

Banff National Park



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# Lake Louise: sharing the land with grizzly bears

The Lake Louise area has become a focal point for grizzly bear management in Banff National Park. The survival of grizzly bears and their cubs in this relatively small area of the Central Rockies Ecosystem influences both the park and region's grizzly population. The area contains important bear habitat and a concentration of adult female grizzly bears. It also receives over 2.8 million visitors a year with use increasing annually. How we choose to share and behave in this landscape has consequences for both bears and people.

There are about half as many grizzly bears in North America today, as there were a century ago. Grizzly bears are now listed as a *Special Concern* species by the Committee on Endangered Species in Canada (COSEWIC). This means the species has characteristics that make it particularly sensitive to human activities or natural events. Specifically, grizzly bears reproduce slowly, require large home ranges, and are thinly dispersed across the landscape.

Female grizzly bears in the Bow River watershed have the lowest reproductive rate of any studied grizzly bear population in North America. They don't reproduce until they're 6-9 years of age, and then have only two cubs every 5-7 years. This means this population has little resiliency to "bounce back" from an increase in mortality or a decrease in the birth rate.

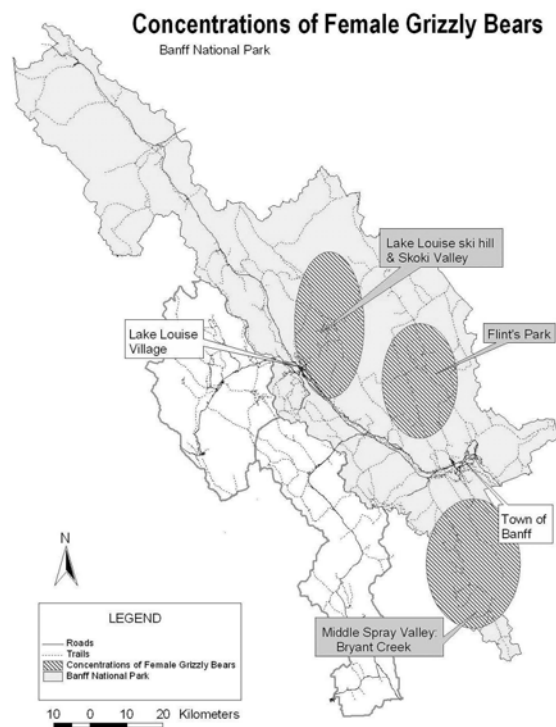
**Births must balance deaths for a population to be self-sustaining.**

It's estimated that around 60 grizzly bears live in Banff National Park. About 16 of these are adult females. The Lake Louise area is home to about one third of them. Along with the middle Spray Valley and an area known as Flint's Park, the Lake Louise area supports a concentration of reproductive female bears. These females and their offspring represent the birth side of the population equation.

To successfully raise cubs, these bears need to be able to use good quality habitat and live long lives. A healthy grizzly bear population reflects a healthy ecosystem.

In the wild, bears can live up to 25-30 years of age; however, most die early human-caused deaths. Until the early 1980s, grizzly bears suffered high human-caused mortality in national parks related to poor garbage management practices. In the Lake Louise area, a particularly high number were destroyed or relocated.

Recently the local population has begun to rebound from this high mortality.



# The challenge

Based on recommendations from the Banff-Bow Valley Study, the 1997 Banff Management Plan set targets to improve effective habitat and to reduce annual human-caused grizzly bear mortality to 1% or less of the park population; this translates to less than one bear per year.

In 2000 and 2001, three young grizzlies (two females) died in separate events on the railway and Trans-Canada Highway near Lake Louise. One had two small cubs that survived her death in 2001. They made it through the winter, but the one-year-old female was killed on the Trans-Canada in early June. The odds are stacked against her brother. To help bears survive in Banff National Park, we need to understand how they use the landscape and reduce the challenges our own use inadvertently creates.

## What bears need

Like all species, bears need habitat that provides for their daily and seasonal needs. Within their home ranges, grizzly bears seek out seasonal foods, mates, den sites, travel routes, and nurture and raise cubs; they make choices to survive. These choices have become complicated by how we have developed the landscape they rely upon.

