



CASCADE ENVIRONMENTAL
RESOURCE GROUP LTD

Grizzly Bear Hazard/Conflict Risk Assessment

Big White Ski Resort, BC



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Prepared for:

Big White Ski Resort

Project No.: 017-10-05

Date: November 27, 2025

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1 Goals and Objectives

1.1 Overview

Cascade Environmental Resource Group Ltd. (Cascade) was retained by Big White Ski Resort (Big White) to produce a Grizzly Bear Hazard/Conflict Assessment to identify human-bear conflicts hazards within the Big White Ski Resort Controlled Recreation Area (CRA) as part of the Master Plan approval process and Master Development Agreement renewal. Big White operates downhill and cross-country ski facilities as well as skating and tube park facilities during the winter and provides hiking, sightseeing and downhill mountain biking within the summer months in the CRA which includes a village consisting of residential and commercial properties. This hazard assessment uses the Bear Smart hazard assessment template as a guide (Bear Smart, 2025 and WildSafe BC, 2025a), which has become the standard format in BC.

1.2 Project goals

The goal of the Grizzly Bear Hazard/Conflict Assessment is to provide a framework and baseline of data to inform the grizzly bear management plan and conflict mitigation management actions.

Overarching goals of the grizzly bear hazard assessment include:

- Gather information on grizzly bear sightings, behavior and movement and habitat use within the CRA
- Identify possible high-risk areas of human-bear grizzly conflicts
- Identify strengths and weaknesses with current waste management, outreach and education programs and laws and regulations on attractant management
- Provide baselines information to form strategies to minimize the rate and intensity of conflicts in formation of a grizzly bear management plan

2 Assessment Methods

2.1 Interview questions with Big White Staff

Big White Staff were interviewed to gather data on observed grizzly bear (*Ursus arctos horribilis*) behavior at Big White Resort including movement patterns, current bear smart practices employed in staff training, current outreach and education programs and knowledge of local refuse practices.

2.2 Identification and Spatial Analysis of Key Human Use Sites

Human use sites which have a high concentration of human activity in which grizzly bear conflicts could occur were researched and mapped for identification. These areas included school grounds, RV campgrounds, recreational bike trails, hiking trails and disc golf areas.

2.3 Identification and Spatial Analysis of potential attractants and transfer station locations

Potential grizzly bear attractants were researched and rated based on Big Whites existing conditions and identified spatially in mapping. The current condition of the waste transfer station within the CRA was researched.



2.4 Grizzly Bear Forage Data

Black huckleberry (*Vaccinium membranaceum*) has been identified as an important food source to grizzly bear in BC (Hamilton *et al*, 2018). The abundance of black huckleberry on the landscape can influence grizzly bear movement and habitat use (Hamilton *et al*, 2018). Black huckleberry was known to exist in the CRA from previous ecological studies. Cascade decided to focus grizzly bear habitat identification and classification within the CRA based on black huckleberry distribution. Cascade created a persistence model for black huckleberry from the Annual Mapping of Huckleberry Distribution Across BC. A detailed description on methodology for the persistence huckleberry model is described in the grizzly bear management plan (Cascade, 2025). Cascade conducted field work in 2025 to ground-verify the persistence huckleberry model. Cascade completed a total of 89 ground-verification plots in the CRA area. The year on year persistence model results provide a guide to quality of grizzly habitat within the CRA. The results assume that the more often an area is predicted by the model as high probability and high confidence of huckleberry patch production, the more likely grizzly bears will utilize the area.

2.5 Wildlife Camera Data

Wildlife camera study within CRA was initiated in 2024 to collect wildlife species data (including grizzly bear) on distribution and frequency of wildlife in the Big White CRA. Six wildlife cameras (GradePro model A3S) were deployed within and adjacent to the CRA. The CRA was analyzed to identify potential high use habitat areas including creeks, wetlands and riparian areas known to serve as common wildlife travel corridors. Cascade utilized areas of prior sightings of grizzly bear from communication with Big White staff to guide camera placement. The placement was also guided by the provincial black huckleberry abundance modelled mapping provided to the project team. During field verification of potential camera locations additional wildlife signs (prints and scat observations) were utilized to place cameras in likely areas of wildlife use. Cameras were active between July 25th, 2024 to October 3rd, 2024. Cameras were retrieved after the first snowfall as snow conditions and snow accumulation were anticipated to restrict efficient camera use. Six wildlife cameras were deployed again in 2025 with a focus on black huckleberry patches as a food source to further capture grizzly bear forage and movement patterns in the CRA.

2.6 Data Gaps

Conservation Officer reports were not obtained, which constitute a data gap for possible Grizzly Bear human conflict data. As Big White does not have management over residential buildings and some private commercial restaurants, research into all waste management practices could not be entirely conducted. The Regional District of Kootenay Boundary (RDKB) is the local government that has jurisdiction over waste management within the Big White residential community. Further work would have to be conducted with the RDKB to complete a full inventory on waste management practices within residential buildings and some commercial restaurant buildings within the Big White CRA. This grizzly bear hazard assessment has been completed on best available data on waste management practices based on responses from Big White Staff questionnaire and online data research. The Big White Community School and Waste Transfer Station identified in this report is also managed by the RDKB. For additional data, further inquiries would need to be conducted with the RDKB.

This hazard assessment focuses specifically on grizzly bears. Black bears (*Ursus americanus*) are present in the community but data from black bear conflicts or management have not been explored in this report.

This hazard assessment is intended to focus on resort activities and infrastructure managed by Big White Resort. This grizzly bear hazard assessment has been produced to allow a community group if established by Big White residents as per Bear Smart guidelines to build on the information presented in



this report. Interested residents could work with the RDKB with the formation of a committee or working group to move towards a Bear Smart designated community if the community intends to do so.

3 Description of Community

The area being evaluated is the Big White Mountain Resort CRA as defined in the Big White Resort Masterplan (BHA, 2025).

