# **Grizzly Bear**

# Occurrence Summary 2017



Bear Management Area (BMA) 5



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### Introduction

Humans and bears have been interacting with one another for as long as they have been in existence together. In recent times, those interactions have become a primary focus of bear management in Alberta and other areas of North America. As people move into what has historically been bear habitat, combined with bears also moving from public lands eastward onto private lands along the eastern slopes of Alberta, interactions between bears and people become more widespread.

In 2010, the grizzly bear was listed as a Threatened species in Alberta. Along with this status came a Grizzly Bear Recovery Plan (GBRP) intended to increase grizzly bear numbers to a more sustainable population level. In 2016, an updated draft Recovery Plan was completed which identifies a Bear Management Area (BMA) specific approach to managing grizzly bears intended to address the unique management challenges within each BMA. This includes a Zoning criterion with management zones: Recovery Zone, Support Zone, Habitat Linkage and Dispersal Zone (Figure 1). The Recovery Zone, essentially public lands along the foothills and west into the mountains, would inform the management of industrial development and human use. Managing attractants as well as other sources of human-grizzly bear conflict that often results in public safety concerns, bear mortality or translocations would be a priority within this zone. The Support Zone, those lands east of the Recovery Zone, is intended to maintain grizzly bears that have home ranges only partially in the Recovery Zone. The management intention here is to maintain grizzly bear occupancy, likely at lower density than in Recovery Zones, with an emphasis given to sows with cubs. The grizzly bear population in the Support zone will likely not be self-sustaining without dispersal from the adjacent Recovery Zone. The Support Zone will contribute to grizzly bear recovery by increasing the regional population size and ensuring that bears that move in and out of the Recovery Zone can survive. Given that the Support Zone is comprised of largely private lands, it is expected to be a focal area for proactive attractant management strategies to reduce Human Bear Occurrences (HBO). The Habitat Linkage Zone identifies key wildlife movement corridors that also have significant development within including urban areas, major highways and railways. In the case of BMA 5, these include Highway 3 in the Crowsnest Pass and the Trans-Canada Highway in the Bow Valley.

Occupancy of grizzly bears outside of the Grizzly Bear Recovery and Support Zones, i.e. Dispersal Zone, is not required to recover the Alberta grizzly bear population. Management tolerance for grizzly bears that come into conflict with humans outside of the Recovery and Support Zones would be lower, resulting in increased management removals.

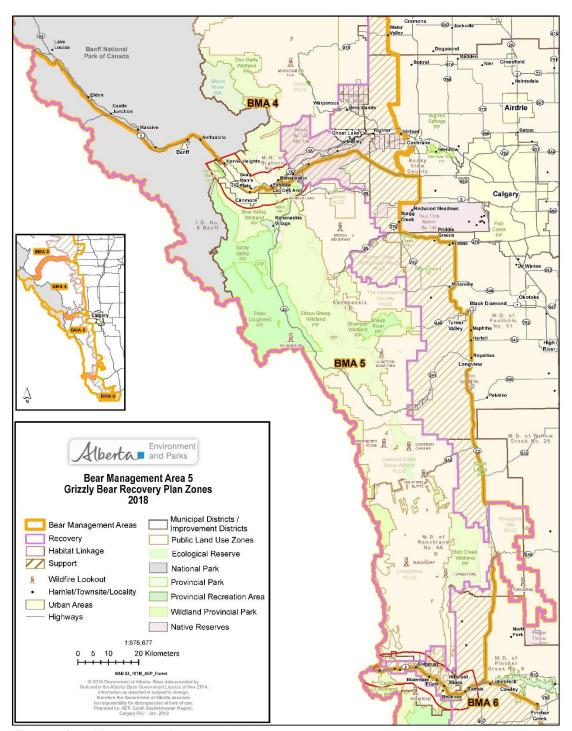


Figure 1. Bear Management Area 5

In the interest of public safety and conservation, wildlife managers have introduced various programs intended to reduce the number of negative interactions between bears and people.

These include the Wildlife Predator Compensation (<a href="https://www.alberta.ca/wildlife-predator-compensation-program.aspx">https://www.alberta.ca/wildlife-predator-compensation-program.aspx</a> ) and Alberta Bear Smart (<a href="https://www.alberta.ca/alberta-bearsmart.aspx">https://www.alberta.ca/alberta-bearsmart.aspx</a> ) Programs. These Programs are important tools to help support communities and other stakeholder groups living, working and recreating in bear country.

The social tolerance for bears in Alberta has to exist if grizzly bears (and black bears) are to sustain themselves, particularly in Support Zones outlined in the proposed grizzly bear Recovery Plan. Failure to gain that support from the people most affected by bears can result in increased HBO and human caused bear mortality, and an overall lack of public support for bears in general.