When you stand in the valley bottom by Lake Louise you are beside the backbone of the North American continent, the Great Divide. Soaring above the south side of the highway are impressive rocky peaks: Mts. Temple, Saddle, Fairview and St. Piran. These mountains demonstrate that nearly half of Banff National Park is rock and ice. Green space or habitat is both limited and marginal for bears in the park's mountainous landscape.

This rugged terrain naturally fragments habitat and dictates how bears can travel through it from one habitat patch to another. The best, most continuous habitat for bears and many other wildlife species sweeps along major valley floors like the Bow Valley bottoms also serve as important wildlife movement corridors.

In the Lake Louise area, bears have run

low on options to avoid people. As they seek their life requirements, bears must cope with the busy Trans-Canada Highway, the Canadian Pacific mainline, the hamlet of Lake Louise, the Bow Valley and Icefield Parkways, busy trails and backcountry campgrounds, summer use on the ski hill, and several outlying commercial accommodations. These developments fragment the habitat into patches of varying sizes. Bears are increasingly challenged to effectively and safely use this fragmented habitat.

From 1996-2001, Alberta's human population rose 10.3%. The Calgary-Edmonton corridor is one of four major urban centres in Canada. It borders the eastern edge of the grizzly bear's current range. The Bow River watershed is one of the most heavily used and developed landscapes in North America where grizzly bears still survive.

### Bear Foods

*Grizzly bears eat a variety of plants at specific stages of growth throughout the year; meat constitutes about 15% of their diet. Bears have about seven months to meet their nutritional requirements for the entire year. They must move up and down in elevation and across the landscape to take advantage of these widely scattered food sources.*

#### spring & early summer

- Sweet vetch roots (*Hedysarum*)
- Glacier lily bulbs
- Spring beauty bulbs
- Winter-killed animals (carrion)
- Grasses and sedges
- Clover and dandelion
- Horsetail (*Equisetum*)
- Newborn calves of elk, deer or moose

#### late summer & fall

- Ants and ant larvae / grubs
- Buffaloberry
- Currant berries
- Blueberry/huckleberry (less common here)
- Bearberry
- Crowberry
- Whitebark pine nuts
- Ground squirrels and marmots
- Hedysarum roots (especially when berry crop fails)

## How we affect bears

Increasing human activity associated with trails and other developments affects grizzly bears in three broad ways, and each has consequences:

- Bears are *displaced* from important habitat
- Bears may begin to tolerate people or become *habituated*
- Bears have an increased chance of being *killed* on the highway or railway.

### Displacement

In the Lake Louise area, bear behaviour ranges from bears that are very wary of people to bears that are very habituated to people. Generally grizzly bears are wary and try to avoid people. Near a busy trail in good habitat, they may do this by feeding early or late in the day. With constant human disturbance, they may be displaced completely from preferred habitats like grassland or shrub meadows, forest edges, and areas near water. They may be forced into poorer quality habitats and have to expend more energy to find food — energy they need to conserve and store as fat to successfully hibernate and reproduce.

### Habituation

Alternatively with repeated exposure to the sights, sounds and smells of people, some bears lose their wariness of people. They become *habituated* to people. 'Teenage' bears striking out on their own, and adult females with cubs tend to dominate this group. These are the bears most important to the growth side of the population equation.

Young bears are at the bottom of the social ladder and on a learning curve — like human teens, they're willing to take risks. They may learn to tolerate people to

access natural foods growing in and around developments. Sows with cubs may also choose habitat close to people as a way to avoid adult male bears that may pose a risk to their cubs.

Research in Yellowstone National Park indicates that habituated bears are three times more likely to die a human-caused death. Habituated bears are more likely to enter townsites and campgrounds, places where they may get into carelessly stored garbage or food. Bears that associate people, vehicles or facilities with food are usually destroyed. Since habituated bears spend more time near the railway and roads, they are also more likely to be struck and killed on them.