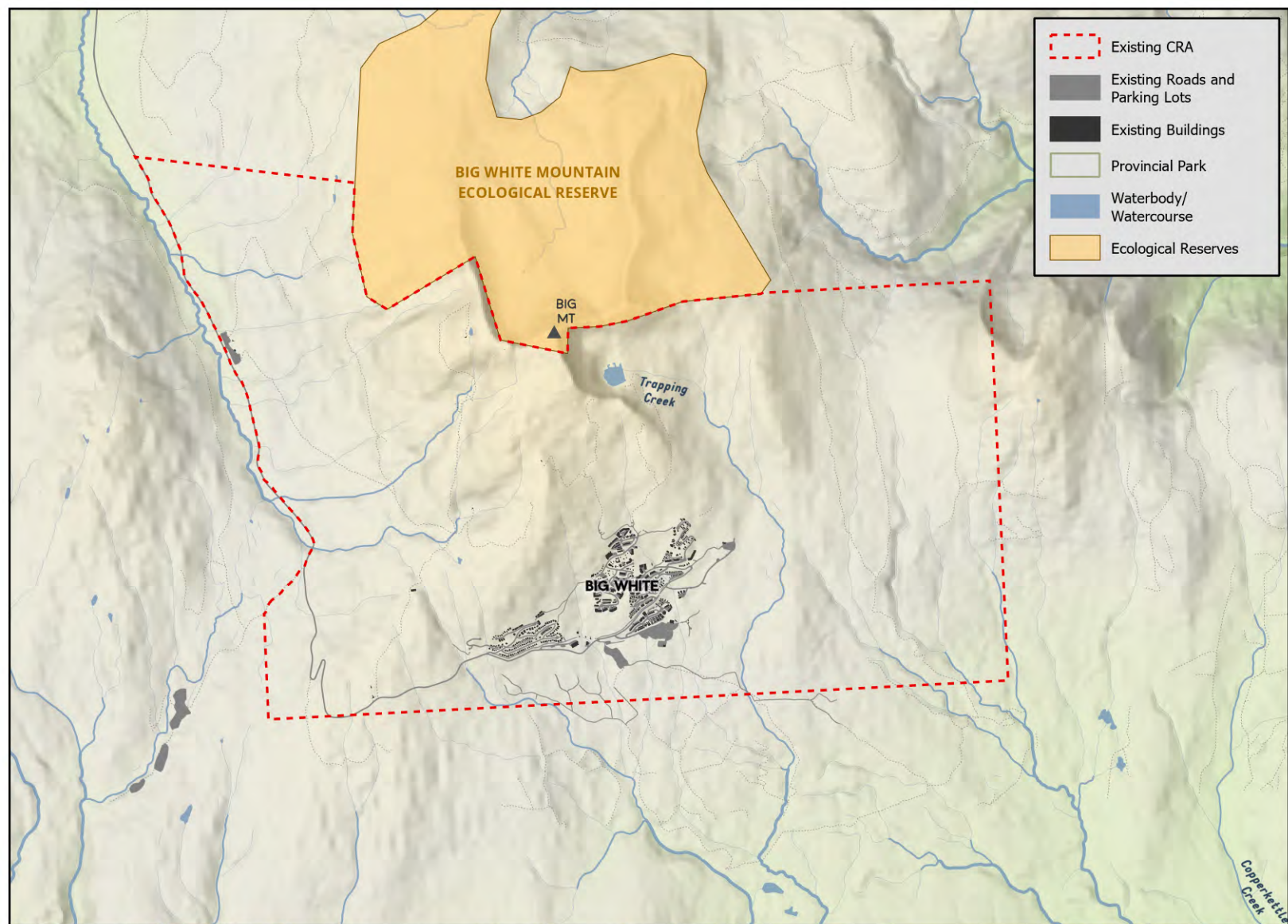
Big White CRA borders the Big White Mountain Ecological Reserve on the northern boundary, and is located on the east side of Okanagan Lake, approximately 56 km southeast of Kelowna. The resort is contained within the CRA boundaries and is the limit of the assessment. The land within the CRA is used for alpine skiing facilities in the winter consisting of 15 ski lifts servicing 108 designated trails covering an approximate area of 607 skiable hectares (1,500 acres) (BHA, 2025). Development also consists of residential and commercial accommodation facilities, restaurants and retail.







The permanent population of Big White village is listed as 991 as per the 2021 Canadian census (Stats Canada 2025). The population of Big White is unique, as population expands within the resort during its peak during the winter months (RDKB, 2021). The existing balance resort capacity has been calculated at 11,488 guests per day (BHA, 2025). 13,761 bed units of existing and committed accommodation are in place, leaving 39 bed units available for development. These bed units are allocated to 3,435 units of development, broken down as follows: 872 single-family units, 216 duplex units, 1,871 multi-family units, 474 hotel rooms, and 12 hostel units. Currently, during summer months Big White's bike park and mountain resort operates for four days a week on Thursday to Sunday. Visitor numbers and population of Big White is considerably less than winter in the summer months when grizzly bear activity is more frequent in the area.