The Wildlife Predator Compensation program is intended to compensate ranchers with livestock killed or injured by wildlife predators. Compensation currently covers cattle, bison, sheep, swine and goats that have been attacked by wolves, grizzly bears, black bears, cougars or eagles.

The Alberta BearSmart program seeks to reduce human-bear conflicts and increase public stewardship in Alberta by providing strategic information and education materials to the public, stakeholders and government agency staff dealing with bears. Stakeholders include local communities, conservation groups and industry, including oil and gas, forestry and agricultural producers. The Program is intended to:

- Reduce the number of undesirable human-bear interactions, which may result in injury or death to either humans or bears.
- Reduce the number of bear mortalities and relocations that occur as a result of negative interactions with people.
- Reduce annual costs associated with property damage and management actions to address conflict situations.

This BMA 5 Grizzly Bear Occurrence summary is intended to identify key areas and practices where HBO is occurring, why it is occurring, and to provide sustainable options for reducing that conflict.

### Study Area

BMA 5 is located in the southern Rockies, west of Calgary and encompasses much of the eastern slopes of the Rockies from the Trans-Canada Highway and Bow Valley south to Highway 3 and the Crowsnest Pass. BMA 5 includes the Parkland Natural Region, the transition area between grasslands and forests. The Foothills Natural Region lies along the eastern edge of the Rocky Mountains characterized by grasslands, shrubs, forests and alpine areas above tree line. The Bow and Oldman watersheds provide critical water supply to both humans and wildlife in the area. The adjacent riparian areas act as major wildlife corridors for wildlife such as bears, wolves and other wildlife.

There are several towns with significant human populations along the eastern periphery of the BMA, including Canmore, Exshaw, Cochrane, Priddis, Bragg Creek, Turner Valley, Black Diamond, Longview, and Crowsnest Pass. Calgary, a sprawling city of over a million people, lies just east of the BMA. Human activities vary throughout the area including motorized and non-motorized recreational activities such as hunting, fishing, hiking, mountain biking and both frontcountry and backcountry camping, and industrial activities such as oil and gas and forestry. Kananaskis Country, a 4,000 km² multi use recreation area is located within the BMA west of Calgary. Agriculture plays a significant role as well, with large grazing leases and private cattle and horse operations, as well as many small private 'ranchettes' producing a variety of livestock along the eastern edge of the BMA. The area also supports an abundance of wildlife, including both grizzly and black bears. These diverse levels of human activity in bear habitat result in regular interactions between bears and people. At times, these interactions can result in injury or death to people and/ or bears, or cause property damage or public safety concerns that lead to bears being euthanized or translocated.

A 2006 Inventory completed in the northern half of the BMA found a relatively robust population of 90 grizzly bears, with a density of approximately 12 bears/1000km². BMA 5 North was inventoried again in 2014, resulting in a combined abundance estimate of 96 grizzly bears with a combined density estimate of 16.01 bears/1,000 km². Based on these numbers, the population in BMA 5 North appears to be stable. In 2016, BMA 5 South was surveyed, resulting in a combined abundance estimate of 35 grizzly bears with a combined density estimate of 12 bears/1,000 km². Large confidence intervals, poor precision, and sparse 2006 data do not allow us to make science-based conclusions regarding population trend in BMA 5 South (Morehouse 2016).

Recent data indicates that eastward population expansion may be occurring. Expert opinion from within government suggests that in the protected provincial lands in this BMA (Kananaskis Country) grizzly bear density is currently at or near carrying capacity and further growth is not required to achieve recovery.

### Methodology

Historical information related to bear occurrences in BMA 5 was obtained from multiple datasets including Government of Alberta (GOA) ENFOR Occurrence Reports, Kananaskis Emergency Services (KES) data and GOA Aversive Conditioning (AC) records. In total 313 occurrence records were reviewed and analyzed. These included occurrences, mortalities and management translocations. Occurrences were defined as:

- any situation where some form of physical damage has been done by an animal to a person's property or possessions
- the animal has obtained unnatural human foods
- the interaction has elicited a response from the bear that heightens concern over the safety of the observer
- the interaction has occurred in a location where the presence of such animals creates a high risk to public safety

In short, they include those situations where the risk is considered to be 'unacceptable' to the public and a formal response from GOA staff is required. For example, this would include situations where bears were feeding on natural foods in occupied campgrounds or in residential areas, bears feeding on unnatural foods, causing property damage, or bears exhibiting aggressive behaviour towards the public. These occurrences were attributed a risk based Occurrence Level category; Low, Moderate, High, Very High or Extreme. These risk levels are based on Aversive Conditioning Indices developed by the Wind River Bear Institute (WRBI, 1999). They are intended to categorize the severity of each incident from a public safety/risk perspective and will help to inform management priorities for instituting mitigation efforts. For a definition of Occurrence Levels, refer to Appendix I. Situations where people saw bears on trails or in the backcountry, and the risk involved was deemed to be acceptable were defined as Sightings and are not included in this Occurrence Summary.

