



South Chilcotin Mountains Park and Big Creek Park Management Plan

January 2019



BC Parks

South Chilcotin Mountains Park and Big Creek Park Management Plan

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This document replaces the Big Creek
Park Management Direction Statement,
approved in November 1999.

Vision

This vision statement describes the future state and management that is desired for South Chilcotin Mountains and Big Creek parks. The vision statement provides long-term direction for park managers while aiding them in making decisions regarding current issues.

Big Creek Park and South Chilcotin Mountains Park are wild places containing a diversity of healthy ecosystems, ranging from high alpine in the south to the low wetlands in the north. The ecological integrity¹ of these two parks is secured with their designation as Class A parks, allowing them to act as centres of biological diversity within the larger area. The large size of the parks, elevational sequences, diversity of landforms and ecosystems, and connectivity to surrounding areas help moderate the effects of climate change and enables the adaptation of ecosystems and the associated species that depend upon them.

Healthy wildlife populations continue to roam the wilderness. Grizzly Bear and Moose have recovered to levels where they now contribute to surrounding populations. Other species that complete the wildlife community include California Bighorn Sheep, Mountain Goat, Grey Wolf, Cougar, Lynx, Wolverine and Fisher. These species occupy all suitable habitats within the parks. Complementary management of lands adjacent to the parks ensures that the parks have not become “islands of protection.”

Species at risk find a secure area, protected from threatening activities and land use impacts. Whitebark pine shows signs of recovery from decline and continues to contribute its significant benefits to the ecosystem.

Visitors experience a pervading sense of wilderness and adventure while participating in a variety of backcountry recreational activities. Visitors are enveloped by beauty and solitude and develop memorable experiences as they discover healthy and functioning wilderness ecosystems. All appropriate activities are managed to maintain the conservation values around which they revolve. After decades of recreational use, the area remains in a pristine state with little evidence of human use.

Respect for the land is inherent, with those who visit or make a living from the parks exhibiting a strong sense of stewardship. Not only do visitors experience this remote and wild area, but they come to learn in this open air classroom. Citizen science greatly assists with the understanding and management of park ecosystems and contributes to inventory, monitoring, research and restoration work.

The cultural heritage of the landscape continues to be appreciated by those who experience the parks.

¹ Ecological integrity occurs when an area or network of areas supports natural ecosystem composition, structure and function, and a capacity for self-renewal.

Plan Highlights

South Chilcotin Mountains and Big Creek parks contain highly significant ecological and recreational values. Wildlife species within the parks are those usually associated with wild and remote regions. This includes Grizzly Bear, Mountain Goat, California Bighorn Sheep, Wolverine, Bald Eagle and Golden Eagle. These species roam over large areas and have specific requirements for critical habitats.

Closely intertwined within the areas frequented by wildlife is an internationally recognized trail system that is used by an increasing number of recreational users taking part in horseback riding, hiking and mountain biking. The parks play a key role in providing economic opportunities for nearby communities and tourism operators as recreation demand increases in the area.

Protecting ecological integrity, including maintaining required habitats for wide-ranging wildlife species, while providing recreational opportunities that are shifting in the amount and type of use, are high priorities. Two key challenges include the goal of a Grizzly Bear population recovery in an area prized by recreational users, and meeting the expectation of visitors for a remote, backcountry experience in parks with increasing numbers of visitors on multiple use trails, many of whom access the parks by floatplane.

This management plan provides direction for an adaptive approach to management in the face of information gaps on wildlife movements and critical habitats and potential impacts of access and recreational activities. A cautious approach is taken to minimize ecosystem impacts, and there is the expectation that all users will cooperate and work together in protecting and enhancing park values.

Key strategies will be to:

- collect and map information on ecological values and critical wildlife habitats to inform decisions on access, recreational activities, facilities and future zoning changes in the parks;
- integrate the parks into the larger recreation and conservation landscape through cooperation with adjacent land managers;
- add available lands adjacent to the parks to secure protection of park integrity, provide needed attention to the condition and impacts of the existing trail system;
- increase BC Parks' presence in the parks;
- ensure that visitors know how to behave in bear country and how to prevent ecological impacts in sensitive environments; and
- develop floatplane access plans that meet the expectations of park visitors and protects conservation values.

Moving forward with these key strategies will require a cooperative effort between BC Parks, visitors, stakeholders, local communities and First Nations.

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1.0 Introduction

1.1 Management Plan Purpose

The purpose of this management plan is to guide the management of South Chilcotin Mountains Park and Big Creek Park. A single management plan was prepared for both parks due to their adjacency, and similarities in their natural values, ecosystems, recreational uses, interested communities, stakeholders and First Nations.

This management plan:

- articulates the key features and values of the two parks;
- identifies appropriate types and levels of management activities in each park;
- determines appropriate uses and development in each park;
- establishes the long-term vision and management objectives for the two parks; and
- responds to current and predicted threats and opportunities by defining a set of management strategies to achieve the management vision and objectives of each park.

1.2 Planning Area

South Chilcotin Mountains and Big Creek parks are located in southwest British Columbia, approximately 80 kilometres west of the town of Lillooet, 100 kilometres southwest of Williams Lake and 180 kilometres north of Vancouver (Figure 1). Figure 2 shows the parks in more detail.

South Chilcotin Mountains Park encompasses 56,796 hectares of rolling mountains and alpine areas while Big Creek Park consists of 67,918 hectares (combining for approximately 125,000 hectares of protected wilderness), transitioning from high, rolling mountains and plateaus in the south, to low wetlands in the north.

Access to South Chilcotin Mountains Park is by Highway 40 from Lillooet, a road that has to be driven with caution due to the frequent and ongoing rockfalls; or over the Hurley Forest Service Road from Pemberton (a seasonal gravel road described as rough and bumpy). Most entry into the park is achieved from trailheads accessible by forest service roads approaching the park on the south and east boundary, but many visitors access the park by floatplane, primarily landing on Spruce Lake. Big Creek Park can be accessed either from the southeast through the same forest service roads that access the east side of South Chilcotin Mountains Park, although these are unmaintained and may be in poor or impassable condition, or by Highway 20 from Williams Lake, then south on Forest Service Road 2000 to the community of Big Creek, then by forest service roads to trailheads to the north of the park.