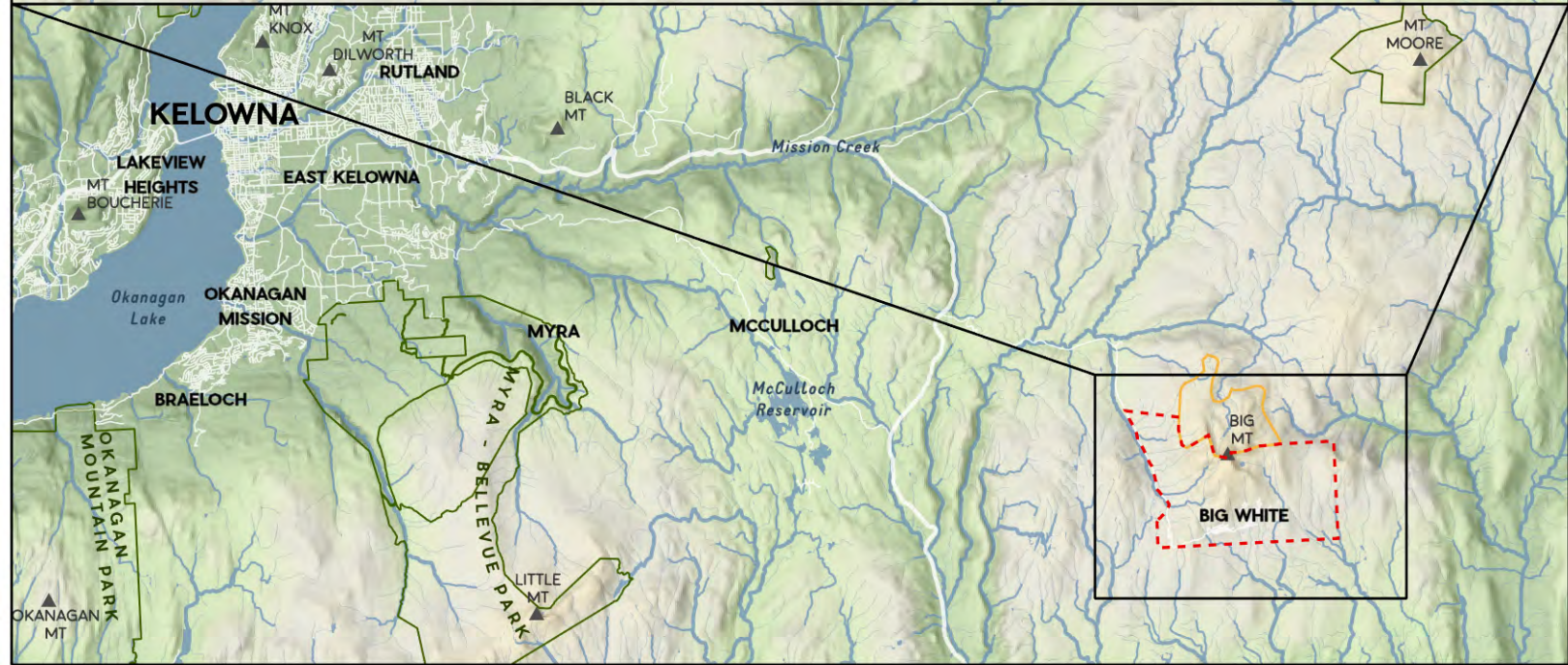
Big White Mountain Community is subject to shared jurisdiction from the Province and the RDKB (RDKB, 2021). Big White Ski Resort manages its resort activities and facilities within the CRA which largely comprises of Crown land in a contractual agreement known as the Master Development Agreement with the Province (RDKB, 2021).

The RDKB is currently responsible for local governance, the OCP, zoning and bylaws at Big White within private parcels, as well as services including the fire hall, waste transfer station, noise control, and some street lighting (RDKB, 2021). Strata corporations also are involved in jurisdiction for private residences including waste management (RDKB, 2021).

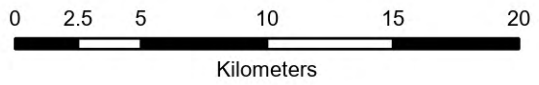
This hazard assessment recognizes Big White can only manage certain bear attractants related within its jurisdiction. Recommendations can be made to local government for mitigation measures outside of Big White's management.



-  Existing CRA
-  Existing Roads and Parking Lots
-  Existing Buildings
-  Provincial Park
-  Waterbody/Watercourse
-  Ecological Reserves



GIS Cartographer: Oliver Chew
 Date: 2025-11-05
 CERG File #: 017-10-04-02
 Projection: NAD 1983 UTM Zone 10N



Map 1 - Location

Grizzly Bear Hazard/Conflict Assessment
 Big White
 British Columbia



4 Bear Presence

4.1 Local Population and Distribution

Bear species confirmed in the Big White CRA include black bear and grizzly bear. Presence of grizzly bears was confirmed in 2024 by wildlife camera traps placed by Cascade. This hazard assessment focuses on grizzly bear species.

Grizzly bears are divided into 55 Grizzly Bear Population Units (GBPU) in BC based on their geographic location. The CRA overlaps two GBPU; Kettle-Granby (population tag 42) in the east and Central Interior (tag 48) in the west. The Kettle-Granby GBPU has a conservation ranking of high and population estimates have shown that the population has increased from 38 bears in 1997 to 87 bears in 2015 (Boulanger 2002; Stent, 2011, and Gov BC, 2020). The Central Interior GBPU is considered extirpated. As such, the province does not provide a conservation ranking, overall threat score, population size or isolation data for this region. Bear density in the grassland areas between Grand Forks and Rock Creek and in the lower Granby and Kettle River valleys is assumed to be very low, estimated close to zero (Mowat *et al.* 2017).

Grizzly bears have been observed within the Big White CRA more frequently in recent years and are likely moving in from the Kettle-Granby Population Unit which is located directly east of Big White. The Kettle-Granby population is considered threatened due to the low number of bears relative to the habitat suitability of the area, and low habitat connectivity with other grizzly populations due to urban development (Mowat *et al.* 2017). Population details on grizzly bear are described in more detail in the Grizzly Bear Management Plan (Cascade, 2025).

4.2 Bear Movements within the CRA

General movements of grizzly bear occur in the CRA within the month of May and are last recorded in late October (Table 1). Grizzly bear observations within 2024 and 2025 tend to suggest that grizzly bears are within the CRA area or in close proximity for the 5 months foraging on available natural food sources for the majority of their non-denning period (Table 1).

A young adult grizzly observed in 2024 (Table 1) was observed on the west side of the CRA within the Gem Lake area and upper powder bowl around the top of the Falcon Chair (Map 2). The grizzly bear observations in 2024 was assumed to be the same bear due the infrequent recordings seen at Big White, however, identification was never confirmed via DNA sampling or tagging. This grizzly tended to remain on the west side of the mountain away from the residential and commercial building areas of the resort. The bear was first observed in the area in May at the Gem Lake chair load and was observed in the alpine areas of Powder bowl in July. The wildlife cameras captured the grizzly bear moving down in elevation on September 28, 2025 (Photo 1). Therefore, the bear spent most its time outside of non-denning period (May-October for interior Bears) in the CRA area foraging.

The female grizzly and cubs were spotted in the CRA area in May 2025 (Table 1) and were observed on the ski runs throughout the summer until August 2025 (Map 2). The female grizzly and cubs remained in much closer proximity to the residential and resort area of Big White than the 2024 grizzly (Photo 2) (Map 2). The bears were observed foraging green up grasses on the ski runs early in the spring season. The female grizzly was also reported to have dug rocks in the bike trail likely to hunt hoary marmot (*Marmota caligata*) or golden-mantled ground squirrel (*Callospermophilus lateralis*) populations in the area. Cascade observed a grizzly bear dig area (Photo 3) in the proximity of an existing ground squirrel/marmot burrow entrance close to a huckleberry patch on the “Surprise” ski run. Big White staff also recounted observations of the grizzly digging for marmots throughout 2024 and 2025.