## Mortality on roads and rails

Near Lake Louise, the Trans-Canada Highway averages 13,100 vehicles on a summer day, and the CP mainline carries 30 freight trains daily. Though wary bears typically avoid busy developments, at times, they must attempt to cross roads, highways and railways to seek out seasonal foods, or mates. They risk being struck and killed.

Some wary bears, especially females, may not even attempt to cross a busy highway. Small isolated populations are at greater risk of local extinction due to factors like in-breeding, or an inability to recover from disease or adapt to land changes.

## Sharing the land

To live long lives, grizzly bears need to remain wary of people. This means they need to be able to access quality habitat without constantly bumping into people.

## Grizzly bears need security

Wary bear behaviour can best be maintained and passed on to cubs by ensuring female grizzly bears have secure areas. Secure areas give a bear enough space to forage in its home range on a daily basis without being disturbed by people.

Parks Canada is currently examining ways to provide more secure habitat for female grizzly bears in the Skoki, Pipestone and Baker Valleys. Overall, these valleys will continue to provide opportunities for people to enjoy their beauty, but in a way that helps protect both bears and people.

We can help reduce our individual disturbance to bears by making our use of the backcountry more predictable to them in time and place. To help increase a bear's ability to use the landscape, but avoid you, please:

- Stay on park designated trails. Concentrate your use to main daylight hours.
- Hike in a group. At times in the Moraine Lake area, you may be legally required to hike in a tight group of six or more to help reduce encounters between bears and people.
- Keep your pet on a leash. Consider leaving it at home.



- If a bear warning sign is posted at a trailhead, consider hiking somewhere else. A bear warning indicates an elevated level of bear activity in an area.
- Respect Closures. Short term Closures are used when one or more bears are using an important food source such as carrion (a dead animal), or if a sow grizzly with cubs is concentrating its use to an area.

## Grizzly bears need quality habitat.

Past fire suppression practices have resulted in older, dense forests with limited bear foods replacing open forest and meadow habitats. This has also resulted in a build-up of woody fuel that increases the



*Fire stimulates growth of bear foods*

risk of uncontrollable wildfire to park facilities. Fire will be reintroduced in the Pipestone Valley to provide grizzly bears with more habitat options in the future.

## Grizzly bears need to stay connected

To meet their basic needs, bears must be able to safely move through the landscape. Wildlife habitat linkages or movement corridors between areas within and beyond a bear's home range need to be maintained. Young male grizzly bears typically travel greater distances, and establish larger home ranges than females. Such movements help 'mix up' the gene pool and prevent in-breeding.

To facilitate these wider travels, wildlife movement corridors in the Lake Louise area need to tie into a regional network of movement corridors. Many of the park's estimated 60 grizzlies have home ranges that cross into other land management jurisdictions. Parks alone cannot sustain grizzly bears on the landscape. For this reason, Parks Canada is working with other land use managers such as the provinces of Alberta and British Columbia to coordinate bear conservation efforts.