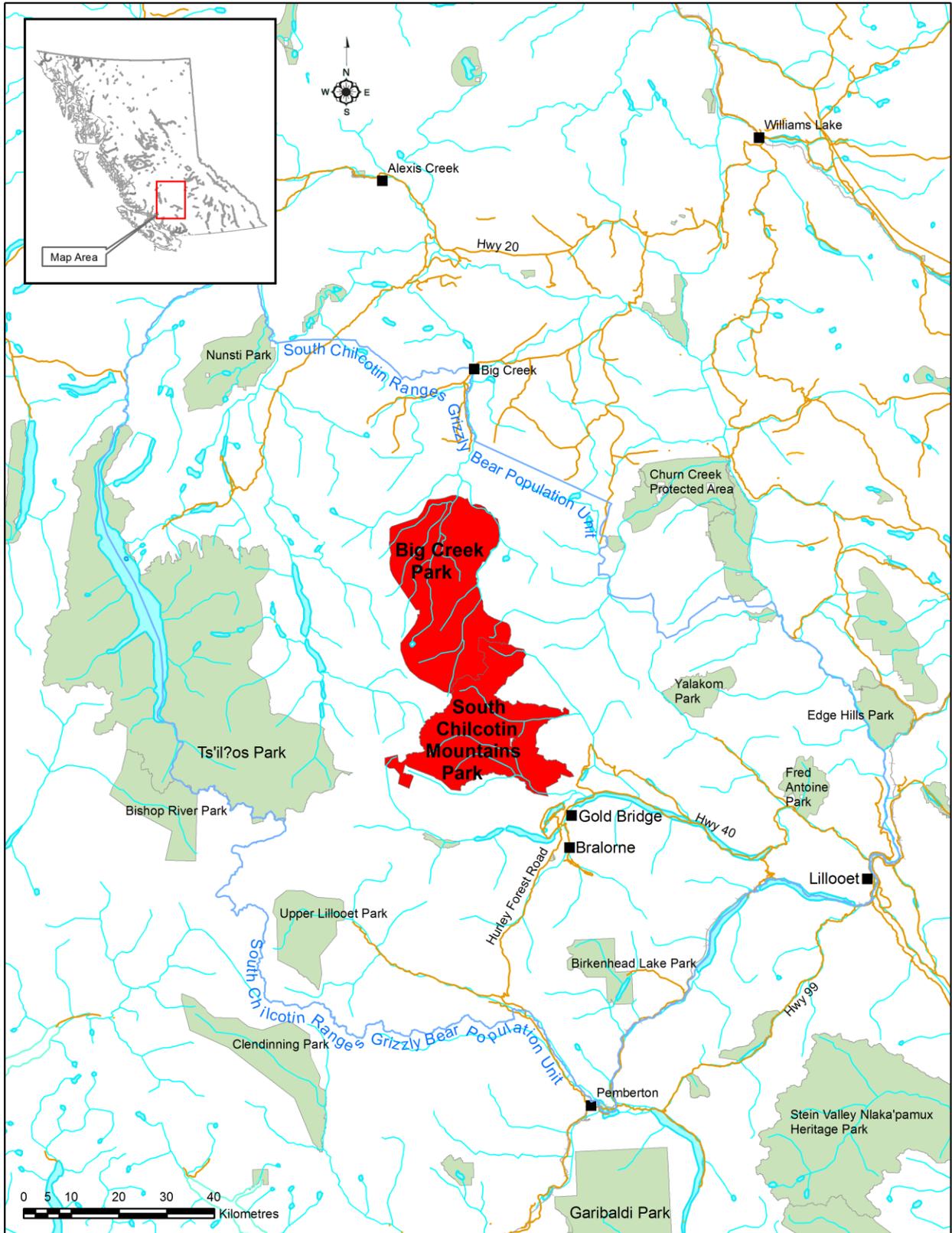


Figure 1: Context Map for South Chilcotin Mountains Park and Big Creek Park

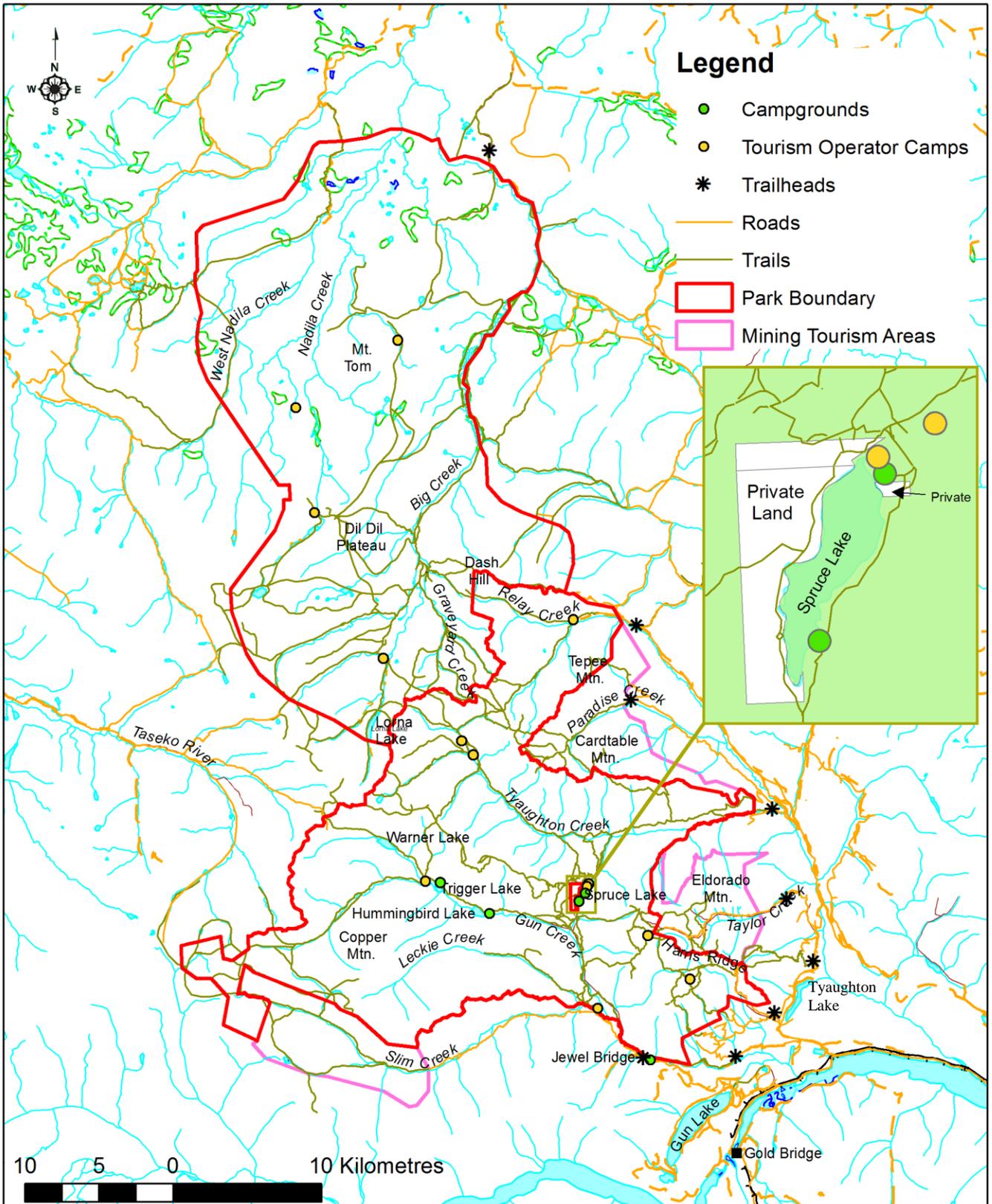


Figure 2: Park map

1.3 Legislative Framework

The establishment of Big Creek Park was recommended through the Cariboo-Chilcotin Land-Use Plan, approved in 1994. Big Creek was established as a Class A park in 1995 under the *Park Act*, and is presently named and described in Schedule D of the *Protected Areas of British Columbia Act*.

The former Spruce Lake Protected Area, at 71,347 hectares, was established in 2001 by an Order in Council under the *Environment and Land Use Act* as part of the government's approval-in-principle of the Lillooet Land and Resource Management Plan (LRMP). In 2004, it was recommended through a revised draft of the Lillooet Land and Resource Management Plan that the protected area be divided into the South Chilcotin Mountains Park and three mining and tourism areas (Figure 3), consisting of 14,550 hectares, to be removed from the protected area. On June 30, 2010, approximately 80 percent of the former Spruce Lake Protected Area was established as South Chilcotin Mountains Park. The mining and tourism areas were established under the *Environment and Land Use Act* on June 30, 2010. The Class A park is named and described in Schedule D of the *Protected Areas of British Columbia Act*.

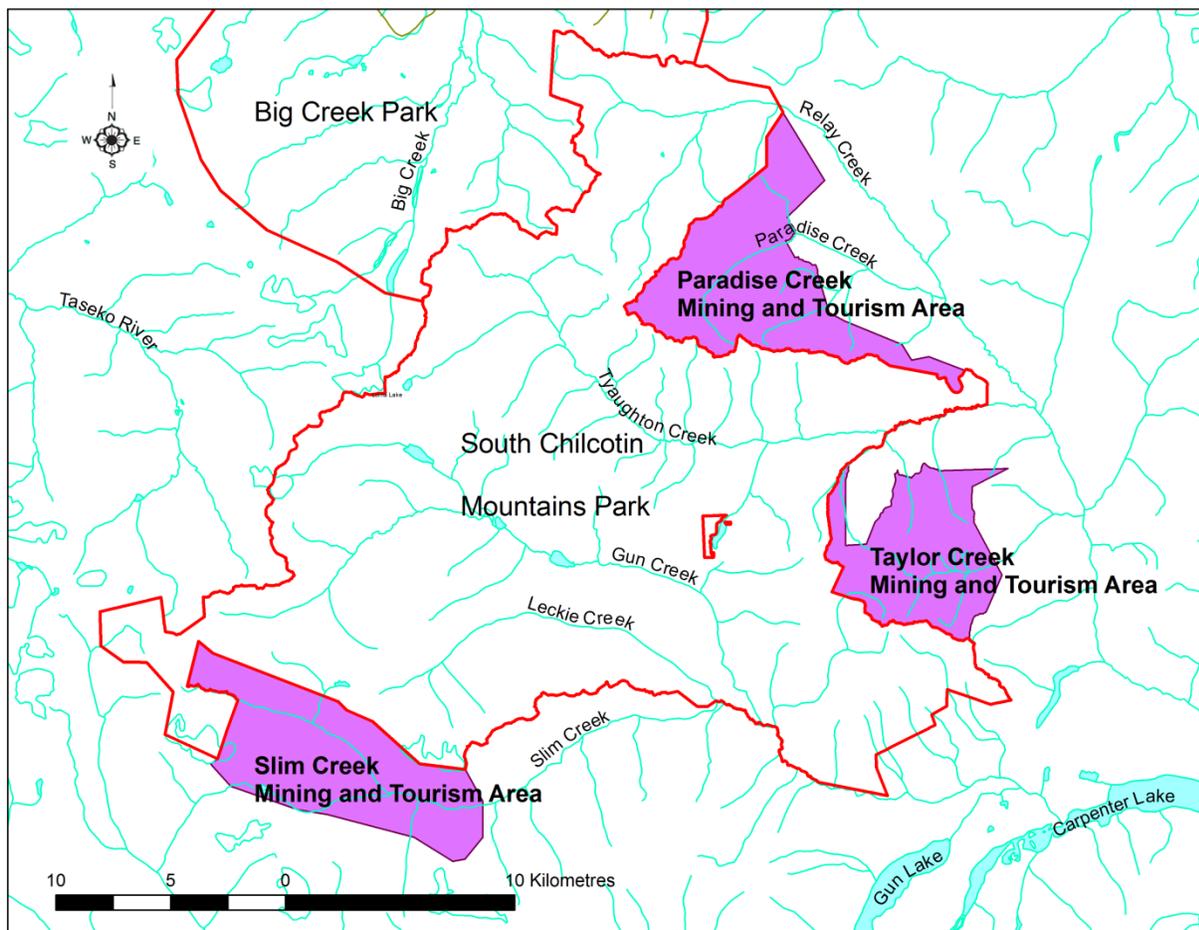


Figure 3: Mining and Tourism Areas Adjacent to South Chilcotin Mountains Park

Class A parks are Crown lands dedicated to the preservation of their natural environments for the inspiration, use and enjoyment of the public. Development in Class A parks is limited to that which is necessary to maintain the park's recreational values. Some tenures and licences that existed at the time a park was established (e.g., grazing, hay cutting) may be allowed to continue in certain Class A parks², but commercial resource extraction or development activities are not permitted (i.e., logging, mining or hydroelectric development).

Management of South Chilcotin Mountains Park and Big Creek Park is guided by the *Park Act*, the *Park, Conservancy and Recreation Area Regulation*, this management plan, and established policies and procedures of BC Parks.

1.4 Adjacent Land Use

Forestry is the main activity adjacent to the parks, but there is also high interest in mineral exploration. There are adjacent range tenures, primarily to the north and east of Big Creek Park, that overlap into the parks. Adjacent lands are also used for a variety of recreational activities including local snowmobile use, mainly to the southwest, and heli-skiing adjacent to, and within, South Chilcotin Mountains Park.

There are three private land inholdings at Spruce Lake in South Chilcotin Mountains Park, with the largest encompassing most of the western side of the lake. The three mining and tourism areas (Slim Creek, Paradise Creek and Taylor Creek) that are located on the southwest, northeast and southeast boundaries of South Chilcotin Mountains Park (Figure 3) are administered by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. These areas allow for mineral exploration and mining as well as tourism use and development; no commercial logging is permitted in the mining and tourism areas.

1.5 Management Commitments

The land use plans that recommended Big Creek Park and South Chilcotin Mountains Park also provided initial management direction. This direction on protected areas in the land use plans provides primary input for park management. Summaries of the direction from these land use planning processes are provided in Appendix 1.

1.6 Land Uses, Tenures and Interests

Some tenures predate park establishment. These include portions of seven traplines and four guide outfitter territories that are authorized under the *Wildlife Act*. These uses must also be authorized by park use permit under the *Park Act*. There are also ten range tenures for horses and cattle that are authorized under the *Range Act*. Grazing of cattle occurs throughout most of Big Creek Park and the northeast portion of South Chilcotin Mountains Park in the Relay Creek area.

² Applies only to Class A parks listed in Schedule D of the *Protected Areas of British Columbia Act*.

Other commercial tenures that existed prior to park establishment are now authorized by park use permits. These include five tourism operations that provide guided horseback riding, biking and hiking; facilities associated with two guide outfitters; one heli-skiing tenure in the southern portion of South Chilcotin Mountains Park; and two air transport companies that fly visitors into the parks. Park use permits have also been issued for range cabins and an Environment Canada hydrological station.

1.7 Management Planning Process

A background document for South Chilcotin Mountains and Big Creek parks was prepared in 2005 in anticipation of completion of the Lillooet Land and Resource Management Plan, and subsequent establishment of South Chilcotin Mountains Park. An *Addendum to Background Information for South Chilcotin Mountains and Big Creek Parks* provided additional background information in 2014.

Management planning for South Chilcotin Mountains and Big Creek parks began in 2011. Participation and input from First Nations were sought as an initial step in the planning process. Background information was placed on the BC Parks website and the public was invited to participate. At this stage, BC Parks also consulted with other government agencies, public interest groups and stakeholders. BC Parks gathered information on values, uses, present and future desired activities, the desired experiences, public and commercial recreational use of the parks and management issues that needed to be addressed. A *Public Input to Lillooet Area Park Planning – A Summary* was prepared in 2012. Draft management plans were produced in 2014 and 2016 and made available for public, stakeholder and First Nation review and comment. This input was summarized in a *Summary of Public Input to Lillooet Area Draft Park Management Plans* in 2015. Comments were taken into consideration prior to the finalization of this management plan. Documents summarizing the input gathered from the various groups were posted to the BC Parks website as they became available.