4.3 Management Actions

Big White has had an adaptive management strategy to grizzly bear presence when recorded in and around high human-bear conflict areas including hiking trails and biking trails. In June 2024 Big White closed a network of its hiking trails after observations of the young grizzly bear by staff on the Falcon Ridge Trail. Big White closed hiking trails and released guidance information on social media channels. Further in 2025 grizzly bear observations were recorded during patrol sweep of the mountain bike trails and lift operations were delayed until the bears had left the trail area.

The Big White village community has been actively communicating presence of grizzly bear sightings to social media channels to warn residents of observations and to avoid the area where possible.



Photo 1: Young grizzly bear on “Ogoslow” ski run within the Big White CRA. September 28, 2024.



Photo 2: Female grizzly and two cubs on "Perfection" ski run adjacent to Winter Ridge Lodge. June 7, 2025



Photo 3: Grizzly bear “dig” for marmot or ground squirrel burrow adjacent to huckleberry patch on “Surprise” Ski run. August 28, 2025



5 Habitat and Wildlife Corridors

Grizzly bears have been observed in the Big White area with greater frequency in the last two years and are expected to be more frequent residents within the CRA and during its non-denning period, foraging on natural food sources in the area. This section aims to identify non-natural and natural features that could influence grizzly bear movement in the CRA. At larger scale of connectivity to surrounding GBPU, telemetry data from Mowat *et al.* (2017) show grizzly bear use within the Kettle–Granby Grizzly GBPU, and mapping indicates that the CRA is situated along the southeastern edge of this GBPU. Approximately half of the CRA falls inside the Kettle-Granby GBPU. Although the CRA overlaps the GBPU, telemetry locations are concentrated mainly in the northern and western portions of the unit, with no recorded locations directly within the CRA, indicating limited confirmed movement through the area. A larger-scale analysis of grizzly bear connectivity in around the CRA based on surrounding grizzly bear population density is described in the Grizzly Bear Management and Monitoring Plan (Cascade, 2025).

5.1 Non-Natural Features That Influence Travel Patterns

Non-natural features identified to influence bear travel patterns in the CRA include;

- Access and Resource Roads
- Ski runs
- Hiking and biking trails

Less travelled forestry and access roads adjacent to and within the CRA provide easily accessible openings for bear travel. Ski runs cleared of vegetation and hiking and biking trails also provide attractive travel corridors throughout the CRA. Ski runs that have been cleared of vegetation provide possible grizzly bear foraging habit in the form of grasses and herbaceous flowering plants that are quick to emerge and green up following the spring snow providing food sources which can be more scarce during snow melt. Black huckleberry is an important berry species which can produce in successful old-growth forests with larger canopy openings; however, black huckleberry generally produces the highest volumes of berries in cleared areas usually associated with early-seral burns and clear-cuts (Hamilton *et al.*, 2018). The cleared ski runs within the CRA also provide good conditions for huckleberry growth and could influence a greater production of huckleberry and provide travel corridors for foraging food sources.

5.2 Natural Features for Travel Patterns and High Use Bear Habitat

Natural features that are likely to influence travel patterns within the CRA include.

- Distribution of black huckleberry patches throughout the CRA
- Riparian corridors
- Adjacent Big White Mountain Ecological Reserve

Black huckleberry patches within the CRA have been modelled within natural forested areas and within anthropogenic areas of the ski runs (discussed above). The abundance, distribution, availability and annual and multi-year productivity of important Grizzly Bear foods such as black huckleberry likely influence grizzly bear movement (Hamilton *et al.*, 2018) and travel within the CRA.

Riparian corridors generally provide optimal habitat for grizzly bears, providing grizzly bear plant foods (Hamilton *et al.*, 2018) and travel corridors providing the least resistance for travel rather than cliffs, steep slopes narrow terrain etc. (Scallion *et al.*, 2025). Riparian areas have been identified within the CRA in the accompanying Environmental Review (ER) document (Cascade, 2025b)

The surrounding protected Big White Mountain Ecological Reserve could also provide natural food sources and an area mainly void of human access and roads, creating higher quality habitat for foraging



habitat for grizzly bear (Proctor, 2019). Grizzly bears could access this ecological reserve by travelling through the west side of the CRA.

6 Human-Bear Interactions

A comprehensive log of grizzly bear observations recorded by Big White staff and during Cascade field studies is recorded in Table 1.

6.1 Grizzly Bear Interactions

The following significant grizzly bear interactions have been recorded within the CRA within the last two years. All observations were made of grizzly bears utilizing natural food sources rather than non-natural attractants with no conflicts recorded.

Roadkill Carcass

The most significant interaction that had the potential to cause a human bear conflict was an observation of a grizzly bear eating a roadkill deer carcass on the Big White Road. The attraction of roadkill can cause bears to become conditioned to roads and vehicular traffic which can lead to higher risk of vehicle collisions and mortality.

Observations adjacent to Big White Road

A total of four out of fourteen recorded grizzly bear sightings were on the Big White Road or on the verge of the road. No incidents were reported due to vehicular collisions, however bears have been found to have a collision risk usually associated with highways (Highway 3) and busier roads with higher speeds (Clevenger, 2008). The Big White Road is a relatively quieter road in the summer with a speed limit ranging between 30 - 80 km/h and single lane.

Hiking and biking trails

Two out of the fourteen sightings were observed adjacent to or on mountain hiking and biking trails. Both observations were made from a reasonable distance from the grizzly bear and no sudden reaction or defensive behavioral response was recorded by the grizzly to human presence. Two sightings also occurred on a walking trail from the village center to the Snow Pines neighborhood that crosses the Perfection Ski Run. As with the instances of the hiking and biking trails, large sightlines prevented surprise encounters or a defensive response from the grizzly bear to human presence.

Community Garden

Grizzly bear sightings were reported in and around the community garden in 2025, however, with no photo or confirmed verifications. No conflicts were reported between the grizzly bear and community garden users.

