

Summary of the Current Condition Report for Grizzly Bear in the Kootenay-Boundary Region | 2019 Analysis

Disclaimer: This summary and current condition report was developed solely by the Province of British Columbia. This assessment is based on GIS information and has not been ground-truthed. There will be opportunities for First Nations and the Province of British Columbia to collaborate on future current condition reports, monitor the condition of Cumulative Effects (CE) values and validate the outcomes of these assessments.

Grizzly bears have ecological, economic, and cultural importance in British Columbia (B.C.) as they reflect the overall health of the landscape they live in. Many First Nations in B.C. include grizzly bears in their cultural and spiritual traditions, histories, and philosophies. Ecotourism and bear viewing also contribute to the provincial economy.

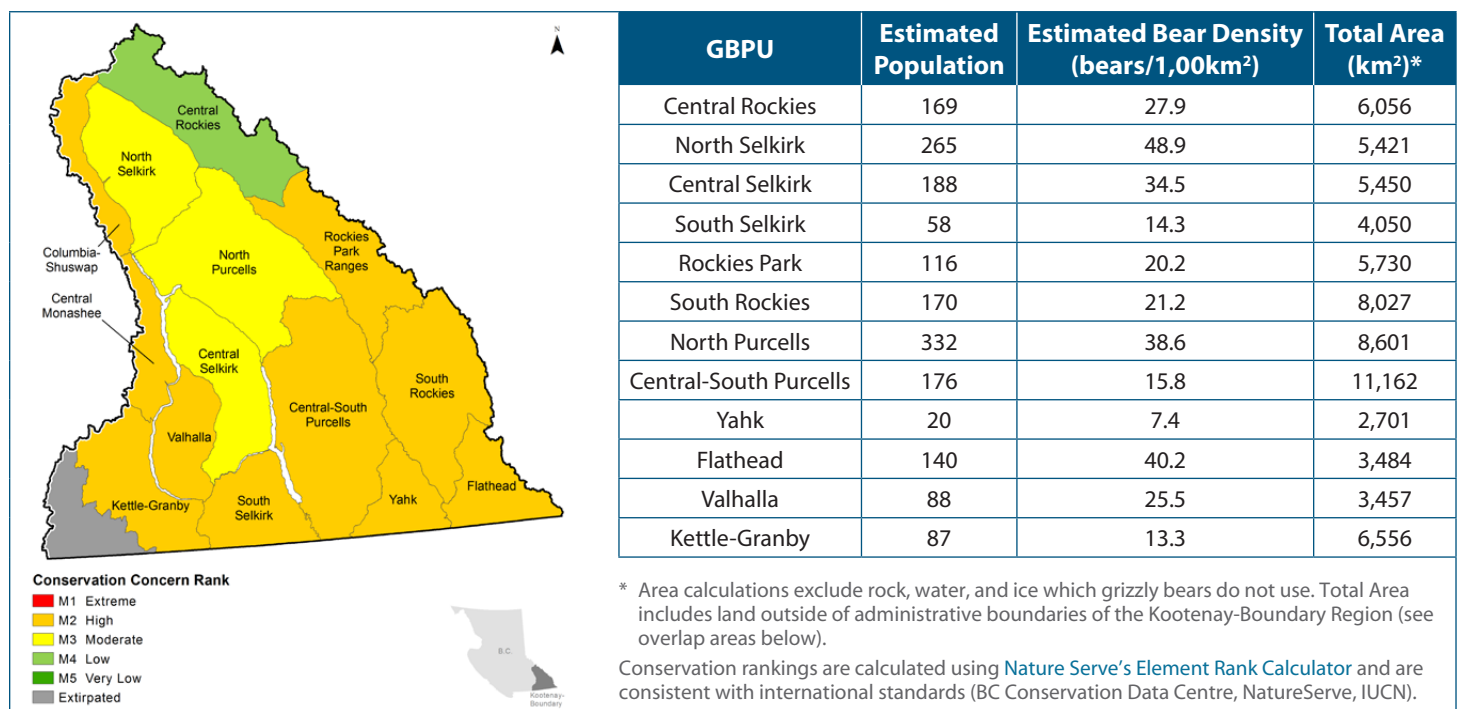
The purpose of this summary is to:

- Highlight results from the [Current Condition Report for Grizzly Bear in the Kootenay-Boundary Region – 2019 Analysis](#); and,
- Inform collaborative discussions among government, First Nations, and stakeholders, including natural resource industries in support of healthy grizzly bear populations.

Grizzly Bear Population Units (GBPUs)

Across B.C., grizzly bears form interconnected populations, which can be divided into sub-populations. For management purposes, B.C. has been divided into GBPUs based on bear biology, ecological boundaries, and management needs. There are five GBPUs wholly or partially located in the Kootenay-Boundary Region (Figure 1).