1.8 Relationship with First Nations

Big Creek and South Chilcotin Mountains parks are within the traditional territories of the St'at'imc, Tsilhqot'in and Secwepemc Nations.

First Nations have a strong sense of guardianship and connection to the land within their traditional territories and may have their own ideas on management actions within the parks. BC Parks seeks an ongoing relationship with First Nations to find common interests and direction for the future management of the parks.

1.9 Relationship with Communities

The residents, ranchers and tourism operators in the local communities not only have a recreational interest in the parks, but the parks also play an important economic role in terms of tourism and ranching. The parks are seen as being important in an overall tourism strategy for the area.

Gold Bridge and Bralorne are the nearest communities to the south (Figure 1), with recreational/residential areas around Gun Lake and Tyaughton Lake (Figure 2). The ranching community of Big Creek is situated to the north, with continued grazing of cattle in Big Creek Park and the northeast portion of South Chilcotin Mountains Park being a primary interest in the parks. Activities in the parks also provide economic spin-offs for the towns of Lillooet and Pemberton, which are the main access points by road to the area.

2.0 Values and Roles of the Parks

2.1 Significance in the Provincial Protected Areas System

South Chilcotin Mountains and Big Creek parks are highly significant, provincially and internationally, for their ecological values. The topographical and climatic variations, ranging from glaciers to lower elevation wetlands over a relatively small distance, create conditions for a high degree of ecological diversity. The ecological integrity of the parks is intact, supporting sensitive species and large predator/prey systems. The area is also core to maintaining Grizzly Bear populations in southern British Columbia, linking populations to the north and south.

These parks are recognized provincially and internationally for their scenic vistas and wilderness recreation opportunities. Varied topography, ease of access and movement through the open terrain on an extensive, interconnecting trail system, spectacular views and high potential to view a variety of wildlife species and vegetative communities attract visitors from around the world. The parks are mostly used by local residents and visitors from the Vancouver area. Clients of commercial tourism operators are primarily from British Columbia, other provinces or the United States, with an increasing number originating from Europe.

2.2 Biodiversity and Natural Heritage Values

South Chilcotin Mountains and Big Creek parks have a complex geological history, with rocks and geological processes from many eras displayed within a relatively small area. There are well preserved Mesozoic Era marine fossils associated with sedimentary rock areas in the parks. Topography is gently sloping valleys and dome-shaped mountains, but with some rugged peaks. The Dil-Dil Plateau in Big Creek Park is a unique, flat-topped feature with abrupt sides.

The parks are on the lee side of the Coast Mountains, creating a drier climate. The topography and the location between the wet coastal and dry interior climates create a diversity of environmental conditions, in turn resulting in diverse vegetation and associated wildlife.

The parks are large and diverse enough to provide fully functioning ecosystems and significant wildlife habitats.

The two parks provide representation of three ecosections: Central Chilcotin Ranges, Southern Chilcotin Ranges and the Chilcotin Plateau. The three ecosections range from rounded mountain areas with deep, narrow valleys to rolling uplands containing many small lakes and wetlands. The parks consist largely of drier Englemann Spruce -Subalpine Fir and Biogeoclimatic Ecosystem Classification (BEC) variants, with some representation of Montane Spruce, Sub-boreal Pine Spruce, and Interior Douglas-fir variants.

Vegetation cover is unique and diverse due to climate and topography variations, ranging from lush alpine and subalpine grasslands, large areas of aspen and mixed forest, scattered stands of whitebark pine, and large areas of marshes and spruce bogs in the north. The whitebark pine seeds provide an important food source for a number of species, including Clark's Nutcracker, and a high energy food for Grizzly Bear.

The vegetation communities have developed under a natural disturbance regime that has included regular fires and insect outbreaks, helping to create a mosaic of conditions and providing periodic renewal of ecosystems.

Six plants are listed as species at risk³ — the blue-listed birdfoot buttercup, five-leaved cinquefoil, little fescue, small-fruited willowherb and whitebark pine and the red-listed narrow-leaved goosefoot. Whitebark pine is designated as Endangered under the federal *Species At Risk Act*.

There is a diversity of wildlife in the parks, with intact large predator/prey communities. The presence of many species considered at risk indicates the importance of the parks to wildlife. These include Fisher, California Bighorn Sheep, Grizzly Bear, Wolverine, Gyrfalcon, Northern Goshawk and Bull Trout. Grizzly Bear is a significant species in this area, with the parks functioning as a large roadless core , providing a connection to endangered populations to the south.

Rainbow Trout and Bull Trout are found in most streams. Lake Char are found in Lorna Lake.

2.3 Cultural Values

Big Creek and South Chilcotin Mountains parks are within the territory of three First Nations: the Tsilhqot'in, St'at'imc and Northern Secwepemc. First Nations have used and continue to use the area for hunting and gathering for food and medicinal plants, and some of the trails through the parks have historically been used as trading routes; specific sites have been used for occupancy, spiritual or sacred purposes. First Nations have a high interest in maintaining wildlife populations and the vegetation communities that support them, and in maintaining water quality. Graveyard Creek valley, in the southern portion of Big Creek Park, is an important site for both the Tsilhqot'in and St'at'imc Nations.

³ Species at risk are species that are threatened with imminent extinction or those that may be threatened in the future if factors affecting their vulnerability are not reversed.

There is a long history of horse use for the purpose of ranching, guide outfitting, hunting and tourism. Tourism operators have provided horseback trips into the parks and were responsible for developing and maintaining many of the trails used by other recreational users. Cabins were built in strategic locations for ranching and tourism (Figure 6). Ranching has a history in the area since the early 1900s, and continues to be important in Big Creek Park and the Relay Creek area in the northeastern portion of South Chilcotin Mountains Park. Mining has a long history in and around the parks, with continuing interest in the mineral potential within the adjacent mining and tourism areas.

2.4 Recreation Values

The rounded nature of most of the mountains and valleys that allow ease of wildlife movement also provides a sought-after setting for recreational activities. The parks provide a range of backcountry recreation and tourism opportunities based on an accessible and diverse trail system. The diverse environments and natural features provide opportunities for hiking, mountain biking, horseback riding, backcountry skiing, snowshoeing, heli-skiing, snowmobiling and hunting. Most use is considered multi-day backcountry facilitated by remote, backcountry campgrounds and a variety of access trailheads. Floatplane access is used by many visitors, with Spruce Lake being the main drop-off point, and lesser numbers of flights to Warner Lake and Lorna Lake.

Tourism operators provide the opportunity for people to experience the backcountry environment through guided horseback and biking tours.

2.5 Research and Education

South Chilcotin Mountains and Big Creek parks serve an important role for education and interpretation. The area has been of interest to researchers and naturalists for decades. The diversity of topography and landforms creates educational opportunities within a relatively small area. Historically, research has focused on topics such as landforms, fossils, biodiversity, plant species and plant communities, and habitat for the variety of wildlife species.

3.0 Management Direction

3.1 Management Objectives and Strategies

The following sections begin with a listing of known issues, interests and opportunities obtained during public consultations, or identified by other agencies and BC Parks staff. This is information only, and does not provide management direction. A more detailed summary of public input is provided in the accompanying document *Summary of Issues and Interests for South Chilcotin Mountains and Big Creek Parks, 2018* (Appendix 2). Management direction appears in the table following the discussion.

Expectations from land use planning processes were strongly considered during development of this management plan. This included direction to honour pre-existing rights and tenures and

integrate commercial and public recreational activities, with a high emphasis on ecological integrity. This direction is supported by public input received during the development of the management plan.

The direction and public desire to integrate and balance conservation values and recreation provides a challenge when it comes to protecting critical and sensitive wildlife habitats. Normally this would be largely accomplished by separating recreational activities from key habitats, but in the case of South Chilcotin Mountains and Big Creek parks, there exists a situation where sensitive species and ecosystems are in extremely close proximity to park users. There is also a challenge to act proactively to mitigate any impacts from the high growth in recreational interest being experienced in these parks. This requires a higher level of management attention and an expectation that all users will cooperate and demonstrate flexibility toward protecting and enhancing the values within the parks. All users indicated that wildlife and the accompanying wilderness and ecosystem components took priority over use. These were the values that attracted recreational users and needed to be maintained.

3.1.1. Ecosystems and Natural Heritage

Public input and identified needs focussed on the following ecosystem aspects:

- protection of ecological integrity as a high priority;
- inventory of natural values and habitat mapping, especially for species at risk;
- reintroducing natural disturbance processes and patterns to establish habitat suitable for many species;
- impacts of climate change that affect vegetation patterns, insect outbreaks and forest stand age patterns;
- damage from cattle and horses, especially in wet meadows and riparian areas;
- invasive plants potentially spread by recreational activities and grazing;
- damage to sensitive areas by recreational activities;
- consideration of adjacent lands on ecosystem function, wildlife seasonal habitats and wildfire management;
- protection of water quality; and
- protection of fossils and deriving scientific knowledge from their study.



Management Direction for Ecosystems and Natural Heritage

Management Objectives:

Maintain the natural diversity of plant and wildlife species and natural ecological processes.

Provide for continuity of ecosystems and habitats to allow for altitudinal and latitudinal migration of ecosystem components in order to allow them to adapt to the effects of climate change.

Management Strategies:

- Employ an ecosystem-based management approach that considers entire ecosystems and human interactions at a broad scale and long-term timeframe.
- Utilize prescribed fire to maintain/restore ecosystems, including provision of wildlife habitat, while protecting sensitive ecosystems (e.g., whitebark pine). Consider a “modified response⁴” policy for wildfires that would promote ecologically acceptable results as conditions allow. Provide direction on fire management for various park values.
- Provide input to any significant management activities on adjacent Crown lands with the aim of implementing strategies that are complementary to park objectives and sustaining a core conservation area of lesser disturbance that is less irregular in shape (i.e., a low perimeter to area ratio that would lessen impacts of any negative outside influences).
- Participate in recovery planning for whitebark pine and implement appropriate recovery actions. This includes implementation of appropriate inventory, assessment and restoration actions, such as prescribed fire or opportunities to re-establish whitebark pine where it has been impacted.
- Work with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to implement appropriate grazing management within the parks. This includes efforts to manage for wildlife values, wetlands and riparian areas. Management strategies should be directed towards enhancing a mosaic of use levels (including ungrazed areas), maintenance of

⁴ Modified response applies to a wildfire that is allowed to burn within set policy and management guidelines. In the case of a park it may involve achieving an environmental goal.