The northern portion of BMA 5, primarily within the western portion of Kananaskis Country and the Bow Valley, also supplemented ENFOR data with KES and AC databases. Both of these databases have been in place for 15+ years and capture additional information that ENFOR does not include. For this reason, the numbers of occurrences may be higher in places like Peter Lougheed Provincial Park where Aversion staff work with low risk, radio collared grizzly bears who may be frequenting campgrounds and facilities within the park. Also in the Bow Valley, the success of Bow Valley WildSmart's Education and Outreach programs has resulted in higher than normal bear activity reporting from the general public. Both of these examples result in more

efficient reporting of Occurrences than in other areas where reporting compliance may not be as high. It is important to note that only those situations that meet the definition of occurrences are analyzed and included in this report, regardless of how many or where those occurrences occur within the BMA. Given that the Draft Grizzly Bear Recovery Plan identifies the need to manage by individual BMA, the addition of these databases should be seen as providing a more accurate picture of bear activity within those specific areas.

Mortalities and relocations were summarized from both ENFOR and grizzly bear capture data located within the provincial Fish and Wildlife Management Information System (FWMIS).

Data was separated by species; only confirmed grizzly bear Occurrences were included in the analysis. It was important to identify where certain types of occurrences took place; standardized GOA Landuse categories identified in ENFOR were used. Often, bear activity is motivated by the search for food, so the type of attractant involved was analyzed to identify what foods were attracting bears to developed areas. Standardized GOA ENFOR categories were used for attractant types. Temporal information was captured by dividing Occurrences into three primary bear seasons; Pre Berry (den emergence to July 15), Berry (July 16 to September 15) and Post Berry (September 16 to den up). The type of bear behaviour during the actual Occurrence was also considered. These were also obtained from standardized GOA ENFOR data. For a list of terms considered for Land Use, Attractant Type and Behaviour, refer to Appendix I.

### Results

#### **Occurrences**

There were 313 grizzly bear related occurrences recorded in 2017 within BMA 5. There were 148 AC records (47%), 48 ENFOR records (15%) and 101 KES records (32%). Nine records were duplicates from both KES and ENFOR (3%) and seven were duplicates records from KES and AC records (2%). The majority of these occurrences were located in the northern half of the BMA (Figure 2). The majority of these records, 80% (250 of 313) occurred within the Recovery Zone; 4% (13 of 313) occurred in the Support Zone, 10% (32 of 313) in Habitat Linkage and 6% (18 of 313) east of the Support Zone (Figure 3). Eighty seven per cent (268 of 313 records) of the occurrences were Low Level, primarily consisting of bears feeding on natural foods within developments; most of those occurring in the northern part of the BMA within campgrounds and day use areas in Kananaskis Country and the communities of the Bow Valley. There were 29 Very High occurrences, 14 which involved bears killing livestock, primarily within the Support Zone. Ten Very High occurrences were the result of bears bluff charging people, most of these occurring in the northern half of the BMA. These included incidents involving a high profile habituated radio collared adult female grizzly bear from Banff National Park – GB #148. She was

known to bluff charge recreationists on trails within the Bow Valley. This resulted in multiple valley closures during July and August. She was eventually translocated to northern Alberta after a series of close distance encounters over a seven day period. She was legally shot by a hunter in BC in the fall of 2017. There was one Extreme incident that occurred in Canmore. A teenage girl was running with her dog along the canal near the Canmore Nordic Centre. A bear came running out of the bushes and attacked her. She suffered puncture wounds and significant bleeding. The bear involved was thought to be a grizzly bear but this was not confirmed. The incident resulted in the area being closed to the public on the south side of the Bow Valley.

As a result of GB 148 being translocated from the Bow Valley, a multi stakeholder group was created to review the cross jurisdictional management of wildlife in the Bow Valley. This group was made up of representatives from GOA (AEP and JSG), Banff National Park, the towns of Banff and Canmore, and representatives from Yellowstone to Yukon, Bow Valley WildSmart and Canadian Parks and Wilderness Society. The Human Wildlife Coexistence report was completed in June, 2018 and included a series of recommendations intended to provide a more consistent approach to wildlife management in the Bow Valley (https://open.alberta.ca/publications/9781460140062)

A similar trend of close distance interactions between grizzly bears and people continued in 2017. Of the 130 records where 'distance to bear' was recorded, there were 73 incidents of grizzly bears getting to within 20 m or less of people. As most distance related data is collected within Kananaskis Country or the Bow Valley, this is where 97% (71 of 73 records) of these records occurred. The number of close distance encounters between bears and people is likely a sign of the level of habituation of grizzly bears within Protected Areas in this portion of the BMA. Of these 73 records, there was one human contact incident that resulted in an injury to the public; the woman jogging in Canmore mentioned earlier.