Table 1: Recorded Observations of Grizzly Bears within the Big White CRA

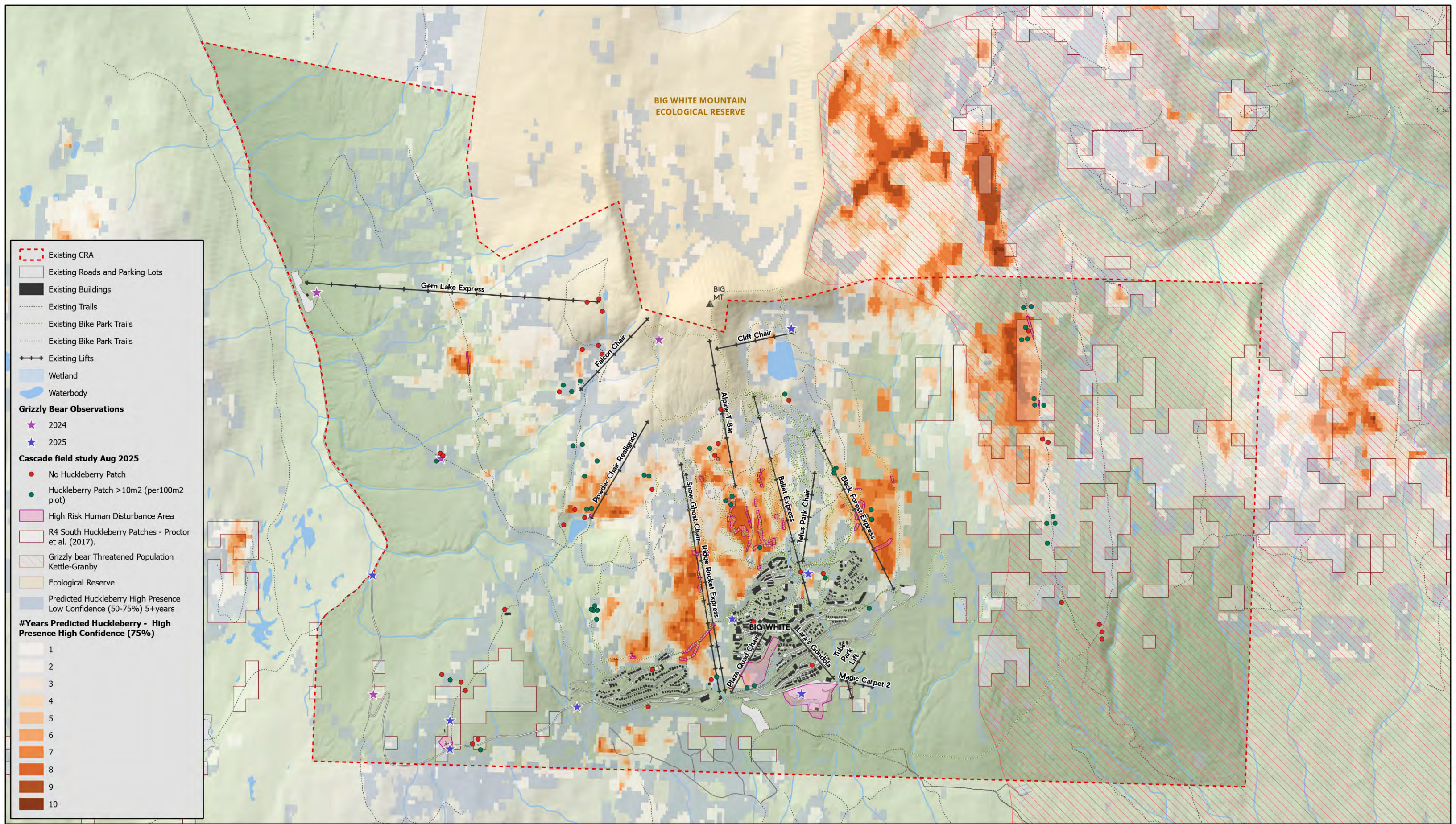
Observation Location	Estimated coordinates	Date	Number and Description of Individual	Bear Activity	Response
Base of Gem Chair Lift	49.74461 N, 118.97906 W	17-Apr- 24	Young single grizzly	Moving through snow covered ski run	None required
Near top of Falcon Chair	49.74179 N, 118.94075 W	06-Jul-24	Young single grizzly	On Upper Falcon Ridge Trail bowl, moving in sub alpine, snow free	Staff member took shelter within the top of Falcon Chair lift hut. Big White closed two hiking trails to limit guest access to area.
Ogoslow Ski Run	49.723955 N, 118.964337 W	28-Sep-24	Young single grizzly	Moving down in elevation using Ogoslow ski run as travel corridor	None Required
Big White Road-Switchback above Gem Chair load area	49.71604 N, 118.97110 W	29-Sep-24	Young single grizzly	Moving across road heading down in elevation	None Required



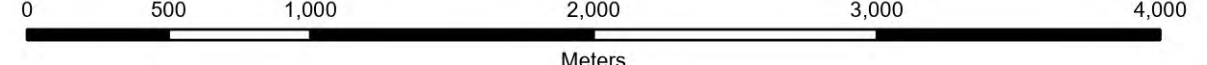
Observation Location	Estimated coordinates	Date	Number and Description of Individual	Bear Activity	Response
Big White Road between Gem Lake Loading area and Waste Transfer Road	49.72451 N 118.97153 W	16-May-25	Female grizzly and two cubs	Moving across road, mother rearing up on two legs and waiting for cubs to cross road with stopped traffic	None Required
On "Perfection" ski run adjacent to Winter Ridge Lodge.	49.72208 N 118.93195 W	May 31 2025	Female grizzly and two cubs	Grazing on green up emergent grass on ski run	None Required
On "Perfection" ski run adjacent to Winter Ridge Lodge.	49.72208 N 118.93195 W	07-Jun-25	Female grizzly and two cubs	Grazing on green up emergent grass on ski run	None Required
Happy Valley Parking Lot	49.71689 N, 118.92413 W	09-Jun-25	Female grizzly and two cubs	Travelling across Happy Valley parking Lot	None Required
On "Perfection" ski run adjacent to Winter Ridge Lodge.	49.72208 N, 118.93195 W	12-Jun-25	Female grizzly and two cubs	Hunting ground squirrels	None Required
Lower Bike Trails	49.72542 N, 118.92373 W	Mid-August, 2025	Female grizzly and two cubs	Moving between ski runs close to bike trails	Bike trails delayed for opening to allow bears space



Observation Location	Estimated coordinates	Date	Number and Description of Individual	Bear Activity	Response
Big White Road close to Big White Sign by Snow Pines Road	49.71553 N, 118.94871 W	14-Aug-25	Female grizzly and cub	Walking on verge of road	None required
Big White Road close to the transfer station	49.712291 N, 118.96256 W	31-Aug-25	Female grizzly and cub	Feeding on roadkill deer carcass on side of road	unknown
Base of Cliff Chair Area	49.14389N, 118.929625W	Mid to late September	Female grizzly and cubs	Grazing	None required
Access road to maintenance shop adjacent to waste transfer station	49.71432 N, 118.96261 W	26-Oct-25	Female grizzly and cubs	Foraging on native vegetation with snow-covered ground	None required



GIS Cartographer: Oliver Chew
 Date: 2025-11-06
 CERG File #: 017-10-04-02
 Projection: NAD 1983 UTM Zone 11N



Map 2 - Hazard Risk Factors and Grizzly Bear Observations

Grizzly Bear Hazard/Conflict Assessment
 Big White
 British Columbia



7 Hazard Assessment of Attractants and Food Sources

Human-bear conflicts and destruction of food-conditioned bears can be avoided through the containment of human food and other non-natural attractants.