Management Direction for Ecosystems and Natural Heritage
<p>browse species on ungulate winter range, decreased pressure on heavily used sites, reduction of forest encroachment, maintenance of riparian areas, invasive plant control strategies, management towards desired plant communities, water quality objectives and predator avoidance.</p> <ul style="list-style-type: none"> • Consider future additions to the parks if land with natural, cultural, and/or recreational values in adjoining areas becomes available. The Taylor Creek, Paradise Creek and Slim Creek watersheds, and the Eldorado Mountain area north to Tyaughton Creek, are especially important for Grizzly Bear and/or Mountain Goat habitat.
<p>Management Objective: Increase knowledge on the parks' ecosystems, vegetation and wildlife.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Encourage, support and, where appropriate, undertake research, monitoring and scientific studies to ensure appropriate and up-to-date ecological and species information is collected and used in decision-making. • Encourage a citizen science program that will enable visitors and volunteers to assist with monitoring activities and inventory needs and to report on wildlife or plant sightings.
<p>Management Objective: Protect fossil resources.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Maintain the integrity of fossil resources while allowing scientific access and removal and study of scientifically significant examples (previously unknown fossils or those that would provide new knowledge about existing fossils). Any fossils removed from the park will remain the property of BC Parks and be kept in a public facility in British Columbia.
<p>Management Objective: Make the park boundary more definable and easily located on the ground.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Recommend that the park boundary be adjusted to use Gun Creek as the boundary in the southeast of South Chilcotin Mountains Park (between UTM coordinates N 5639354, E 508452 to N 5640063, E 505463). Ensure boundary is clearly marked on all access routes.
<p>Management Objective: Prevent the establishment of new invasive species and control existing species from spreading to new areas.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Monitor for non-native species and remove or reduce where feasible. • Do not allow hay to be brought into the parks and pursue a practice of horses being fed weed-free feed prior to entering the parks. • Ensure there are no invasive plant seeds in grass seed being used in restoration projects. • Work collaboratively with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, grazing licensees and other partners for inventory, monitoring and control of invasive plants. • Encourage weed awareness by land managers and the general public. Make educational material available to tourism operators, park rangers, government staff and all user groups on invasive identification, vectors of spread (horses, bikes, planes) and best management practices. • Allow chemical control in early detection/rapid response treatments and regionally high priority species when eradication is a possibility or control of spread is necessary. Use biological control methods as the first choice where effective and available.

Management Direction for Ecosystems and Natural Heritage

Management Objective: Maintain water quality within the parks.

Management Strategies:

- Ensure proper sanitary practices and facilities are established through proper placement of camps, trails and toilets, and provide educational material on backcountry practices to avoid contamination of waterways.
- Monitor water quality adjacent to facilities and access locations.
- Evaluate stream crossings and prevent or stop erosion.
- Promote practices to discourage cattle from entering streams with installation of water developments away from riparian areas and the use of natural barriers or fencing.

3.1.2. Wildlife



Public input and identified needs related to wildlife included:

- the importance of maintaining wildlife movement corridors both inside the parks and in adjacent areas;
- assessing and mitigating the impacts of recreational uses, aircraft and grazing on wildlife;
- paying special attention to Grizzly Bear, Mountain Goat, Moose and California Bighorn Sheep and the potential impacts on these species from heli-skiing, trail use and visitor numbers;
- ensuring specific attention to the parks' role in Grizzly Bear recovery within the Threatened population in the South Chilcotin Ranges Grizzly Bear Population Unit (outlined in Figure 1) and areas to the south;
- identifying the location of critical wildlife habitats and ensuring these are protected;
- considering all wildlife, big or small; and

- improvement of the fishery on Spruce Lake.

Management Direction for Wildlife

Management Objective: Ensure healthy and thriving wildlife populations.

Management Strategies:

- Identify and protect areas of highest value habitats and movement corridors, ensuring unrestricted access and use by wildlife during normal times of need. Options that should be considered are provided in *Wildlife Considerations for South Chilcotin and Big Creek Parks, 2018* (Appendix 3).
- Assess and maintain habitat supply to sustain optimum wildlife populations in conjunction with ecosystem restoration efforts.
- Encourage and obtain cooperation of all commercial operators within the parks in contributing to wildlife research.
- Require all park use permit holders, and encourage the public, to follow available provincial guidelines and best management practices to avoid any activities that could cause disturbance or negatively influence wildlife behaviour.
- During trail planning, development, deactivation and improvements, habitat importance will be evaluated for the purpose of mitigating impacts, including avoiding displacing wildlife from critical habitats.
- Work with other agencies to co-ordinate wildlife management within and adjacent to the parks to protect populations and habitats.
- Keep or move trailheads to locations outside the park boundaries to assist with preserving the parks as core areas for Grizzly Bear and other species. Work with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to keep access roads and motorized vehicles away from park boundaries, and to manage the areas between the access locations and boundaries in a manner complementary to wildlife management.
- Work with commercial aircraft operators that access the parks to ensure that flights do not approach critical wildlife habitat during periods of use, nor cause stress to wildlife that are dependent upon these habitats (e.g., do not allow winter flights or snowmobile use in Mountain Goat or California Bighorn Sheep winter ranges (mainly alpine areas in the southwest of South Chilcotin Mountains Park and the Graveyard Creek area in Big Creek Park)).
- Disallow use of llamas within the parks to eliminate the possibility of disease transmission to wildlife.
- Ensure that park management decisions are consistent with ongoing regional and provincial Grizzly Bear recovery efforts in the South Chilcotin Ranges Grizzly Bear Population Unit.
- Produce a detailed Grizzly Bear habitat and use map for both parks to facilitate implementation of the strategies in this management plan. This includes habitat capability and suitability mapping, movement corridors, home ranges and areas of actual use by bears. Information will be used to ensure bears are not displaced from important habitats and to minimize the potential for human-bear interactions and conflicts.
- Ensure Grizzly Bear management takes an adaptive approach in order to consider temporal changes in food resources and shifts in bear locations and abundance. Continual, real time adjustments in recreational activities should be expected by all parties to ensure flexibility in

Management Direction for Wildlife
<p>protection and conservation of Grizzly Bears.</p> <ul style="list-style-type: none"> • Close, relocate or adjust trails and/or cut vegetation back on corners to improve sight lines where possible in order to minimize the potential for surprise bear encounters. • Ensure a high level of bear aware and bear management strategies to prevent bears from habituating to human presence. • Emphasize use of best practices when travelling along park trails, especially where visibility may be limited, such as making trail users predictable in location and timing, moving slowly in groups, and audibly announcing their presence. This will allow bears to more readily avoid interaction with humans. • Investigate the establishment of a bear sightings and incident reporting system to track bears. This would be invaluable in an area of high recreational use in bear territory. Tracking the location and identity of adult females with cubs is the most important for population monitoring and visitor safety. A real-time monitoring system would allow specific areas to be avoided.
<p>Management Objective: Maintain healthy wild populations of Rainbow Trout and Bull Trout.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Encourage the appropriate agency to undertake lake and fish inventories to assess fish health, productivity and abundance in relation to fishing pressure. • Encourage the review of fisheries management in Spruce Lake to maintain healthy populations of Rainbow Trout and a quality fishery based upon the present natural wild stock in the lake, providing an acceptable balance between catch rates and average size of fish. • Encourage fishery management for lakes within the parks aimed at maintaining natural, wild populations and managing angling use.

3.1.3. Cultural Heritage

The Tsilhqot'in Nation has interests in Big Creek Park associated with access for traditional gathering and hunting. Graveyard Creek, in the southern portion of Big Creek Park, has significant First Nation values.

The St'at'imc Nation has an interest in South Chilcotin Mountains Park. The St'at'imc have produced their own draft land use plan, NxeKmenlhkalha Iti tmicwa, with many aspects that are directly relevant to park management planning. Direction derived from the NxeKmenlhkalha Iti tmicwa that was considered in this park management plan includes:

- Respect cultural traditions;
- Placing the health of water, air, plants, animals and the land before all else;
- Activities will be carried out in a sustainable manner;
- Continuation of traditional First Nations' activities;
- Respect ecological limits;
- Maintain fully functioning ecosystems;
- Incorporate traditional knowledge;
- Recognize the values to be maintained and allow use that is consistent with maintaining those values;

- Protect intact ecosystems, encouraging management in adjacent lands that contributes to ecosystem health with the parks;
- The management plan will be dynamic, including new knowledge as it becomes available;
- Ensure natural disturbance cycles are maintained; and
- Incorporate climate change planning into management to counter its effects or facilitate adaptation (movement corridors, recognize shifting ecosystems).

The western boundary of the Secwepemc Nation asserted territory includes the parks. The Secwepemc Nation has an interest in traditional gathering and hunting activities in the parks.

Management Direction for Cultural Heritage
<p>Management Objective: Ensure cultural information is available for future generations.</p> <p>Management Strategies: Inventory locations and descriptive information on cultural values in cooperation with First Nations and other agencies.</p>
<p>Management Objective: Protect the parks’ cultural values.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Continue dialogue with local First Nations and others to work cooperatively in determining the presence of First Nations’ cultural features, assessing threats to these features, and ensuring their protection. • Ensure ongoing consultations and seek opportunities for First Nation involvement in park management. • Consider development of interpretive material relating to First Nations and other cultural values and use of the parks. • Require trails through Graveyard Creek to be “pass through” only, with no camping or off-trail use.

3.1.4. Access



Public input and identified needs related to access included:

- maintaining the feeling of isolation and remoteness valued by almost all park visitors;
- protection of conservation values, including wildlife movement corridors and habitat use;
- provision of better condition of access roads and conveniences at trailheads;
- consider the impacts to the park of activities on adjacent land;
- consider the impacts of aircraft access on wildlife and the expected quality of the park experience for other visitors; and
- the need for clearly identified park boundaries and improved signage.

Management Direction for Access

Management Objective: Maintain a backcountry and remote experience within the parks.

Management Strategies:

- Use access setbacks to keep motorized activities away from park boundaries by:
 - Working with forest companies and appropriate government agencies to manage road access and motorized access restrictions adjacent to the parks.
 - Work with forest and mining companies to plan future access from getting too close to park boundaries and prevent unplanned access opportunities.
 - Ensure access development and management adjacent to the parks are coordinated with access management plans within the parks.
- Do not expand the number of trailheads and access roads. Access roads and parking are provided outside of park boundaries.
- Develop an access plan that protects ecological integrity and wildlife, and provides the remote, nature-based experiences that are desired by park visitors. The access plan will recognize the

Management Direction for Access

parks as backcountry areas more suited to dispersed, multi-day trips over day-use.

- Assess carrying capacity related to visitor experience, use of individual trails, floatplane flights and impacts to terrain and wildlife.
- Recognize commercial floatplane access as an appropriate means of access for many park visitors while identifying an acceptable level of disturbance for visitors and wildlife. Consult with commercial floatplane operators as part of the overall access plan in order to meet the objectives of this management plan respecting avoiding disturbance of wildlife and maintaining a feeling of solitude for visitors. Consideration should be given to timing, number and location of flights.
- Work toward flight schedules that both recognize Spruce Lake as the primary and regular entry point into South Chilcotin Mountains Park, but also provide for quiet, undisturbed opportunities for visitors staying at the campgrounds; treat Lorna Lake, and especially Warner Lake, as less disturbed wilderness locations; and avoid park overflights or viewscape sightseeing. This may include consideration of eliminating flights into one or more lakes.
- Wheeled aircraft will not be permitted (an old airstrip in Big Creek Park should be permanently closed).
- Docks for floatplane access on Warner and Lorna lakes will be inconspicuous where possible, in keeping with a wilderness viewscape.
- Motorized vehicles are generally not permitted within the parks for recreational purposes. The following strategies apply to motorized use in the parks:
 - ATVs will be able to use the Gun Creek trail between the terminus of Gun Creek Road and Jewel Bridge;
 - Skidder access to Bear camp in Big Creek Park will continue under park use permit until the present permittee transfers the camp;
 - Snowmobile use in specified areas as described in section 3.1.5; and
 - ATV use of High Trail into the park will not be considered as it would allow uncontrolled access to a large alpine area.
- Control access by road into Big Creek by gate as prescribed in the Cariboo-Chilcotin Land-Use Plan.