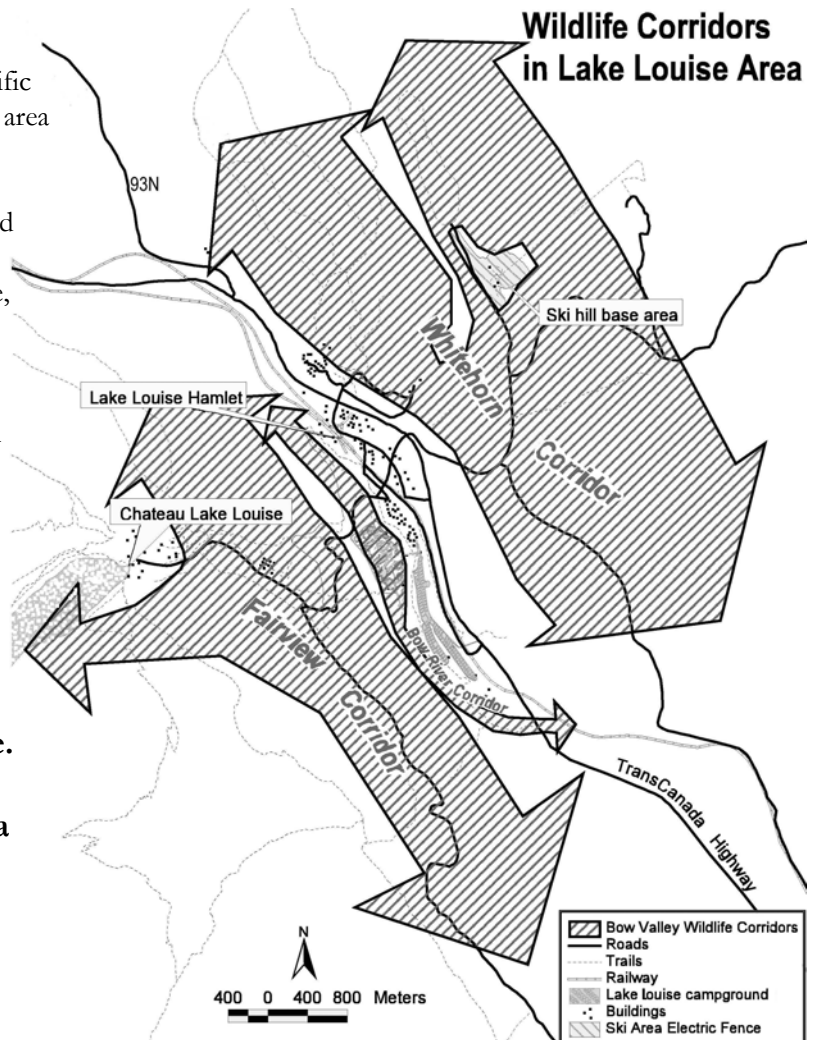
# Stepping forward

Based on the best information available, a number of specific bear management actions are underway in the Lake Louise area to help protect bears and people. These actions are inter-related and share common goals:

- to allow bears to move safely through the landscape and access quality habitat,
- to reduce the risk of conflict between bears and people, and
- to provide people with opportunities to share and gain insight into the park's larger community of life.

Research continues around the effects of human activity on grizzly bears, and the birth and death rates of the local population to help assess and guide management actions.

**We have the ability and responsibility to weigh the effects of our actions on other species. With creativity and open discussion we can share and behave in this landscape in ways that give grizzly bears the space they need to survive. This will help protect the unique nature of the Lake Louise area and ensure it continues to be a place for both people and bears.**



The 1997 Banff National Park Management Plan is currently undergoing its five-year review. Parks Canada in consultation with an advisory group is also in the process of developing a human use management strategy for Banff National Park. A first draft will be released at the Banff Planning Forum in November, 2002. Specific to the Lake Louise area, Parks Canada is working with an advisory committee to develop an integrated management approach. The Lake Louise Planning Initiative has a goal to:

- improve ecological health,
- provide for a range of high quality national park opportunities,
- reinforce the important role the Lake Louise area has played in the park's evolution, and
- respect a sustainable economy.

*This is the first in a series of information bulletins on bear management in the Lake Louise area. Others are available through the park website or the Lake Louise Visitor Centre.*

## Ways to stay informed

To get a current park trail report, bear safety publications or information about the many visitor opportunities in the Lake Louise area:

- visit or phone our Visitor Centres in Lake Louise (403.522.3833) or Banff (403.762.1550)
- visit our web site (see 'recreation'): [www.parkcanada.gc.ca/banff](http://www.parkcanada.gc.ca/banff)
- phone: 403.760.1305 (trail report recording)
- listen to Banff Park Radio 101.1 FM for trail reports on the half hour; also on audio at [www.friendsofbanff.com](http://www.friendsofbanff.com)

**Your comments about current management actions in the Lake Louise area are most welcome.**

**Superintendent**

**Parks Canada:**

**Lake Louise, Yoho and Kootenay Field Unit**

JMK, July 2002

**Banff National Park**

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