Figure 1 Conservation Concern Ranking for GBPUs in the Kootenay-Boundary Region. Results for the Central Monashee and Columbia-Shuswap GBPUs are presented in the [Current Condition Report for Grizzly Bear in the Thompson Okanagan Region – 2019 Analysis](#) (March 2022)



Indicators used to assess the status of grizzly bear populations and habitat

The Interim Assessment Protocol for Grizzly Bear in British Columbia – Version 1.2 (2020) is based on a scientific understanding of grizzly bear ecology. This protocol provides a standard methodology for evaluating cumulative effects on grizzly bear populations and habitat across the province. Ten indicators from this protocol were used in this assessment:











	Population Rank: a conservation concern ranking for grizzly bears in GBPUs (following NatureServe ranking methodology).
	Number of Bears (Bear Density): estimated number of bears/1,000 km ² .
	Mortality Rate: percent female mortality (human caused).
	Road Density: total length of roads divided by the size of the area (km/km ²).
	Core Security: suitable habitat larger than 10 km ² found at least 500 metres from people and human infrastructure.
	Front Country: urban and rural landscapes with high densities of people and bear attractants (e.g., human food, garbage, livestock, fruit trees, crops). This includes roads.
	Hunter Day Density: number of hunter days per year in the area's wildlife management units. ¹
	Poor Forage Potential (BEC Mid-Seral Dense Conifer): amount of mid-seral dense conifer forest (associated with low amounts of berry shrubs and other food supply).
	Quality Food: estimate of the amount of quality food sources available (e.g., forbs, berries, grasses, and sedges) and salmon biomass.
	Quality Habitat Protected: amount of high capability grizzly bear habitat protected in conservation areas and wildlife habitat areas.



Photo: Troy Malish

Regional Summary

Grizzly bears are susceptible to cumulative impacts on their populations and habitat from various historic, present, and future human activities and natural disturbances. Overall, grizzly bears are found throughout much of the Kootenay-Boundary Region, apart from a small, extirpated area in the southwestern part of the region² (Figure 1). Industrial development, including mining, road development, forestry activities, hydroelectric activities, urbanization and recreation are present in the Kootenay-Boundary Region. These activities– including the roads and corridors created to enable human access to the backcountry– pose a significant threat to grizzly bears as they may lead to habitat loss, fragmentation, displacement, increased human-bear conflicts, increased risk of mortality, and the loss of quality foods (including berries, white bark pine, grasses and sedges, and freshwater fish). Climate change may also impact grizzly bears in the region.

¹ In December 2017, the B.C. government announced a provincial ban on licensed grizzly bear hunting (other than hunting by First Nations for food, social and ceremonial purposes). This indicator reflects activity of all hunters, not just grizzly bear hunters, to captures direct mortality risk to grizzly bears caused by people on the landscape who may kill a bear in a conflict situation or incidental to hunting other species.

² Grizzly bears may be present in local communities on an occasional basis due to attractants such as food.