3.1.5. Outdoor Recreation Opportunities and Facilities



Public input and identified needs related to recreation and facilities included:

- placing a priority on ensuring the retention of a wilderness feel and protection of wildlife that are the main attractions for visitors;
- efforts to minimize human/wildlife conflicts, especially potential bear encounters and displacement of wildlife;
- maintaining a remote, natural feeling and protection of viewsapes;
- concern on the sustainability of present level of use and whether it is over capacity for the desired experiences, with the potential need for quotas;
- manage potential conflict between different users (horse riders, bikers, hikers) on the same trail system;
- contribution to local economic development;
- provision of good trail conditions, with the need for trail clearing, addressing drainage issues and trail damage by users and provision of adequate directional signs;
- provision of appropriate facilities for a remote, wilderness experience;
- potential upgrades and expansion to existing tourism facilities;
- arrangement of activities at Spruce Lake to address crowding and scenic vistas;
- the compatibility of hunting within the parks;
- impacts of adjacent helicopter and motorized vehicle activity; and
- continued use of traditional areas for snowmobile users and backcountry cross-country skiing.

Management Direction for Outdoor Recreation Opportunities and Facilities

Management Objective: Maintain the environmental qualities that form the basis of the strong recreational attraction, including wilderness, solitude, viewsapes, wildlife and diverse and intact ecosystems.

Management Strategies:

- In order to maintain the primary attractions for visitors, the protection of wildlife, landscapes and cultural values will receive priority consideration, with the provision of recreational opportunities being accommodated within the requirements of ecological and wildlife values.
- Monitor recreation use over time to evaluate impacts on the parks' natural, recreational and cultural values. Where impacts to wildlife and ecosystems are detected as a result of recreational activities, initial efforts will be directed at consultation and mutual agreement with the user groups on how to address concerns. However, changes to recreation levels or activities may be required in some cases as determined by assessment of science-based information.
- Maintain a remote, unstructured and challenging backcountry experience, where visitor use is minimally visible.
- Determine number of visitors and visitor satisfaction on various trails to determine opportunities to enhance the recreation experience, the need to preserve the expected remote experience, and assess impacts. Depending upon results, consider where necessary implementing management actions such as registration or reservations for camping or day use, quotas, closures, changes to trail management, or provision of new trails. This would include indications of wildlife displacement or visitor dissatisfaction with the degree of solitude or other aspects of the park experience.
- Liaise with the relevant agencies to:
 - encourage recreational uses in adjacent areas that are compatible with park objectives.
 - encourage adjacent land managers to manage forested areas adjoining and visible from the parks to consider visual quality.
- Work with local tourism operators to help avoid potential impacts to sensitive species and cultural sites, discourage the development of informal trails and reduce trail user conflicts.
- Facilitate communication and coordination between tourism operators and visitors to optimize itineraries in order to minimize crowding in popular areas, educate clients on expected conditions and behaviour around wildlife, make sure visitors are prepared for a remote, backcountry experience, instil trail and campsite use etiquette for other users, and ensure a positive visitor experience. Encourage tourism operator meetings and sharing of information on a regular basis. This can also assist in avoiding areas of Grizzly Bear activity.
- Implement education efforts (e.g., meetings, newsletter articles, signs) in the larger community to prevent motorized access.
- Heli-skiing will continue and will be managed within existing policies and monitored for any impacts on wildlife or other recreational activities. Management strategies, such as changes in flight paths, areas of use or timing restrictions, will be implemented to address any negative impacts.
- Heli-ski flight paths will avoid backcountry skiing areas as much as possible. The existing overlap of the heli-ski permit area with the area used for backcountry skiing should be reviewed with stakeholders to ensure this is suitable and/or to come to an agreeable understanding.
- Heli-hiking is not an acceptable activity.

Management Direction for Outdoor Recreation Opportunities and Facilities
<p>Management Objective: Recreational activities will be those that are aimed at experiencing the natural values and viewsapes with negligible disturbance and displacement of wildlife and other visitors.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Supported recreational activities will be those that have the potential to contribute to a visitor experience that is consistent with a quiet, natural, remote mountain park, in keeping with the appreciation of park values, the wilderness character, solitude and protection of ecological values. It is anticipated that these pursuits will be undertaken by a conservation-minded public and commercial tourism operators. • Participate in commercial recreation and tourism opportunity studies for the area to ensure the vision for the parks is properly incorporated into regional tourism strategies. • Apply the following guidelines to mountain biking in the parks: <ul style="list-style-type: none"> – Cross-country mountain bike riding, rather than downhill, will be the principal form of mountain biking in the parks. – Encourage a shift from day-use mountain biking (fly in – ride out) to a more leisurely, group oriented, multi-day approach to reduce the potential for conflicts with wildlife and other users, consistent with the park vision of a remote, backcountry experience. – Development or construction of technical trail features will not be considered. – Mountain biking will be restricted to trails; off-trail riding will not be permitted. – Trails used by mountain bikes should have good sight lines on critical downhill sections (e.g., 3 metres wide by 3 metres high), such as around blind corners or in heavily vegetated areas known to be frequented by bears. • Prior to entering the parks, all visitors will have the opportunity, either by tourism operators or signage, to be informed of proper etiquette when encountering other users.
<p>Management Objective: Ensure visitors are prepared for a backcountry excursion.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Visitors should be provided with information on the conditions to be expected in the parks, and advised on appropriate equipment to carry in case of emergencies and how to avoid and react to bear encounters. It will be the responsibility of tourism operators and air carriers to provide this to their clients. Individuals entering the park on their own will be informed by signage, written material at the trailheads or by the BC Parks website. Encourage visitors entering the parks to leave a schedule and location with a third party. • Promote the use of the parks by visitors experienced in backcountry travel and/or accompanied by a guide.
<p>Management Objective: Provide for a variety of backcountry angling opportunities.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Encourage the appropriate agency to review fishing regulations for each lake to ensure a quality fishing experience consistent with maintaining healthy populations.
<p>Management Objective: Provide opportunities for hunting.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Hunting will continue and will be managed in cooperation with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development
<p>Management Objective: Ensure facilities (trails, camping opportunities, tourism camps) are</p>

Management Direction for Outdoor Recreation Opportunities and Facilities

compatible with a feeling of solitude and have a minimal impact on the environment.

Management Strategies:

- Inventory and assess trails for environmental impacts and current trail condition, and restore or relocate on a priority basis if necessary.
- Design multi-purpose trails and trailheads to accommodate horses (e.g., popular trailheads will have trailer turn-arounds, highlines and space for overnighting horses).
- Use the separation of activities (e.g., use-specific trails in high use areas, twinning trails, timing, location, trail direction, etc.) as a suitable management tool in specific instances, but not to be used as a widespread strategy in the parks. Consider designing some trails for one user type (long sections of such trails should not exclude other users). This will make some trails generally more attractive to one user group, decreasing pressure on more heavily used trails.
- Require facilities to be low profile, hidden from view when possible, away from key recreation attraction areas (e.g., lakeshores, wildlife viewing areas, open meadows, open alpine areas) and rustic in character, blending in with the natural environment. A minimum of signs should only be placed at major intersections, and blending with the environment.
- Assess the number and location of commercial camps for compatibility with the maintenance of park values, such as potential impact on wildlife and maintenance of a wilderness experience. Require the removal of unused camps.
- Require all commercial operators to regularly clean and remove any material that is not used for the purposes of their ongoing operation (e.g., broken or unused building materials, tent coverings, platforms, heli-ski marker poles).
- Consider moving facilities that are near habitats frequented by wildlife (especially Grizzly Bear) or on migration routes. This can also be done to decrease congestion in existing locations. Additional facilities can be considered outside of important wildlife habitats. This does not preclude BC Parks from providing cabins for public use should commercial tourism operators be unwilling or unable to provide accommodation in certain areas. This would only be considered to divert existing recreation pressure to more remote areas away from critical wildlife habitat.
- Allow commercial camp upgrades that meet recreation and wildlife objectives, but without an increase in visitor capacity at each site. This will increase safety, assist in integrating strategies for Grizzly Bear management and allow tourism operators to improve camp conditions for a broader range of clientele.
- Minimize environmental impacts at popular camping sites through regular monitoring, provision of adequate sanitary facilities, hardening sites as required, and addressing issues (e.g., firewood gathering, erosion, garbage) as they arise. Dispersed, no-trace camping may occur elsewhere.
- Provide separate areas for commercial operator and public horse grazing to ensure availability of forage and to be able to measure grazing pressure from each group. Separate public and commercial campsites to avoid overgrazing and to maintain a sense of remoteness.
- Monitor conditions, particularly forage for horses around campsites, ensuring tourism operators have continuing access to forage for horses consistent with their park use permits.
- Public campsites will be rustic with minimal facilities, appropriate for a wilderness setting. Provide only basic infrastructure (e.g., outhouses and tent platforms in regular backcountry sites where impacts from camping occur; picnic tables in main access campgrounds).
- Evaluate Spruce Lake campgrounds for potential alternate siting and improvements.

Management Direction for Outdoor Recreation Opportunities and Facilities

Management Objective: Recognize continued traditional snowmobile use.

Management Strategies:

- Continue to allow snowmobile use on the Gun Creek trail only as far as Jewel Bridge and the area west of Gun Mountain. Snowmobiles will not be allowed to descend into the Eldorado Creek or Pearson Creek watersheds from Harris Ridge or enter into Mountain Goat winter habitat within the park.

3.1.6. Commercial Operations

Public input and identified needs related to commercial operations included:

- considering the contribution of commercial tourism in the parks to the local economy and provision of opportunities for visitors to experience and learn about the area;
- continued grazing of cattle and horses by traditional users;
- use and maintenance of range cabins and corrals; and
- potential conflict on trails between cattle and recreational users.

Management Direction for Commercial Operations

Management Objective: Honour prior uses, rights and tenures.

Management Strategies:

- Commercial tourism and ranching operations in existence prior to park establishment can continue.
- Long-term, stable commercial tourism is considered a partner in maintaining or enhancing park objectives.

Management Objective: Ensure ranching activities are not unduly impacted by changes in recreational activities and have use of trails for ranching purposes.