Of the occurrences that identified an attractant type, natural foods were the primary attractant (73% or 192 of 263) (Figure 4). In these cases, 71% (136 of 192) of natural food related occurrences were located in Campgrounds and Day Use areas and buffaloberry (*shepherdia canadensis*) was the main species involved. Twenty-four per cent (46 of 192) occurred in urban areas including facilities, golf courses and residential areas. Livestock related occurrences accounted for 6% (15 of 263) of attractant related occurrences and they all involved predation of cattle. There was only one recorded garbage occurrence within the BMA; a testimony to the effectiveness of bear proof waste management systems that have been in place for over twenty years throughout most of the BMA. The attractant related occurrences for 2017 follow a similar trend to 2016.

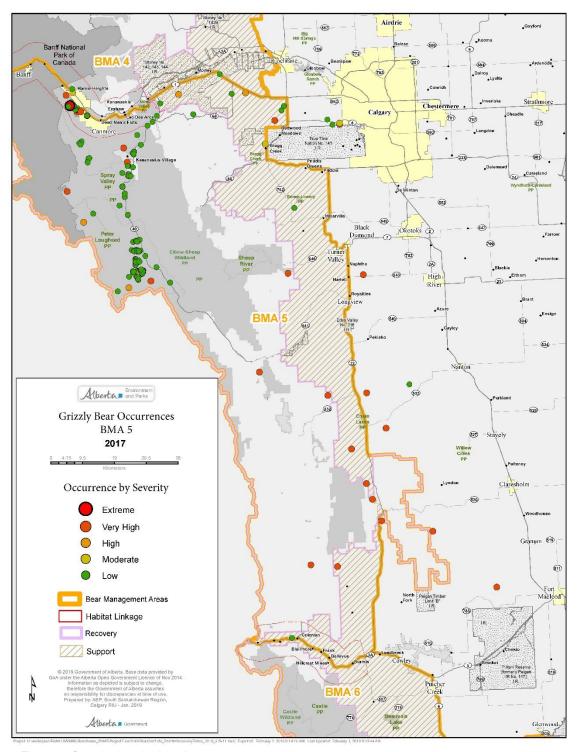


Figure 2. Occurrences by Level

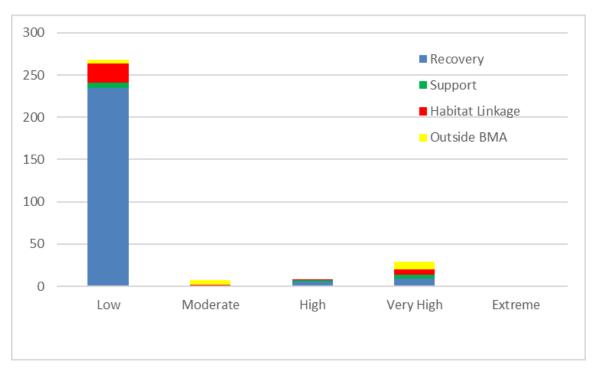


Figure 3. Grizzly Bear Occurrence Levels by Zone (N+ 313)

Forty-two per cent (132 of 313) of the occurrences occurred during the Pre Berry Season, 49% (154 of 313) during the Berry and 9% (27 of 313) during Post Berry. The majority of the natural food related occurrences happened during the Berry season; 57% (109 of 1920 and Pre Berry; 41% (79 of 192). Fifty per cent of the livestock related occurrences happened during the Post Berry Season.

Campgrounds (38% or 118 of 312), residential areas (21% or 65 of 312) and day use areas (18% or 56 of 312) were the most common known locations for occurrences (Figure 5). Most of these were Low Level occurrences of bears feeding on natural foods within these developments.

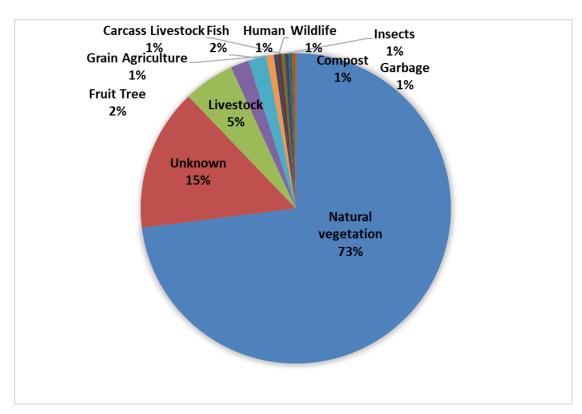


Figure 4. Grizzly Bear Occurrence by Known Attractant Type (N= 263)