7.1 High Risk Human Use Areas

The following areas were identified as areas within the CRA that had the potential to be a high-risk area of human-grizzly bear conflict due to high frequency of use, bear habitat or type of activity;

- Happy Valley RV Campground/Parking Area
- Hiking and biking trails within mid-mountain areas
- Disc Golf Area
- Community School*
- Transfer Station*

*Big White does not have managerial jurisdiction over the Community School or Transfer Station

7.1.1 Hiking and Biking Trails

Conflicts can occur as humans and grizzly bears come into close proximity with each other, whether intentionally or during an accidental surprise encounter (Scallion *et al*, 2025). How a grizzly bear reacts to human presence is unpredictable and dependent on the individual bear and its perceived level of threat (Scallion *et al*, 2025). Quicker and more direct approaches which may occur by mountain bike activities can lead to a more pronounced reaction (Scallion *et al*, 2025). Sudden encounters from humans in close proximity to grizzly bear are unpredictable and could elicit a defensive response (Scallion *et al*, 2025). Hiking and biking trails have been rated a high-risk area due to:

- Decreased sightlines in forested areas
- Presence of valued grizzly bear black huckleberry patches throughout the mountain biking and lower hiking trails.
- Mountain biking activities can occur with speed throughout the network increasing the possibility of surprise encounters

7.1.2 Happy Valley RV Campground/Parking Area

The Happy Valley RV Campground/ parking area is open to guests currently from Thursday-Sunday during summer operations for a booking fee. The area consists of cleared graveled parking lot with forested habitat surrounding the southern perimeter and sections of the east and west perimeter. Tent camping is not prohibited in the area and a bear-proof garbage bin is provided within the lot. The area is therefore being currently managed for bear attractants and there has been no recorded bear conflict interactions in this area. However, the area should be identified for special consideration due to the potential of high human use and non-natural attractants to be present with surrounding grizzly bear habitat features.

7.1.3 Disc Golf Course

The disc golf course was rated as a potentially high risk area as grizzly bear sightings have been directly observed in the area on the “Perfection” ski run where the disc golf course is located. Grizzly bear observations have shown bears foraging on emergent green up of grasses on the ski run during early snow melt in May and scavenging for ground squirrel/marmot in the area (Table 1 and Map 2). Black huckleberry patches were also observed in surrounding forested areas. The disc golf area is mostly confined to a wide ski run which had a low vegetation structural cover including grass and low shrub

vegetation with generally good sightlines if vegetation were to be maintained. The area could lead to close interaction of human and bear interactions if not managed for sightlines.

7.1.4 Community School*

Big White resort does not have managerial direction over the Big White Community School. However, the area was included as a high human risk area due to the high human traffic in the area and the vulnerability of children that use the location. The school has an associated play field and community garden which is surrounded by forested habitat and potential foraging areas and connectivity corridors for grizzly bear.

7.1.5 Transfer Station*

Big White resort does not have managerial direction over the transfer station. However, the area was included as a high human risk area due to the presence and potential of grizzly bear to become food-conditioned and habituated due to human garbage. Further details on the transfer station are detailed in Section 9. However, recently transitioned to an attended site that is open seven days a week in the winter and five days a week in the summer, closed Tuesdays and Thursdays (RDKB, 2025). There were also three grizzly bear observations in and around the transfer station between 2024-2025.

7.2 Hazard Ratings

Risk factors for grizzly bear were divided into natural and non-natural attractants based on the research conducted for the hazard assessment. Grizzly bear attractants were identified from the reported attractants to the Conservation Officer Service with regards to grizzly bears in BC from 2014-2017 as reported by WildSafe BC (WildSafe BC, 2025b). Natural attractants were defined to be food sources that would occur naturally in grizzly bear habitat without human influence. Non-natural attractants were potential grizzly bear food sources available due to the anthropogenic influence on the landscape within the CRA. A subjective hazard rating was applied to each factor based on existing factors within the CRA and the risk of human-conflict behavior if grizzly bears were to access attractant.

The highest rating for natural attractants was the high abundance of black huckleberry within the CRA. Highest non-natural attractants were expected to be refuse-related which could provide high caloric sources in close proximity to human dwellings and increase chances of conflict behavior.

A description of each factor and risk analysis is provided below

Table 2: Grizzly Bear Risk Factor Analysis for Big White Ski Resort

	Bear Hazard Attractant	Hazard Rating
Natural Attractants	Huckleberry Patches	High
	Wildlife	Moderate
	Fish and aquatic life	Low
	Insects	Low
Non-natural Attractants	Waste containment – residential	High
	Waste containment – commercial	High
	Compost	High
	Restaurant grease containers	High
	Carcasses/roadkill	High



	Bear Hazard Attractant	Hazard Rating
	Barbeques	Moderate
	RV Campground-Garbage	Moderate
	Pet food	Moderate
	Bird feeders	Moderate
	Outdoor freezers, fridges and coolers	Moderate
	Pets	Moderate
	Bird feeders	Moderate
	Fruit trees	Low
	Community Gardens	Low
	Oil/petroleum products	Low

Huckleberry Patches

The CRA contains a high abundance of black huckleberry bushes, known to be a main natural food source for interior grizzly bears. Hiking and biking trails that overlap modelled highest presence, highest confidence of black huckleberry patches were identified as high-risk-factor areas. A summary of these identified trails is presented in Table 3. Surprise encounters from mountain biking and hiking activity in these areas also provide a high risk factor in these berry areas.