Management Strategies:

- Do not allow public camping closer than 500 metres from range cabins; discourage use of trails leading to the cabins.
- Allow access, under agreed times and locations, for ranchers to maintain existing fence lines, distribute salt and other necessary activities related to ranching. This will require use of motorized vehicles in some cases and clearing of potential deadfalls; any other use of motorized vehicles will not be permitted.
- Use of aircraft by ranchers to locate cattle will continue with consideration of impacts on wildlife and park users.
- Many trails in grazing areas have been established for range purposes. Assess trails that are most important to ranchers and provide priority use for ranching purposes. Consider methods of minimizing negative interactions in consultation with recreational users and ranchers.
- Assess options to address livestock predation by bears and wolves that will have minimal impact on wildlife.

3.1.7. Management Services

Public input and identified needs related to management services included:

- requests for a greater BC Parks presence (rangers, ranger cabin, education, enforcement);
- meaningful management input and information exchange by First Nations and stakeholders;
- continue the relationship with volunteers on trail maintenance and collection of information; and
- the need for increased resources for park management.

Management Direction for Management Services
<p>Management Objective: Obtain co-operation of all users to maintain park values.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Collectively meet with stakeholders on a regular basis (at least annually) to contribute to meeting park objectives. Invite this group to be active participants in the stewardship of the parks and in providing advice on park management. • Foster a working relationship between all groups and individuals that have an interest in management of the parks. • Investigate communication methods within the park to enable communication between tourism operators and BC Parks staff in order to coordinate travel plans, maximize trail use while maintaining a remote experience, and increase safety.
<p>Management Objective: Ensure proper monitoring of activities and potential impacts.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Maintain regular seasonal ranger patrols and a BC Parks' presence. • Encourage continued participation by volunteers, including developing volunteer partnership agreements.
<p>Management Objective: Identify additional opportunities for local groups to assist in stewardship of the parks.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Maintain contact with non-government organizations, education institutions, the local community, and other organizations to identify joint stewardship opportunities.

3.1.8. Visitor Information/Visitor Experience



Public input and identified needs related to public information and visitor experience included:

- the need for information to be available to the public to inform, educate and provide safety advice; and
- increase visitor awareness of park conditions, appreciation and stewardship.

Management Direction for Visitor Information/Visitor Experience

Management Objective: Information provided to the public encourages a backcountry experience based upon self-reliance, and minimizes potential impacts on conservation values.

Management Strategies:

- Provide basic park information to visitors. This information will be largely restricted to showing access points and trailheads, main trails, etiquette expectations, safety, protection of natural and cultural values and the history of the parks. Information will highlight the parks' fragile nature and the importance of minimizing disturbance to natural values and wilderness experiences. Specific natural features or attractions will not be emphasized in order to discourage overuse.

Management Direction for Visitor Information/Visitor Experience
<ul style="list-style-type: none"> • Support use and appropriate low profile marketing of the parks for nature-based tourism products compatible with conservation and cultural values. • Advise visitors of the sensitive nature of the parks. Statements are needed on a “tread lightly” message, especially for sensitive sites such as grasslands, shale slopes and near wetland areas. This can include messages on no-trace camping, safe storage of food, bear smart hiking, biking and camping practices, no campfires in alpine areas, best practices for reducing the spread of invasive species and the requirement to stay on trails where dispersed use would create more impact. An important wildlife message will be that, if wildlife are reacting to or modifying their behaviour in response to a visitor’s presence or actions, then that action or proximity must be considered inappropriate.
<p>Management Objective: Increase awareness of park values and cultural history to encourage visitors to become advocates for the preservation of park values.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Provide information that will promote public understanding and appreciation of the parks’ ecosystems and history.
<p>Management Objective: Ensure a highly informed public able to minimize impacts and participate with Grizzly Bear stewardship.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Produce a comprehensive Grizzly Bear education and outreach program that includes: <ul style="list-style-type: none"> – A synthesis of existing science related to Grizzly Bears. – Bear conflict and avoidance and response (e.g., safe behaviour in bear country for each stakeholder and user group, including hunters). – A clear statement of the conservation and management/recovery objectives for Grizzly Bears in the parks. – A contact/sightings reporting system on which to base timely management actions, such as temporary trail/area closures where necessary. – A description of the legal, regulatory and enforcement procedures. – Signs, pamphlets, web pages and apps, all with consistent messaging.
<p>Management Objective: Provide information on the recreation opportunities and permitted uses in the parks to enhance visitor use, enjoyment and safety.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Develop a comprehensive and coordinated orientation/information package. • Ensure that promotional material and signs provide adequate information to direct visitors to recreation opportunities suitable to their interests and abilities, and that respect conservation values.
<p>Management Objective: Encourage sharing of park information through education and extension.</p> <p>Management Strategies:</p> <ul style="list-style-type: none"> • Share results of research and management with other agencies, organizations and individuals.

3.2 Zoning Plan

In general terms, a zoning plan divides a park into logical management units within which certain activities/uses are permitted and a particular set of management objectives apply. Zoning is often used to physically separate incompatible activities or uses within the park and provides visitors and managers with a quick visual representation and appreciation of how a particular park is managed. Zones are designed to reflect the physical environment, existing patterns of use and the desired level of management and development in a given management unit.

3.2.1. Wilderness Recreation Zone

The parks are entirely zoned as Wilderness Recreation. Conservation values are in close proximity to largely dispersed recreational activities. Visitors are attracted by the trail system, which is intertwined throughout important and sensitive wildlife habitats and ecosystems. Even the most highly used area around Spruce Lake is adjacent to high value habitats. Also, currently available information on species and habitat distribution is not considered adequate to definitively locate areas that could be used more for recreation or areas that could be more protected as core wildlife areas. Although land use planning suggested “wilderness” and “natural environment” zones, the Wilderness Recreation Zone was considered the most appropriate at this time as it will meet the intent of continuing public and commercial recreation while protecting the high conservation values.

Objective and Management Intent: The management intent should be to identify core habitat areas for wide-ranging wildlife species. Some of these are generally known (Figures 4 and 5) and recreational activities should avoid these areas. Future research and assessment are needed to better identify critical and core area candidates, which would form the basis for better zoning of the parks. It is anticipated that this may result in separate Wilderness Conservation, Wilderness Recreation, and possibly a small Nature Recreation Zone.

Recreational activities and facilities will be integrated with a high degree of consideration for the needs of wildlife and sensitive ecosystems. The long-term goal is to have all facilities and access points avoid being located in core wildlife areas and critical habitats; facilities and recreational activities would either not be appropriate or be managed in a way that is highly sensitive to the needs of wildlife in areas of high use wildlife habitats.

4.0 Plan Implementation

4.1 Implementation Plan

This management plan provides the guidance for the management of South Chilcotin Mountains and Big Creek parks. The management plan forms the basis from which BC Parks and other agencies can set priorities to meet management objectives. More detailed planning will be required for invasive plant management, trail inventory and priority setting, wildlife habitat analysis, on-going monitoring, and research

Implementation of these strategies is dependent on financial availability and staffing capacity. In addition, implementation of actions is affected by the management needs of other parks in the entire protected areas system.

BC Parks will ensure that public interest groups, individuals and stakeholders are consulted where appropriate in the implementation of the management strategies. Any required changes in use, as well as incorporating new information in development of alternate zoning, will be implemented over reasonable timeframes and with full consultation with affected interests. The aim will be to minimize impacts on users and explore options with stakeholders. A cooperative model will be the preferred approach where possible if there are changes to the strategies in the future.

In addition to any park specific policies highlighted in the management plan, there are numerous other provincial/regional policies and guidelines which will be considered during management plan implementation. This includes items such as BC Parks' policies on conservation, permitting processes, and the BC Parks Impact Assessment Policy.

4.2 High Priority Strategies

The following strategies have been identified as high priorities for implementation:

1. Assess carrying capacity related to visitor experience, use of individual trails, floatplane flights and impacts to terrain and wildlife.
2. Identify and protect areas of highest value habitats and movement corridors, ensuring unrestricted access and use by wildlife during normal times of need. Options that should be considered are provided in an accompanying document entitled *Wildlife Considerations for South Chilcotin and Big Creek Parks*.
3. Assess and maintain habitat supply to sustain optimum wildlife populations in conjunction with ecosystem restoration efforts.
4. Provide input to any significant management activities on adjacent Crown lands with the aim of implementing strategies that are complementary to park objectives and sustaining a core conservation area of lesser disturbance that is less irregular in shape (i.e., a low perimeter to area ratio that would lessen impacts of any negative outside influences).
5. Produce a detailed Grizzly Bear habitat and use map for both parks to facilitate implementation of the strategies in the management plan. This includes habitat capability and suitability mapping, movement corridors, home ranges and areas of actual use by bears. Information will be used to ensure bears are not displaced from important habitats and to minimize the potential for human-bear interactions and conflicts.
6. Inventory and assess trails for environmental impacts and current trail condition, and restore or relocate on a priority basis if necessary.
7. Ensure a high level of bear aware and bear management strategies to prevent bears from habituating to human presence.
8. Recognize commercial floatplane access as an appropriate means of access for many park visitors while identifying an acceptable level of disturbance for visitors and wildlife.

Consult with commercial floatplane operators as part of the overall access plan in order to meet the objectives of this management plan respecting avoiding disturbance of wildlife and maintaining a feeling of solitude for visitors. Consideration should be given to timing, number and location of flights.

9. Develop an access plan that protects ecological integrity and wildlife, and provides the remote, nature-based experiences that are desired by park visitors. The access plan will recognize the parks as backcountry areas more suited to dispersed, multi-day trips over day use.
10. Supported recreational activities will be those that have the potential to contribute to a visitor experience that is consistent with a quiet, natural, remote mountain park, in keeping with the appreciation and experience of park values, the wilderness character, solitude and protection of ecological values. It is anticipated that these pursuits will be undertaken by a conservation-minded public and commercial tourism operators.
11. Maintain regular seasonal ranger patrols and a BC Parks' presence.
12. Advise visitors of the sensitive nature of the parks. Statements are needed on a "tread lightly" message, especially for sensitive sites such as grasslands, shale slopes and near wetland areas. This can include messages on no-trace camping, safe storage of food, bear smart hiking, biking and camping practices, no campfires in alpine areas, best practices for reducing the spread of invasive species and the requirement to stay on trails where dispersed use would create more impact. An important wildlife message will be that, if wildlife are reacting to or modifying their behaviour in response to a visitor's presence or actions, then that action or proximity must be considered inappropriate.

4.3 Plan Assessment

In order to ensure that the management direction for Big Creek Park and South Chilcotin Mountains Park remains relevant and effective, BC Parks staff will ensure that the management plan is assessed by BC Parks staff on a regular basis (i.e., at least every 5 years). Minor administrative updates may be identified and completed at any time (e.g., correct spelling errors, update protected area details where needed), and will be documented according to BC Parks guidelines.

If an internal assessment reveals that the management plan requires updating or substantial new management direction is needed, a formal review by BC Parks may be initiated to determine whether the management plan requires an amendment or if a new management plan is required.

The management plan amendment process or development of a new management plan includes an opportunity for public input.