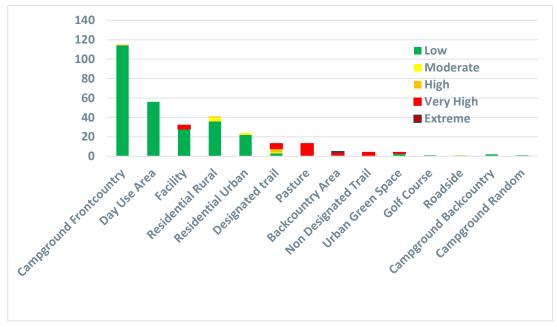


Figure 5. Grizzly Bear Occurrences Levels by Land Use (N= 312)

#### **Mortality**

Highways continue to be the primary cause of mortality for grizzly bears in BMA 5. There were five known grizzly bear mortalities recorded in 2017, four of them transportation related. A sub adult grizzly bear was killed illegally in the Jumpingpound Creek area south of the Trans-Canada highway in April.

Since 2009 there have been 46 known human caused grizzly bear deaths in BMA 5 (Figure 6). The majority of these have occurred within the Recovery/Support Zones. Almost half (22 of 46) have been transportation related, 20 by vehicle and two by train. These mortality numbers do not include those bears translocated from the BMA.

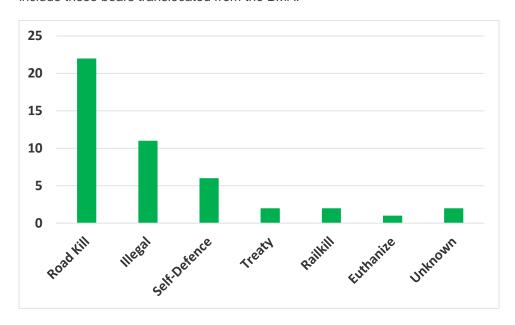


Figure 6. Human Caused Grizzly Bear Mortality 2009 to 2017 (N= 46)

#### **Translocations**

There were 10 grizzly bears translocated from BMA 5 in 2017. Two different females with two cubs each were involved in separate livestock predations, one NW of Bragg Creek and one near Bob Creek, west of Claresholme. GB 148, a habituated female grizzly bear from Banff National Park was translocated from province lands in the Canmore area. She was involved in multiple closing distance incidents in July. From 2009 to 2017, there have been 50 translocations from BMA 5 (Fig 7). Over 50% (27 of 52) of these have been a result of livestock depredation. These numbers include incidents where a bear(s) was moved outside of its home range and does not include relocations that may have occurred where the bear was released within their home range.

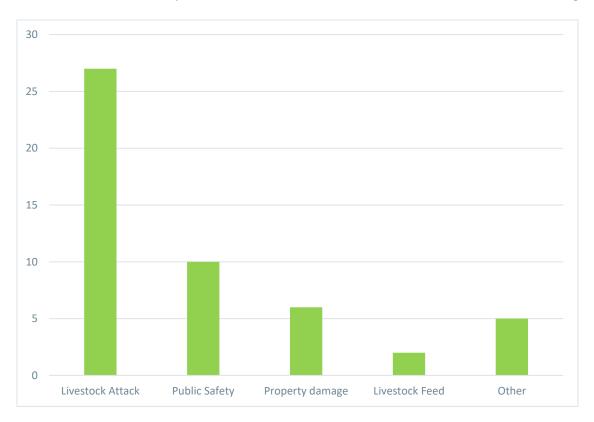


Figure 7. Grizzly Bear Translocations 2009 to 2017, (N= 50)

### Mitigation

A number of proactive mitigation programs currently exist within BMA 5, all with the aim of reducing current levels of negative interaction between grizzly bears and people.

#### **Aversive Conditioning (AC)**

A formal AC program has been in place since 2001 in the Kananaskis / Bow Valley. The program identifies Low Conflict level grizzly bears based on the Wind River Bear Institutes Bear Shepherding protocols (WRBI, 1999). Staff from Alberta Environment and Parks, Justice and Solicitor General along with select Alberta Parks volunteers, attempt to discourage bears from utilizing developed areas such as campgrounds and residential areas, and to increase the wariness of those bears when interacting with the public. This is done through the delivery of noise and pain stimuli when bears attempt to enter into developed areas. In 2017, there were 488 AC actions delivered on 7 different radio collared grizzly bears, almost exclusively within the Kananaskis and Bow valleys. Five of these bears were female and two were male. The majority of these actions (61% or 297 of 488) were roadside events. Campgrounds (17% or 83 of 488), Day Use Areas (4% or 21 of 488) and residential areas (4% or 20 of 488) were also involved. There was one translocation; GB 148, related to these 'aversion' bears in 2017. In the case of GB 148, staff from Parks Canada assisted in the AC program while the bear was on provincial lands. This was done to provide GB 148 the best chance of success and was the first time federal and provincial staff worked together on provincial lands.