Table 3: Trails that intersect modelled high presence, high confidence huckleberry patches

Trail	Trail area
Mountain Biking Trails	
Bumble Bee	Last traversing section towards the village
Rocket Science	Lower Sections
Lightning Strike	Lower Sections
Catapult Ranch	Lower Sections
Dark Roast	Lower Sections
Bermslang	Lower Sections
Squirts	Lower Sections
The Joker	Lower Sections
Hiking/walking Trails	
Rhonda Lake Circuit	Mid trail
Falcon Ridge	Small section on lower mountain behind Porcupine Road.
Snow Pines to Village Trail	Along Surprise Ski Run



Surprise encounters from mountain biking and hiking activity in these areas also provide a high risk factor in these berry areas.

Wildlife

Grizzly bears have been observed foraging on ground squirrel or marmot colonies within the CRA. A general observation in the CRA found a high abundance of these colonies in and around ski runs and the village of Big White. These food sources are usually located outside of high human use areas and therefore was rated as moderate.

Fish and Aquatic Life

All five species of spawning Pacific salmon can be a major food source for grizzly bear and can influence movement in the landscape and home ranges (Hamilton *et al*, 2018). The CRA contains no known spawning habitat for Pacific salmon and rainbow trout have only been observed in the watercourse within the CRA. Therefore, this risk factor was rated low.

Insects

Insects do make up part of the natural diet for grizzly bears; however, temporal occurrence is difficult to quantify (Hamilton *et al*, 2018) and there have been no known hazards of grizzly bear foraging on insects that could cause conflict in human areas. Therefore, this risk factor is marked as low.

Refuse Factors

Waste containment residential and commercial Waste, Compost and Restaurant Grease Containers

Refuse risk factors were rated as high as these non-natural attractants are usually located in potentially high conflict areas in residents homes or close to commercial work places e.g. kitchens of restaurants. If grizzly bears did come across these attractants human conflict and defensive behaviors could occur. Therefore, these attractants were ranked as high.

Carcasses/Roadkill

Bear observations recorded grizzly bear feeding on a roadkill deer carcass on Big White Road (Table 1). Roadkill carcasses can provide grizzly bears to be conditioned to roadways and increase the risk of vehicular collision. Therefore, this attractant was listed as high.

RV Campground/Parking Area

RV campgrounds usually provide high traffic areas in proximity to grizzly bear habitat and can be seen as a higher risk factor due to the attractants they can produce, including garbage. Big White RV Campground/Parking Area is an open lot with no vegetation providing large sightlines for bear interactions. The RV Campground/Parking area currently does not see large volumes of use in the summer months but could increase with summer resort development. Bear bins are also currently provided at the RV Campground. Therefore, for the risk factor was rated as moderate.

Pets

Big White residents and visitors will have pets including dogs in the CRA and resort. Dogs are allowed up the mountain on resort hiking trails if on a leash. Off leash dogs can lead to negative interactions and conflicts with grizzly bears, leading to defensive behaviors and human conflicts (Scallion *et al*, 2025). Therefore, this factor was rated as moderate.

BBQ's, Bird Feeders, Outdoor freezers, fridges and coolers, and Pet food

All these attractants are known to be in the Big White residential area. Likely located on balconies or backyard areas of residents. Grizzly bears are not known to be as opportunistic urban scavengers as



black bears who attractants would have a higher risk. Therefore, they rated as moderate risk. Grizzly bears were observed on ski runs adjacent to residential areas, and the risk should not be completely ignored as grizzly bears may find these attractants if within their movement corridors.

Fruit trees and community garden

There are no prominent fruit orchards or trees known to be present in the resort area, including residential housing and risk is thought to be low for a hazard attractant to grizzly bears. A small community garden is located at the Big White Community School with 2-3 vegetable plots and a small green house. The risk is analyzed as low as the area does not see high human traffic and users are aware of bear attractants in the plots.

Oil and Petroleum Products

The most significant oil and petroleum storage areas are located at the maintenance shop area managed by the resort. All oil and petroleum products are secured and managed to prevent attractants to grizzly bears and are rated low risk.

8 Outreach and Education

Big White Resort has conducted the following outreach activities in the resort.

- Bear Signage
- Bear Aware leaflets distribution
- Social media information
- Staff Bear Safety and Bear Spray Training

8.1 Bear Signage

Bear aware signage is placed around the resort area of the CRA in the summer and in high traffic areas including top of Bullet Chair lift, hiking trails and Disc Golf Area (Photo 4). QR codes are made available on signage that link to the WildSafe BC website and further information. The top of Bullet Chair is the main access point for hiking and mountain biking trails and also has a whiteboard that is updated with current bear sighting information in the area by Big White Patrol personnel.



Photo 4: Existing Bear Aware signage within Big White Alpine Area

8.2 Leaflet distribution

WildSafe BC brochures and the QR code linking to WildSafe BC website are distributed to accommodations and hotels within the Big White Resort during the summer months to educate guests, particularly those from out of province or out of country residents who may be unfamiliar with bear safe guidelines.

8.3 Social Media Information

Big White has bear safe awareness guidelines listed on their summer mountain safety webpage. The guidelines provide actions to minimize bear-human interactions and actions to respond to a bear if encountered in the resort. WildSafe BC is also linked to provide additional information.

Big White also provided social media updates on its platforms to communicate management actions when certain hiking trails were closed during the grizzly bear observations in July 2024 (Table 1).

8.4 Perceived Effectiveness of Communications

Social media post comments from the Big White community generally have positive feedback for providing up-to-date information and the action of closing trails for guests and bear safety. Social media would likely be the best form of communication to reach the largest audience in the quickest response. Tourists from out of province or country may not follow Big White on social media as with regular local guests and leaflet and signage may be more effective communication.



8.5 Staff Bear Safety and Bear Spray Training

The Big White health and safety team have provided Big White staff with wildlife and bear hazard sheets used in training presentations. The sheets provide information on avoiding bear encounters and the proper use of bear spray with reference from WildSafe BC. Big White staff are also trained in proper use of bear spray with practical training.

9 Waste Management

9.1 Transfer Station

Residents in single family homes or small developments take their waste to a contained solid waste transfer station within the CRA. The solid waste transfer station is the responsibility of the RDKB and is not managed by Big White. There is no scheduled pickup of curbside garbage in the resort.