Appendix 1: Summary of Land Use Planning Direction Applicable to Parks

General Protected Area Direction:

The Lillooet Land and Resource Management Plan provided guidance for parks in the area and identified a number of issues to be addressed:

- Achieving a balance between ecological integrity and public and commercial use within protected areas.
- Overuse and/or inappropriate use can impair or spoil the ecological integrity of protected areas.
- Access management within protected areas needs to allow a variety of public uses, while ensuring tenured access and avoiding general overuse.
- Managing public and commercial recreation uses within protected areas to ensure maximum compatibility.
- First Nations, local government, the public, and user groups seek greater involvement in park planning processes.
- Integrating park designation and management with pre-existing rights and tenures, such as livestock grazing and commercial recreation.
- Unclear land and resource management direction can limit resource development opportunities adjacent to protected areas.
- Forest fire, pests and disease are a part of nature and are integral to protected areas. If not recognized and addressed they can damage nearby timber harvesting areas thus increasing operating costs or disrupting timber supplies.

General objectives and strategies for all proposed parks in the Lillooet Land and Resource Management Plan were:

- Manage park use to conserve ecological values by:
 - Dispersing use to less heavily used areas as may be allowed by park management plans.
 - Use local level plans to manage general public and commercial recreation use and access in order to preserve ecological values.
 - Ration park use by permit if necessary to meet management objectives for ecological integrity.
- Complete park management planning on a priority basis, ensuring that they incorporate LRMP direction with respect to the theme and purposes of each park.
- Manage park use to maintain the quality of visitor experience by:
 - “Harden” park facilities (e.g., trails and campsites) in a way that prevents site degradation but conserves a natural appearance.
 - Manage general public and commercial recreation use and access in order to maintain the quality of visitor experience.
 - Ration park use by permit if necessary to meet management objectives for the visitor experience.

- Manage types and modes of recreation to minimize conflicts among users by:
 - Zone different portions of protected areas for various modes of access consistent with the LRMP and the goals for each park.
 - Develop an equitable allocation process between commercial and non-commercial users, consistent with government protocols and park management planning processes.
- Manage protected areas to achieve a balance between ecological integrity, commercial tourism opportunities, and general park visitors by:
 - Develop appropriate limits of capacity on a park by park basis, considering the overall management direction of the park and/or for the zones within the park (e.g., if the park has a conservation focus then a conservative carrying capacity would be appropriate; conversely if the management direction is for intensive recreation then a less conservative carrying capacity could be used)
 - Distinguish limits relative to tourism clients and general park users
 - Consider resource allocation between tourism clients and general park users.
 - Apply consistent approaches (e.g., reservation systems, registration and fees) to managing both commercial tourism client and public users.
- Honour pre-existing rights and tenures in new protected areas.
- Ensure that uses that are compatible with protected areas designation and which predate its legal designation (e.g., hunting, fishing, various types of recreation), continue to be accommodated within the protected area.
- Ensure that the time periods, quality or type and amount of access are consistent with the objectives and prescribed character of the protected area.
- Manage forest health factors (e.g., disease, insect infestation, noxious weeds) to an acceptable risk level, where they pose a significant risk to resources and/or values.
- Manage pre-existing *Range Act* tenures in new protected areas as prescribed in the *Park Amendment Act*.
- Evaluate suitability of protected areas as sources of irrigation water for adjacent agricultural land.
- Consider Table 3 “Management Categories and Key Issues” in management plans for new protected areas.

South Chilcotin Mountains Park

The Table 3 Management Categories and Key Issues mentioned above for South Chilcotin Mountains Park were:

- Wilderness; natural environment.
- Balancing conservation of Grizzly Bear, sheep and goat habitat with use of area.
- Integrating commercial recreation businesses with public use (winter and summer).
- Access for owners of private land.
- Scientific research and collection of fossils.
- Public snowmobile users need assured access into Upper Slim Creek.

The objective statements in the Lillooet LRMP applicable to South Chilcotin Mountains Park are as follows:

Mountain Goat:

1. Manage resource development and use activities within winter/kidding range by reducing or eliminating disturbance and displacement of Mountain Goats.
2. Restrict disturbance or displacement of goats from recreational and tourism related human disturbance including both air and ground based mechanized forms of recreational access (e.g., cat skiing machines, snowmobiles, helicopter and fixed wing aircraft) within currently identified and suspected winter and kidding ranges (see Mountain Goat map). In no circumstances is use of current permanent helipads and common air transit routes near settlement areas (e.g., Lillooet, Lytton, Gold Bridge) and destination resorts (e.g., Tyaughton Lake) to be restricted.

Grizzly Bear:

1. Maintain the suitability of critical Grizzly Bear habitats, and ensure these habitats have adequate security and thermal cover associated with them.
2. Minimize negative interactions between Grizzly Bears and recreational activities in identified watersheds.
3. Manage recreation and tourism developments to minimize bear/human conflicts and limit impacts on Grizzly Bear populations and habitat.

Big Creek Park

General direction arising from the Cariboo-Chilcotin Land Use Plan that is applicable to Big Creek Park included the following:

1. A protected area, regardless of subsequent designation, is land on which the dominant ecological values should be protected and that uses, such as recreation, cattle grazing, hunting, trapping and backcountry tourism will be allowed.
2. Hunting and trapping will continue to be allowed in new protected areas, regardless of subsequent designation by the Province.
3. Many of the major, new protected areas are available, in principle and where appropriate, for commercial tourism and recreation.
4. Existing, approved levels of cattle grazing will continue in all protected areas. The maximum level of animal unit months (AUMs) in protected areas will be set at the existing level of authorized AUMs as of October 24, 1994.
5. No private land will be included within protected areas unless the government negotiates a mutually agreed purchase. Existing landowner use, development and access rights will be unaffected by the protected areas.
6. Protected areas boundaries have been adjusted to exclude mineral and placer tenures located adjacent to the periphery of protected areas.

Appendix 2: Summary of Issues and Interests for South Chilcotin Mountains and Big Creek Parks, 2018

Summary of Issues and Interests for South Chilcotin Mountains and Big Creek Parks, 2018

The following is a summary of input obtained during the planning process. This information was obtained from the public, stakeholders, government agency staff and information from the Lillooet Land and Resource Management Plan. It is summarized by section presented in the Park Management Plan for the South Chilcotin Mountains Park and Big Creek Park.

Ecosystems and Natural Heritage

Protection of ecological integrity is a high priority for BC Parks. A large majority of park users who participated in meetings or submitted input during the development of the management plan agree: ecosystems, wildlife and the landscapes were the top stated values.

The majority of ecosystems in the parks appear healthy, although there are natural and human-made pressures that need to be addressed. Incomplete inventory of natural values and habitat mapping, especially for species at risk, limits the ability to manage ecosystems and natural disturbance patterns and provide the habitat requirements for wildlife. As an example, altered natural disturbance cycles have resulted in a lack of fire, allowing encroachment of buckbrush on wet meadow areas, which in turn may be partially responsible for fewer Moose in Big Creek Park.

Fire suppression may be changing forest patterns, contributing to a decline of younger, more productive ecosystems due to allowing succession to create an older than normal forest. Forest fuels also build up, and prescribed fire may be necessary to reduce them in order to prevent high intensity wildfires that could even impact species that are adapted to fire.

Climate change is also altering ecosystems and influencing changes in vegetation patterns. It is largely responsible for the Mountain Pine Beetle outbreak that resulted in the mortality of lodgepole pine over large areas, and some whitebark pine. This has affected forest stand age patterns, the probabilities of forest fires and their intensity, ecosystem function and distribution of wildlife habitats.

Whitebark pine is an endangered species, threatened primarily by white pine blister rust, but also by Mountain Pine Beetle and fire suppression. There are implications for Grizzly Bear,

Clark's Nutcracker, Red Squirrels and other species that rely on the seeds as a high energy food source.

Cattle and horses can cause habitat degradation in wet meadows and riparian areas. Also, long-term grazing may have affected the original vegetation composition in some meadows and riparian areas. For example, there are areas of concentrated grazing where cattle congregate in the fall before leaving the park, and areas of horse grazing around campsites and stops of interest.

Preventing invasive plants from entering the parks and controlling those that exist are management challenges. Burdock is prevalent on sites outside the parks and houndstongue has been located within the boundaries of the two parks. Recreational activities and grazing increase the potential for invasive plants within the parks as these activities are known to help the spread of seeds and other plant parts.

Recreational activities are having some impacts in sensitive areas, including trail braiding on wet sites and off-trail damage by horses and mountain bikes. Sensitive areas include alpine meadows, grasslands, wetlands, shale slopes and special plant associations. Areas of sensitivity and where recreation uses conflict with those values have not been fully identified.

Patterns of adjacent land use may affect ecosystem function within the parks. For example, adjacent forestry activities alter the age class structure of forests, which needs to be considered when evaluating vegetative patterns required by species within the parks. Wildlife move between seasonal habitats, with critical habitats found outside and within park boundaries. As an example, the three adjacent mining and tourism areas contain critical habitats for Mountain Goats, Grizzly Bear and other wide-ranging species. There are several immediately adjacent areas that contain critical habitat that would benefit wildlife if added to the parks.

Consideration must also be given to the potential for wildfires. Landscape fire management planning in collaboration with adjacent resource land managers and private property owners would help to make informed decisions that result in resilient ecosystems both inside and outside of these parks. Cooperation is also required for insect and disease management in parks when negative impacts threaten values outside of the parks.

Water quality and maintaining lakes and streams in pristine condition were concerns expressed by the public. The outlet from Spruce Lake is the main spawning location for Rainbow Trout in the lake. Sources of siltation, such as erosion of trails leading up to stream crossings, are a concern due to the susceptibility of fish, especially eggs and fry, to siltation.

The parks are rich in fossils, and there is a desire to both protect fossil sites and derive scientific knowledge that can be gained from their study. The scientific community is interested in having continued access to fossils for research, study and public education.

Wildlife

Wildlife use the valleys in the parks for migration and seasonal feeding. They also migrate along traditional routes in their movements in and out of the parks, but these same routes are also the most popular for recreational activities. The ecological impacts of recreational activities and aircraft on wildlife are often poorly understood but can, to varying degrees, negatively influence wildlife, especially during sensitive time periods and near important habitat types with limited distributions (e.g., spring calving or lambing grounds, ungulate winter range, early spring forage sites for bears). Research has shown that some species of wildlife are displaced by human activities on trails, with the level of displacement influenced by the frequency, type of use and timing (daily and seasonal). Moose wintering areas in the north of Big Creek Park and the wintering ranges for California Bighorn Sheep and Mountain Goat have been specifically identified as locations where snowmobile activity may be impacting wildlife.

The importance of different habitat types to the wildlife within a geographic area is in many instances uncertain, creating a challenge to make management decisions regarding acceptable activities and level of recreational use. Careful attention will be needed in assessing potential impacts due to this uncertainty in order to minimize the possibility of serious management errors.

Mountain Goats require undisturbed areas for birthing, rearing, foraging, and thermal and security cover. In winter, Mountain Goats seek south and west-facing slopes and ridges. These can be the same locations sought by heli-skiers. Research indicates that aircraft in the vicinity of Mountain Goats will displace them. Also, the Mountain Goats found within South Chilcotin Mountains Park are dependent upon critical habitats outside of the park (Eldorado Mountain and the ridge north of Slim Creek).