#### **Attractant Management**

**Natural vegetation**, primarily buffaloberry, continues to attract bears to developed areas, particularly within the northern half of the BMA. Programs to physically remove buffaloberry are ongoing within Kananaskis Country and the Town of Canmore. This work is done by volunteers and paid contractors, and is considered an effective method of reducing bear activity in key areas of the BMA.

**Livestock** related occurrences are typically dealt with through the Predator Compensation Program. In 2017, 17 claims involving 20 animals, were 'Confirmed' (12 steers, 3 bred cows, 1 bred heifer, 3 heifers, 1 calf) and 5 claims involving 5 animals deemed 'Probable' (5 steers) for grizzly bears killing livestock resulting in \$28,350 paid to producers.

The **Deadstock** program coordinated by the WBR continues to be a cost effective method of removing dead livestock from developed areas in southern Alberta. In 2017, 22 carcasses were picked up in the Ranchland/Willowcreek Counties. The program allows ranchers to deposit livestock carcasses in strategically located bear proof bins free of charge (Fig 8). These

carcasses are picked up regularly and taken to local rendering plants for disposal. Ranchers can also be reimbursed for on-farm pick up. Removing these type of attractants ensures large carnivores including grizzly bears will have no reason to visit.

**Grain continues to be** an ongoing concern, largely due to non-bear proof grain bins and doors and wooden hopper bottoms. Securing grain through the use of electric fence, bear proof doors, cement bottom floors and hopper bottom bins have all shown to be an effective deterrent to bears. These tools are promoted as best practices by GOA, WBR and Crowsnest Pass BearSmart (CNPBS).



Figure 8. Bear Proof Deadstock Bin

Unsecured attractants such as **fruit trees**, **birdfeeders**, **garbage**, **chickens** and **beehives** do cause conflict with black bears in BMA 5, less so with grizzly bears. Most of these types of attractant concerns can be resolved by securing the attractant with electric fence or a bear proof container. There has been very little **garbage** related conflict within the Recovery Zone of BMA 5 since the implementation of bear proof bins. Areas outside the Recovery Zone continue to have relatively high black bear/garbage related occurrences, suggesting that garbage management remains a potential concern for both black and grizzly bears in these areas. In the case of fruit trees, communities in the Crowsnest Pass and Bow Valley have initiated programs that would remove the fruit or the tree itself from residential areas or have the tree replaced with a non-fruit bearing trees. Birdfeeder and wildlife attractant bylaws are also in place in these areas.

#### **Loaner Programs**

AEP, along with the WBR and CNPBS, have had Loan or Cost Sharing Programs for landowners experiencing HBO for a number of years now (Fig 9). The Programs promote the use of electric fence, bear proof garbage bins, grain bin doors, sea canisters and metal hopper bottoms. Since 2014, there have been over 45 projects implemented by these groups (Fig 9). The majority of these projects occur in the Support Zone, east of the Recovery Zone. The garbage bins were mostly used to securely store garbage and livestock feed, while electric fence was used to primarily secure beehives and chickens. There have been no reported reoccurrences once these loaner systems were in place.

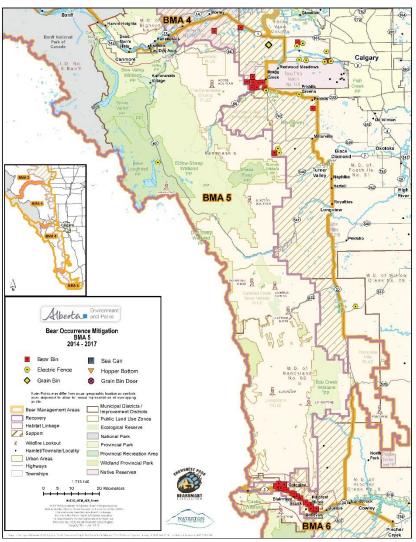


Figure 9. Mitigation Projects 2014 to 2017 (N= 45)

#### Education

There are a number of non profit groups assisting AEP in delivering programs to promote best practices and reduce conflict between grizzly bears and people through education. These include:

- WBR Carnivores and Communities program
   (http://www.watertonbiosphere.com/projects/carnivores-communities/)
- Bow Valley WildSmart (http://www.wildsmart.ca/)
- Crowsnest Pass BearSmart Association (<a href="http://www.cnpbearsmart.com/">http://www.cnpbearsmart.com/</a>)
- Redwood Meadows WildSmart
   (http://www.redwoodmeadows.ab.ca/community-2/conservation-and-sustainability/7051-2/)
- Alberta BearSmart
   (http://aep.alberta.ca/recreation-public-use/alberta-bear-smart/default.aspx)

