.

We support the goals of the draft B-16 Black Bear Management Plan and maintaining a stable bear population, while minimizing human-bear conflicts. We understand CPW will continue to manage the B-16 bear population within 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.

We support the draft E-8 (GMU 18 & 181) Elk Herd Management Plan with updated and broader population and sex ratio objectives, as this population is within the lower end of the current objective.

We have concern with the draft E-13 (GMU 28, 37, 371) Elk Plan, as this current elk population is as much as 2,600 below the current objective. We support CPW's goal of growing the E-13 elk population back. However, we support growing E-13 back to current population and sex ratio objectives, not lowering the proposed objectives. We strongly encourage CPW to implement management tools to assist meeting this goal, such as removing existing wolves from E-13 in order to grow our elk population back. No additional wolves should be reintroduced in either E-8 or E-13.

Maintaining healthy elk herd populations and sex ratio objectives is important to the citizens of Grand County, as well as being an economic driver within our community. Thank you for the opportunity to comment on the draft Black Bear and Elk Herd Management Plans within Grand County.

Sincerely,

Merrit Linke
Commissioner Chair

Randal George
Commissioner

Richard Cimino
Commissioner

SUMMIT COUNTY
COLORADO

BOARD OF COUNTY COMMISSIONERS

970.453.3414 ph | 970.453.3535 f
summitcountyco.gov

208 East Lincoln Ave. | PO Box 68
Breckenridge, CO 80424

To Whom It May Concern:

The Summit County Board of County Commissioners (BOCC) is writing to express its support for the Colorado Parks & Wildlife DAU B-16 Black Bear Population Management Plan. We endorse the goal of maintaining a stable bear population trend while ensuring there is no increase in human-bear conflicts.

The BOCC acknowledges the efforts of Colorado Parks & Wildlife (CPW) in Summit County to protect the black bear population and promote a safe coexistence between bears and our communities. We recognize CPW's commitment to manage the B-16 bear population with an adaptive management approach, aiming to maintain stable population ranges within specific parameters.

An important component of the plan is community engagement in Bear Aware education, and we appreciate CPW's ongoing efforts to inform and educate residents and visitors about bear behavior and ways to minimize attractants. Additionally, we support initiatives encouraging local governments to implement and enforce programs and guidelines designed to reduce the presence of bear attractants in residential areas. Summit County has benefited from these efforts, beginning our Bear Safe Summit program, to reimburse residents and businesses for switching to a wildlife-resistant trash bin, through a grant from CPW.

The BOCC supports Colorado Parks & Wildlife's efforts and the B-16 Black Bear Population Management Plan. We believe the approaches outlined in the management plan will contribute to the long-term health and stability of the black bear population and minimized human-bear conflicts in Summit County.

Sincerely,
The Summit County Board of Commissioners

Tamara Pogue
County Commissioner

Eric Mamula
County Commissioner

Nina Waters
County Commissioner

June 28, 2024

Elissa Slezack
Colorado Parks and Wildlife
346 Grand County Rd.
Hot Sulphur Springs, CO 80451

RE: Middle Park Colorado Habitat Partnership Program Comments - HMP DAU-B-16

Dear Ms. Slezak,

One of the initial reasons for creating the Habitat Partnership Program was to provide local landowners and other interests an opportunity for input into big game management in their areas. The diverse makeup of the local HPP committee (3 livestock growers, USFS, BLM, CPW, and sportsperson representatives) provides a good cross-section of local interests to review DAU proposals and respond accordingly for CPW consideration.

HPP exists to help reduce big game related agricultural conflicts, assist CPW in meeting big game management objectives, enhance big game migration corridors, and support conservation efforts on private lands as they relate to deer, elk, moose, and pronghorn. With this perspective in mind, the Middle Park Colorado HPP (MPCOHPP) Committee is in agreement with the following comments pertaining to proposals for the population range and sex ratio objectives for the above DAU plan.

The MPCOHPP committee supports the draft alternative to keep the current population objective. We believe this alternative responsibly balances local range and habitat conditions with sportsmen desires and landowner concerns. We have not heard of any concerns about the current population or any desires to increase the local herd size and so we believe the current levels are where they should be. Any issues we have are more likely related to distribution of the herds in the area and not the overall population size.

As stated above, HPP is also directed by statute to assist the Division to meet game management objectives. The MPCOHPP committee has worked with both public land managers and private landowners to improve the quality and quantity of the habitat in DAU-B16. Adequate habitat is critical to meeting game management objectives and we remain committed to maintaining and improving habitat in this area. The MPCOHPP Committee will continue to support management efforts in partnership with numerous local landowners and federal land managing agencies that place a high priority on implementing valuable habitat improvement projects and have expressed the desire to continue this work. Thank you for the opportunity to provide these comments.

Sincerely,
Middle Park Colorado HPP Committee

Friends of the
Lower Blue River

June 20, 2024

Elissa Slezak
Terrestrial Biologist - Area 9
Northwest Region
Colorado Parks and Wildlife
346 County Road 362
Hot Sulphur Springs, CO 80451

Dear Ms. Slezak,

The Board of Friends of the Lower Blue River would like to express its support for the B-16 Black Bear Management and NW Elk Herd Management Plans. We have reviewed the proposals from Colorado Parks and Wildlife and the majority of the Board is in full support. We did have one member of the Board who suggested bear hunting should be totally eliminated in the State of Colorado.

Friends of the Lower Blue River values its partnership with CPW. We are always willing to provide feedback on any future plans that could impact the Lower Blue River Valley.

We will follow the process for the B-16 Black Bear Management and NW Elk Herd Management Plans and looking forward to hearing more.

Kind Regards,

Jonathan Knopf
Executive Director
Friends of the Lower Blue River

Friends of the Lower Blue River
PO Box 2191
Silverthorne, CO 80498