Big White Transfer Station has recently transitioned to an attended site that is open seven days a week in the winter and five days a week in the summer (RDKB, 2025).

Garbage is secured in a large utility building with automatic opening and closing doors. A recycling center is also on site. A fence does not complete the perimeter of the transfer station (Photo 5) and acts only to prevent vehicular access from the road from accessing the transfer station outside of opening hours. The transfer station is fully manned during opening hours to monitor bear activity during opening times. Video surveillance is present during out-of-hours operations to prevent illegal dumping at the fences in an unsecured fashion.

The transfer station became a manned site in 2024 (RDKB, 2024b). Previously, the transfer station was a self-service station. Problems occurred at the site with the automatic doors to the secured building resulting in broken doors and access being left open to wildlife. Black bears were observed accessing garbage at the station in 2023 due to these problems (RDKB, 2024b). A manned station was established by the RDKB to reduce wildlife conflicts from accidental openings to the building and prevent oversized tipping of garbage at the site (RDKB, 2024b). The downside of a manned site was that the transfer location was to be closed on certain days due to budget allocation. Having a transfer station that is closed two of the seven days in the summer could cause the risk of dumping of unsecured garbage at the fence, leading to bear attractants. However, having a manned transfer station will allow for regular upkeep and monitoring of the site and will likely result in overall reduction in bear conflicts.



Photo 5: Transfer station at located on Big White Road operated by the RDKB

9.2 Commercial Waste

Larger residential buildings and condo buildings (typically more than 10 units) are managed by strata corporations and usually contain secure garbage room within the building. Waste is hauled to the Glenmore Landfill in Kelowna from these locations.

Big White Resort contains five retail shops, seventeen bar/restaurant/café/deli spaces (of which eight are licensed lounges/bars) (BHA, 2025). Currently only a limited number of restaurants are open during the summer months. Big White owns some restaurants while others are owned and privately operated. A portion of the restaurants have secured garbage dumpsters in an underground parkade located in a garbage room. These dumpsters are believed to be relatively secure as parkade doors are closed the majority of the time and only opened by remote key card or in the event of a power failure/mechanism failure. A portion of restaurants have garbage dumpsters out the back of buildings. Bear security features of these dumpsters are unknown at this time.

9.3 Resort Trails Management

Big White contains bear secure garbage bins in the Village Plaza, Monashee Corner (hiking, biking road access) and the Happy Valley plaza adjacent to the entrance of the RV campground area. Garbage hauling is conducted by Big White on these bear secured bins. There are no garbage bins located on the hiking and biking trails except for at the top of Bullet Chair. This garbage bin is monitored by lift staff and is hauled down at the end of each day on the chair lift and removed to a secure location.



10 Growth and Development

The Big White Resort is primarily focused on outdoor recreation and resort activities, with a main focus on alpine skiing in the winter and lift-accessed mountain biking in the summer. Commercial businesses are focused on restaurants and retail. There is no agricultural or other business use within the CRA.

Big White does propose to develop additional residential areas as part of its phased development plan within the CRA. This could pose additional risks to bear interaction with increase in garbage and other anthropogenic attractants associated with residential areas. Big White also proposes to develop its summer activities to include expansion on mountain bike park trails and lift access, ziplines, alpine coaster, cross-country biking and hiking network and yurt camping areas. These additional summer activities will likely increase visitation in the area during summer months and could cause higher number of users in the mountain area within potential grizzly bear habitat. Human presence can lead to the displacement of grizzly bear from their preferred habitat or a direct loss of habitat by replacement with development infrastructure. A focus on grizzly bear conflict mitigation measures should be developed in the planning stage as summer activities expand to reduce human bear conflicts. Impacts on bear habitat from resort activities is discussed in detail in the grizzly bear management plan (Cascade, 2025a).

11 Laws and Regulations

The following local bylaw documents were reviewed for any potential laws and regulations relating to bears and attractant management:

- RDKB Area E Big White OCP (RDKB, 2023),
- RDKB Area E zoning bylaw (RDKB, 2024a)
- RDKB Solid Waste Management Facilities Bylaw (RDKB, 2021)

Currently, the RDKB bylaws or regulations for the Big White community do not contain wording or guidelines regarding bear and attractant management. The author of this report understands the OCP for Big White is currently under review for update by RDKB staff and is not privy to updated information regarding bear hazard management within this OCP.

12 Community Attitudes

Research on social media posts on grizzly bear sighting from Big White residents generally show a sense of excitement for observing grizzly bears back in the area. Community members provided informational warnings on observed grizzly bear locations to avoid human use in the area or to slow vehicles if seen on road to minimize the risk of vehicular collisions. Comments seem to have the general view to protect the grizzly bears from being a tourist attraction and reduce human use around the bears. Comments also display some wariness for observing grizzly bears in close proximity to residential areas.

13 Conclusions, Recommendations for Next Steps, and Action Items

Grizzly bears have been observed more frequently in the Big White CRA since 2024. The combination of natural black huckleberry patch occurrence, connection to the kettle Granby GBPU to the east and anthropogenic effect with the creation of ski runs provides a travel corridor for grizzly bears in the CRA. Grizzly bear observations have not recorded any human conflict behavior with most observations displaying foraging on natural attractions. The highest risk human conflict areas managed by the Big White included hiking and biking trails within modelled black huckleberry patch habitat, RV campground, and Disc Golf course. The highest natural hazard factors in the CRA included black huckleberry patches



in high human use areas and highest non-natural attractants risk factors included residential and commercial refuse and roadkill. Big White has currently incorporated bear safe practices into its operation including the use of bear safe bins, community outreach including signage and social media posts and adaptive management to trail closures based on grizzly bear observations. Waste management is mainly under the direction of the RDKB at the transfer station which is now manned during operation hours. Big White proposes to expand its summer operations within the CRA and bear human conflict mitigation measures should continue to be assessed and incorporated during development. Currently, no local bylaws or regulations govern bear attractant management in the RDKB and Big White Community area within the CRA. Community attitudes are generally in support of grizzly bear management in the area.

The next steps of the grizzly bear hazard conflict/assessment would be to use the results of this report to complete mitigation measures within a grizzly bear management plan for the CRA.

The content in this plan could also be utilized by Big White residents to work towards a Bear-Smart community status with the RDKB if there is interest in doing so.

14 Signature

Please do not hesitate to contact the undersigned should you have any questions about this report.

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