In 2017, AEP along with other stakeholders delivered bear safety workshops at the Ghost, Priddis and Springbank. These workshops are specifically targeted to local stakeholders including recreation groups, ranch families and communities that are living with grizzly bears and other large carnivores. They focus on securing attractants, how to avoid encounters, what to do during an encounter and how to effectively use bear spray. AEP had created a number of Fact Sheets that are available on the <a href="BearSmart">BearSmart</a> web page, including:

- Electric Fence and Bears
- Chickens and Bears
- Bees and Bears
- Deadstock Composting and Bears
- Fruit Trees and Bears

#### **Facility Closures**

There are times when an area is closed to public use. These closures are typically initiated by Alberta Environment and Parks or Justice and Solicitor General Officers. There were 24 area closures due to grizzly bears in BMA 5 in 2017. These were primarily proactive closures in Kananaskis Country designed to provide bears with an opportunity to feed undisturbed by human presence during the berry season.

### Conclusion

#### **Recovery Progress**

There are extensive ongoing occurrence prevention programs in BMA 5, including excellent garbage management, natural vegetation management, aversive conditioning of habituated grizzly bears, deadstock management and multiple education programs that focus on HBO issues and the associated best practices that will help reduce occurrences at the local level.

#### **Challenges for Recovery**

BMA 5 has extensive and increasing levels of public recreation along with a healthy population of grizzly bears. Any eastward expansion of bears in this BMA will likely result in widespread occurrences associated with agriculture and acreage development. High densities of acreages in the northeastern portion of the BMA, along with growing interest by acreage owners to produce some of their own food (i.e. chickens and honey), may increase HBO and preclude regular occupancy by grizzly bears in these areas. The dispersal of habituated grizzly bears from Protected Areas into the Support Zone, where unsecured attractants are more widespread could result in an increase in HBO and associated public safety concerns, HCM and translocations.

#### **Priorities**

The continued promotion of best practices related to mitigation will ensure that HBO incidents are minimized. This reduction in negative interactions with bears, particularly on private lands within the Support Zone, will help to maintain tolerance levels for grizzly bears, an essential component of grizzly bear recovery in Alberta.

## **Bibliography**

- Hunt, Carrie. 1999. "Partners in Life" Program: Bear Shepherding Guidelines for Safe and Effective Treatment of Human Bear Conflicts. Wind River Bear Institute, Heber City, Utah.
- Morehouse, Andrea, 2018. Spatially explicit capture recapture estimates of grizzly bear density and abundance in Alberta Bear Management Area 5. Report prepared for Alberta Environment and Parks.

# Appendix I

#### **Human Bear Occurrence Definitions**

Occurrence	Definitions
No Occurrence	Bears feeding on natural foods in non-developed areas including backcountry trails, roads, train tracks or travelling in non-developed areas (i.e. trails) or developed areas such as day use areas, golf courses, campgrounds (frontcountry, backcountry or random)
Low	Bears feeding on natural foods (except carcasses) in or adjacent to trailheads, campgrounds, picnic areas, barns, or feeding on golf courses during the day; feeding/ travelling in urban green space, facility/ playfield; feeding on unnatural food in non-developed areas or travelling through residential properties (backyards), travelling frequently through cgs or repeated sightings on trails
Moderate	Bears feeding on unnatural foods (except carcasses) not secured at or adjacent to developed area (trailheads, campgrounds, picnic areas, playfield, barns or golf courses during the day; natural foods at or adjacent to residential areas; predating on domestic animals in non-developed areas; makes physical contact with manmade structures (decks, dumpster, pickup beds); standing ground
High	Bears feeding on lightly secured non-natural foods (coolers, non-bear proof garbage cans) in or adjacent to developed area; partially enters 2 or 3 sided structure, minor property damage, closing distance (non-aggressive) to people for food or non-food related closing distance incidents
Very High	Bears depredating (i.e. hunt, chase, harass) on wild or domestic animals (livestock, dogs, cats, rabbits) or feeding on carcasses in or adjacent to developed areas including trails, major property damage, enters 4 sided structure; charges people (no contact) including surprise encounters, defence of young or defending carcass
Extreme	Bear injures or kills people
Not Applicable	Does not apply