Assessment Results

GBPU Assessment Results	
<p>Central Rockies – Low Conservation Concern (M4)</p> <p>This GBPU has moderate bear density (20 to >40 bears/1,000km²) and moderate mortality rates. Low proportions of front country area is present in the northern portion of the GBPU and provides some core secure habitat for grizzly bears in this area. Quality food sources are also present in the north and central portion of this GBPU. However, there is a lack of habitat protection in the GBPU, apart from the northern portion of the GBPU where Hamber Provincial Park and Cummings River Provincial Park are present, as well as Yoho National Park to the south.</p>	<p>North Selkirk – Moderate Conservation Concern (M3)</p> <p>This GBPU has very high bear density (40 to >50 bears/1,000km²), low to moderate mortality rates, and high proportions of core secure habitat. However, the GBPU has a high proportion of front country area, despite moderate road densities in this GBPU. Habitat protection varies greatly throughout this GBPU (0->60% protected), and has limited areas that support quality foods for grizzly bears.</p>
<p>Central Selkirk – Moderate Conservation Concern (M3)</p> <p>This GBPU has high bear density overall (30 to <50 bears/1,000km²). However, the GBPU exhibits low to moderate mortality rates, moderate to high road densities, high proportions of front country area, and lacks core security habitat for grizzly bears. Quality food sources are present throughout the majority of the GBPU. These food sources overlap with existing areas of habitat protection in the northern portion of the GBPU.</p>	<p>South Selkirk – High Conservation Concern (M2)</p> <p>This GBPU exhibits low bear density (10 to <20 bears/1,000km²), high road density, and high proportions of front country area. Core security varies throughout the GBPU but is highest in the northern portion. Quality food sources are present throughout the eastern portion of the GBPU and overlap with existing areas of habitat protection.</p>
<p>Rockies Park – High Conservation Concern (M2)</p> <p>This GBPU exhibits low bear density (10 to <20 bears/1,000km²), high proportions of front country area, and an overall lack of quality food sources. Low to moderate road densities exist throughout the majority of the GBPU, apart from the western portion where Highway 93 is present. However, the majority of the eastern portion of this GBPU has good core security and a significant amount of habitat protection.</p>	<p>South Rockies – High Conservation Concern (M2)</p> <p>This GBPU has moderate bear density (20 to >40 bears/1,000km²). Moderate road densities exist throughout the majority of the GBPU, apart from the western portion where Highway 93 is present. The GBPU has high proportions of front country area, high mortality rates, low core security, and lacks quality food sources and habitat protection. Notably, the grizzly bear population in this GBPU is supported by immigration from other areas and is a sink habitat.</p>
<p>North Purcells – Moderate Conservation Concern (M3)</p> <p>This GBPU has very high bear density overall (40 to >50 bears/1,000km²) and good amounts of core security habitat for grizzly bears in the central portion of the GBPU. Low to moderate road densities also exist throughout the majority of the GBPU, apart from the eastern portion where Highway 93 is present. Quality food sources are present throughout the central portion of the GBPU where the majority of habitat protection exists. However, the entire GBPU has high proportions of front country area due to human presence and activities.</p>	<p>Central South Purcells – High Conservation Concern (M2)</p> <p>This GBPU exhibits low bear density (10 to <30 bears/1,000km²). Low to moderate road densities exist throughout the majority of the GBPU, apart from the eastern portion where Highway 93 is present. Core security varies throughout the region, but is lacking in the southern portion of the GBPU due to proximity to human settlement. This overlaps with the area of high mortality rates in the GBPU. Quality food sources are present throughout the central portion of the GBPU where the majority of habitat protection exists from the Purcell Wilderness Conservancy Provincial Park and Protected Area.</p>
<p>Yahk – High Conservation Concern (M2)</p> <p>This GBPU has the lowest bear density in the region (<10 bears/1,000km²) and has high mortality rates, low core security, and high proportions of front country area. This GBPU has the highest road density in the region due to the presence of major highways (Highways 95) and human settlement around communities including Cranbrook and Elko. Quality food sources are present in a few Landscape Units (LUs) throughout the GBPU, and the GBPU has moderate habitat protection throughout.</p>	<p>Flathead – High Conservation Concern (M2)</p> <p>This GBPU has high bear density overall (30 to <50 bears/1,000km²). However, the entire GBPU has high road density, moderate to high mortality rates, and high proportions of front country areas. Core security areas vary throughout the GBPU. Quality food sources are present in the eastern portion of the GBPU, however the majority of the GBPU lacks habitat protection for grizzly bears.</p>
<p>Valhalla – High Conservation Concern (M2)</p> <p>This GBPU has moderate bear density (varying between 10 to >50 bears/1,000km²) and moderate road density. However, the entire GBPU has high proportions of front country area, and the majority of the southern portion of the GBPU lacks core secure habitat for grizzly bears. Quality food sources are present in the western portion of the GBPU, while the majority of the habitat protection exists in the eastern portion of the GBPU.</p>	<p>Kettle-Granby – High Conservation Concern (M2)</p> <p>This GBPU exhibits low bear density (10 to <20 bears/1,000km²), low core security, and high proportions of front country area. High road density is also present throughout the GBPU. However, the GBPU has a significant amount of areas that have habitat protection measures, which overlap areas with quality food sources.</p>

Opportunities for Improvement

Resource specialists and decision-makers could consider various mitigation measures to support grizzly bear populations and habitat. Some mitigation measures could include:

- Deactivating and/or restricting access on roads and corridors in high priority grizzly bear habitat, particularly where forage capability is high but core security areas do not exist;
- Addressing expansion of humans into remote/backcountry areas;
- Establishing grizzly bear Wildlife Habitat Areas in locations where grizzly bear habitat capability is high but populations are pressured by the combined effects of high road density, and low core security areas could offer additional protection to grizzly bears now and in the future;
- Adjusting forest planning and other practices in priority grizzly bear habitat to conserve or enhance the long-term availability of seasonal foraging habitats (e.g., berry production) and limit future disturbance by removing in-block and spur roads as soon as development is finished.
- Adjusting best practices for development project and activities to mitigate project impacts to grizzly bear populations and habitat; and,
- Mitigating and reducing human-bear conflict by educating local communities on bear-smart initiatives (e.g., WildsafeBC, Bear Hazard Assessments) and implementing measures to reduce attractants (e.g., electric fencing, improved waste management, etc.).



Photo: TJ Gooliaf