



Grizzly Bears: Habitat Security and Mortality Targets

Background – Mountain Parks

A Need for Change

Management plans for the mountain parks need to reflect improved tools and new targets for managing and monitoring the status of grizzly bears.

Background

- The management plans for Banff, Yoho, Kootenay and Jasper national parks identify grizzly bears as a priority species.
- The status of grizzly bear populations in Mount Revelstoke and Glacier national parks is currently not a concern; this may change with increasing regional development.
- Waterton Lakes National Park is small and its grizzly bears, part of a larger population in Montana, Alberta and British Columbia, travel back and forth across park boundaries.
- Grizzly bears are widely accepted as an indicator of the health and diversity of mountain ecosystems, and as a measure of sustainable land use practises. In the mountain parks, habitat security and grizzly bear mortality are used as measures of ecological integrity.
- Habitat security reflects both the physical quality of the habitat and the level of human disturbance. Grizzly bear habitat is considered secure when the probability of meeting humans is low, thereby reducing the risk of dangerous behaviour.

Existing Management Plan Direction

The management plans for Yoho and Kootenay identify habitat effectiveness targets (table 2; map 2) and actions to determine habitat security targets (section 3.11.3.7).

The *Banff National Park Management Plan* describes a “Framework for the Conservation of Grizzly Bears,” which defines habitat security and indicates a desire to improve habitat security and effectiveness (section 5.6.2).

The *Jasper National Park Management Plan* refers to “security areas” for grizzly bears (sections 3.5.3.3 & 3.11.3.3); these do not correlate directly with the habitat security measure.

The *Waterton Lakes Management Plan* includes targets for habitat security (the best estimates at the time - p 36), mortality (0%), and for females with cubs less than two years old (three or more per year - p 21).

In the 1990s, Parks Canada set a human-caused mortality target of less than one per cent per year, the best estimate at the time. The management plans for Banff (section 3.11.2 and 5.6.2.2), Yoho and Kootenay (section 3.11.3.14; Table 1), and Jasper (Table 1) include this target.



The Mount Revelstoke and Glacier management plan refers to reducing female grizzly bear mortality (section 4.5.3.5).

Considerations

- There are no quantifiable grizzly bear population estimates for the mountain parks. Working estimates, based on a variety of sources, are 60 grizzly bears in Banff, 12 in Yoho, 12 in Kootenay, and 60 - 80 in Jasper. Revised estimates for Banff and Jasper will be available soon.
- A hair snag DNA study in 1997 estimated the regional grizzly bear density for southwest Alberta (including Waterton) at 12 bears/1,000 km². A similar study in 2007 estimated the density at 18 bears/1,000 km².
- Recent scientific research reveals that grizzly bears in Banff have the lowest known reproductive rate for the species.
- The uncertain status of grizzly bears and the reproductive rates in Banff highlight the need for very conservative management of the grizzly bear population.
- New research suggests the survival of reproductive females is the key factor affecting the population; scientific analysis and multi-stakeholder review have identified new mortality targets for female bears.
- The minimum target for secure grizzly bear habitat in Yoho, Kootenay, and Banff is 68%, a target used by several other jurisdictions.
- The State of the Park Reports for Banff, Kootenay and Yoho reveal that only 31 of 40 landscape management units (LMUs) in the three parks currently meet the 68% security target.
- The State of the Park Report for Jasper rates habitat security in terms of good (>78% secure), fair (68% - 78% secure), or poor (<68% secure). In Jasper, 75% of the LMUs have good habitat security, while only one LMU has poor habitat security.
- The targets and thresholds for the four contiguous mountain parks should be consistent with Jasper's.
- Mount Revelstoke and Glacier national parks may also consider establishing habitat security targets as regional development increases around the park.
- The factors that influence habitat security for grizzly bears (proximity to developed areas, roads, etc.) also directly influence the quality of the wilderness experience for people – the chance to be alone in the mountains, surrounded by natural sounds and vegetation. These experiences are becoming increasingly rare and, therefore, increasingly valuable.

New Directions

Parks Canada welcomes public comments on the following proposed direction for the revised management plan.

Use the “Framework for the Conservation of Grizzly Bears” from Banff’s management plan to prepare a revised framework for Yoho, Kootenay, Banff and Jasper. The new framework will reflect the most recent research and understanding regarding habitat security and female mortality.

Use habitat security as a tool for conserving grizzly bears and providing opportunities for wilderness experiences.

Maintain or improve existing habitat security levels in all LMUs. Achieving grizzly bear habitat effectiveness targets will also enhance the quality of wilderness experiences.

Set the minimum threshold for secure habitat at 68% in at least 90% of LMUs in the four contiguous mountain parks.

Identify strategies to improve habitat security in areas that are now below the 68% target. In some areas, such as the Jasper and Banff townsite management units, the 68% target may not be achievable given the level of human activity. In these units, a more important target is to see improvements in the trend.

Identify strategies to improve habitat security in order to move areas currently above 68% closer to the target of 78%.

Revise mortality thresholds for grizzly bears in the four contiguous mountain parks to reflect the focus on adult females.

Maintain the current target of keeping the human-caused mortality of independent female grizzly bears below 1.2% annually, based on a four-year running average.

Continue to refine the existing targets in Waterton Lakes National Park; work with neighbouring land managers to establish realistic regional targets, ensuring “populations of native wildlife are viable within the regional ecosystem” (3.11.1 strategic goal); include movement corridors between secure habitats.

Improve understanding of grizzly bear habitat quality, habitat security, and population dynamics in Mount Revelstoke and Glacier; work with communities to strengthen stewardship responsibilities on lands adjacent to Mount Revelstoke and Glacier National Parks.