# Appendix II

#### **ENFOR Field Categories**

Primary Attractant	Behaviour	Land Use
BBQ	Alert	Campground Backcountry
Bird Feeder	Bluff Charge	Campground Frontcountry
Carcass Livestock	Charge	Campground Informal
Carcass Wildlife	Curious Approach	Day Use Area
Compost	Indifferent	Designate Trails
Domestic Pet	Predatory Approach	Facility
Garbage	Property Damage	Golf Course
Garden	Retreat Run	Non-Designated Trails
Golf Course	Run to Cover	Other - Specify
Grain Agriculture	Stands Ground	Pasture
Human Food	Unaware	Railway
Humans	Unknown	Residential Urban
Insects	Walk to Cover	Residential Rural
Livestock		Roadside
Natural Vegetation		
Ornamental Fruit Tree		
Pet Food		
Unknown		
Unnatural Vegetation		
Wildlife		

## Appendix III

#### **Fact Sheets**



**our challenge** Bears exist throughout most of Alberta. Black bears are found across the province, with the exception of some agricultural lands in the south east corner of the province and grizzly bears are found primarily along the Rocky Mountains and in the Foothills of western Alberta. In recent years some areas of the province, particularly parts of southern Alberta, have been experiencing grizzly bear activity in areas further east of traditional home ranges.

A large portion of Alberta's bear populations overlap areas where people live, work and play. This has resulted in increasing human bear interactions on both public and private lands. Some interactions involve bears accessing unnatural food sources including garbage, fruit trees, bee yards, livestock feed and livestock.

Fruit trees can attract bears into residential areas creating issues of public safety and potential property damage. Attempts are often made to capture and remove bears that begin to associate developed areas as possible food sources. If attractants remain available, there is a risk that other bears will eventually discover them and the issue will repeat itself. By properly securing or removing fruit from trees, bears will have no reason to frequent these developed areas and they will typically move on. The result is no loss of fruit, no property damage or public safety concerns and no need to remove bears – a win for all concerned.







our challenge Bears exist throughout most of Alberta. Black bears are found across the province, with the exception of some agricultural lands in the south east corner of the province and grizzly bears are found primarily along the Rocky Mountains and in the Foothills of western Alberta. In recent years some areas of the province, particularly parts of southern Alberta, have been experiencing grizzly bear activity in areas further east of traditional home ranges.

A large portion of Alberta's bear populations overlap areas where people live, work and play. This has resulted in increasing human bear interactions on both public and private lands. Some interactions involve bears accessing unnatural food sources including garbage, fruit trees, livestock, livestock feed and, in some cases, bee yards.

Aside from the obvious loss of bees and honey, issues of public safety and property damage, are also a concern when bears access bee yards. Attempts are often made to capture and remove bears that begin to associate developed areas as a food source. If attractants are left unsecured, there is a risk that other bears will eventually discover the area and the same issue will arise.

Securing attractants results in reduced incidents of property damage and public safety concerns and the need to translocate bears; a win for all concerned.









Our challenge People living and working in bear country will, at times, experience bears.
Often bears will visit because of available foods, natural or otherwise, that exists. Depending on the circumstances, this can result in a loss of livestock, livestock feed or property damage and concerns related to public or personal safety. It can also result in bears becoming food conditioned and being relocated or euthanized.

Securing available attractants as much as possible is an effective way of preventing bears from visiting in the first place. This can include placing garbage and pet or livestock feed inside buildings or in a bear resistant container or removing fruit from trees or bushes before bears can get to it. A properly constructed and maintained electric fence can be an effective way of protecting livestock and bee yards from bears. These preventative measures will reduce incidents of loss, property damage and alleviate public safety concerns. It will also reduce the need to remove or kill bears.







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A large portion of Alberta's bear populations overlap areas where people live, work and play. This has resulted in increasing human bear interactions on both public and private lands. Some interactions involve bears accessing unnatural food sources including garbage, fruit trees, bee yards, livestock, livestock feed and, in some cases, deadstock piles.

Attempts are often made to bury dead livestock to prevent access by bears and other scavengers. The reality is that bears are opportunistic feeders guided by a good nose and will likely discover deadstock piles at some point in time as livestock carcasses are a desirable food source for bears. If the location of the deadstock is close to outbuildings, ranch houses, or calving pens, issues of public safety, possible property damage, or future predation of livestock can be a concern.







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A large portion of Alberta's bear populations overlap areas where people live, work and play. This has resulted in increasing human bear interactions on both public and private lands. Some interactions involve bears accessing unnatural food sources including garbage, fruit trees, bee yards, livestock feed and livestock, including chickens

Aside from the obvious loss of chickens, issues of public safety and property damage are also a concern when bears access chickens for food. Attempts are often made to capture and remove bears that begin to associate developed areas as food sources. If attractants are left unsecured, there is a risk that other bears will eventually discover the area and the same issue will arise. By properly securing attractants, bears learn they cannot access food from a particular area and they typically move on. The result is no loss of chickens, no property damage or public safety concerns and no need to remove bears – a win for all concerned.



lear and chicken yard conflict

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