California Bighorn Sheep are resident year-round in the parks, wintering on wind-swept ridges. This population has a low reproductive rate and is in need of protection from any disturbance, especially during winter.

There is a need to consider all species of wildlife, including invertebrates and their habitat needs, and potential impacts of recreational activities on these species. As an example, butterflies (e.g., Edith's Checkerspot) are found in the alpine grasslands, and they tend to concentrate in puddles on trails, where they may be crushed by trail users.

Moose sightings have decreased recently, which may be due to nearby road hunting outside of the parks or as a result of a reduction of forage species caused by a lack of natural

disturbance (fire). The ranching community has indicated some concern about the growing Grizzly Bear and Grey Wolf populations in Big Creek Park and the resulting impact on Moose populations due to predation. Increasing the allocation levels for hunting bears, wolves and Cougars has been suggested by some members of the public as a means of reducing predation on Moose, Mountain Goats, California Bighorn Sheep and Mule Deer.

Grizzly Bears located within the South Chilcotin Ranges Grizzly Bear Population Unit are classified as Threatened. Recovery of this population is a regional and provincial objective. South Chilcotin Mountains and Big Creek parks were in large part created to provide Grizzly Bears with undisturbed access to forage and security cover across a broad landscape, thus facilitating further population expansion to peripheral but connected areas. The parks are considered well placed to function as source or core areas key to the recolonization of habitats to the north, east and south, and to overall population recovery. The historical persecution of bears has been implicated in the creation of genetic differences between Grizzly Bear populations west and east of Big Creek. A second important recovery objective is to eliminate this anthropogenic genetic difference and provide for a more natural continuity of populations.

The importance of habitat protection as a BC Parks conservation measure in aid of Grizzly Bear recovery in the South Chilcotin Ranges is expected to increase as development pressures rise in areas beyond park boundaries.

Grizzly Bears are long-lived and intelligent animals that are capable of learning. Bears that are or have become wary of humans will make temporal and spatial adjustments to avoid interaction. Activities least likely to result in a negative human-bear interaction or conflict are those that can be most easily avoided and are predictable in time and space. Activities most likely to result in interaction or conflict are those which are least avoidable and occur in an unpredictable and/or sudden manner.

Slow moving park users (hikers and horse riders) are less likely to surprise a bear than those moving at a relatively fast pace (a mountain biker on a level or downhill run). Park use off-trail is likely to be less predictable to a bear than on-trail activities.

As all recreational activities within the parks may potentially induce stress upon bears, focused management will be needed to protect critical habitats and to minimize the potential for human-bear interactions and conflicts. Preventing human incursion into critical habitats may be relied upon to ensure both human and bear safety.

Grazing of cattle and horses requires consideration for potential impacts on forage availability to maintain or increase wildlife populations, especially in Big Creek Park. Cattle

and horses are direct competitors with Grizzly Bears for food in these areas. There is also potential for persecution of bears due to real or perceived threats to cattle.

Spruce Lake is popular for anglers, but the fishing is reported to have changed, with fish being numerous but small in size compared to previous years, indicating a potential overpopulation situation.

Occasional use of llamas by private individuals takes place within the parks. Use of llamas as pack animals could present a risk to California Bighorn Sheep and Mountain Goats through disease transmission.

Cultural Heritage

The Tsilhqot'in Nation has interests in Big Creek Park associated with access for traditional gathering and hunting. Graveyard Creek, in the southern portion of Big Creek Park, has significant First Nation values.

The St'at'imc Nation has an interest in South Chilcotin Mountains Park. The St'at'imc have produced their own draft land use plan, Nxeke'menlhkalha Iti tmicwa, with many aspects that are directly relevant to park management planning. Direction derived from this land use plan that was considered in this park management plan includes:

- Respect cultural traditions;
- Placing the health of water, air, plants, animals and the land before all else;
- Activities will be carried out in a sustainable manner;
- Continuation of traditional First Nations' activities;
- Respect ecological limits;
- Maintain fully functioning ecosystems;
- Incorporate traditional knowledge;
- Recognize the values to be maintained and allow use that is consistent with maintaining those values;
- Protect intact ecosystems, encouraging management in adjacent lands that contributes to ecosystem health with the parks;
- The management plan will be dynamic, including new knowledge as it becomes available;
- Ensure natural disturbance cycles; and
- Incorporate climate change planning into management to counter its effects or facilitate adaptation (movement corridors, recognize shifting ecosystems).

The western boundary of the Secwepemc Nation asserted territory includes the parks. The Secwepemc Nation has an interest in traditional gathering and hunting activities.

Access

The amount and type of access can affect the desired visitor experiences. Almost all park users that have provided input to the management plan have noted that they value the

feeling of isolation and remoteness as the most important experience of their visits to these parks. Access management also has the potential to affect conservation values, particularly the movement of wildlife. Access management needs to take these values into consideration. There was some contradiction in public input; while most users wanted a remote experience, some suggest that access restrictions should only be used where it is necessary to protect conservation values.

There is no direct vehicle access to the parks; trailheads around the periphery are used by visitors as the starting point for most trips. Access to Big Creek Park is on roads that are to be gated and kept locked as per previous land use planning outcomes. The one exception to vehicle access is an existing skid trail that is used by a tourism operator for access to a cabin location on Bear Creek, but use of this trail is not transferrable to a subsequent owner in order to restore the wilderness character of the park. The location of trailheads must look after both convenience and maintenance of the wilderness feel and conservation values.

Some park users have requested upgrades to park entry points. Horse riders have requested proper horse tie-ups so they can camp and prepare for excursions into the parks. Hiking and mountain biking enthusiasts have questioned the condition of access roads and wish to maintain good, dependable access to the trailheads.

High Trail in South Chilcotin Mountains Park was requested as an exception to the motorized vehicle closure to allow ATVs access to this one specific location in the park; this request was to provide access to a small part of the park so people who are not as physically able can experience an aspect of the park. This proposal was to be evaluated based upon consistency with the broader objectives of this management plan.

Some of the trails that access South Chilcotin Mountains Park originate and traverse the adjacent mining and tourism areas. Management of the mining and tourism areas may affect access, conservation values and the wilderness experience in the parks. There is concern that any mining activity adjacent to the park may impact wildlife and provide additional access points to motorized vehicles.

Aircraft access is used by property owners on Spruce Lake and visitors wishing to access the parks, but there must be recognition of the issues associated with aircraft access. Although most recognize that floatplane access is a legitimate mode of entry to the parks, this must be balanced by the expected experiences of other visitors participating in on-the-ground activities. Public concerns were raised on the disturbance created through noise, frequency, timing and location of flights. Aircraft also allows access to the park by some who may not be prepared for a wilderness excursion. The narrow valleys typical of the area where the destination lakes are located echo the sound of aircraft. It was noted that even floatplane

clients want to have some quiet experience. Impacts of the noise on wildlife are also a concern.

Some park visitors have noted that park boundaries are not clearly defined, and information and directional signs may be lacking.

Outdoor Recreation Opportunities and Facilities

The recreation and tourism appeal of South Chilcotin Mountains and Big Creek parks results from the impression of naturalness, the mountain viewsapes and the feeling of remoteness. These qualities and features are sensitive to some recreational uses such as off trail and motorized vehicle use, levels of use, and development and activities in adjacent areas.

Concerns were expressed during the public input processes on the sustainability of the present level of use and whether it is now at or over capacity for the desired experiences, particularly the southern and eastern portions of South Chilcotin Mountains Park.

The increasing multiple uses within the parks, using the same trail system and different modes of travel are resulting in some conflicts being expressed among users, as well as potential impacts on natural values. Most people with an interest in the parks agree that different users and activities should be welcome, but with recognition that protecting the environment and the backcountry experience is a priority and that cooperation between parties should be a priority. Too much recreation activity can also displace wildlife, decreasing the chances of viewing animals, a major reason why many use the parks.

Levels of recreation use are expected to increase due to marketing by tourism companies and local communities. Current trends also show increasing popularity of the types of recreation opportunities provided by the parks. There is also a desire by the local community to have the parks be part of economic development. Any consideration of increasing the levels and variety of recreational activities must address sustainability of use, including impacts on conservation and other values and the relationship with First Nations.

Increased recreational activity will influence various wildlife species to differing degrees, but such influences are frequently impossible to accurately quantify. However, impacts on backcountry enthusiasts are more readily monitored and evaluated. Increasing rates of disturbance (e.g., audible noise related to floatplane transportation of park users) may be limited to appropriately protect sought after backcountry values such as quality of wilderness experience, opportunity to view wildlife, peace and solitude. Protection of backcountry aesthetics is similarly expected to confer benefit to wildlife by reducing disturbance levels.

Until more recently, horseback riding and hiking had been the traditional activities within the parks, but the increasing popularity of mountain biking challenges the compatibility of activities on multi-use trails and may impact wildlife. Horse riders, hikers and mountain bikers have different trail use characteristics and impacts. On occasion, bikers have been observed riding off the designated trails. They also tend to travel downhill much faster than any other trail users. This has the potential to lead to greater stress on a landscape that is prone to erosion and may also negatively impact wildlife and create safety concerns should they surprise other trail users or bears.

While most encounters between visitors are friendly, there have been some etiquette issues and accidents noted by park users. On popular trails, bikers quickly close in on horse riders, causing anxiety for both trail user groups. On the one hand, horse riders feel anxious to find suitable locations to let groups of bikers pass, who could be spread out along the trail. Bikers, on the other hand, have to wait while horse riders find a suitable passing location, which could take considerable time on steep trail sections. Without proper trail etiquette and each user type being aware of the other's needs the potential for conflict or accidents due to misunderstanding is increased. Visitors meeting horseback riders on the trail also have to be aware that the horses have reactions to other users they meet, especially from behind.

Although the park experience is prized by recreational users, there is potential for improvement. Existing recreation use patterns and some trails have evolved in an *ad hoc* fashion and need to be formalized with consideration of natural and cultural values.

Trail condition is a major concern for most users. This includes in-growth of vegetation, branches and fallen trees, which have become much more common as trees killed by the recent Mountain Pine Beetle infestation begin to fall. There are also drainage issues, requests for more bridges and directional signs, as well as trail damage from both horses and mountain bikes. It has been mentioned by some park visitors that horses are negatively impacting the optimum trail conditions desired by other users.

Visitors have raised an interest in improved facilities, including campsites, trails, pit toilets, and some demand for shelters. While a need for improvements was requested, keeping a wilderness feel was also a major concern noted by some park visitors. Suggestions included having low visibility of any developments and not impacting visual values of key recreation attraction areas such as open meadows, lakeshores and mountain vistas, minimizing signs and bridges, using wood rather than metal where they are required, using natural materials for outhouses, and keeping trailheads back from the park boundary. Requests were received for a map of all the trails and increased signage (at all trailheads and at public campgrounds) to reduce the number of people becoming disoriented.

Guided tourism has traditionally centred on providing horseback trips to the backcountry using rustic wall tent camps. Operators want to modernize their operations to meet the needs of a changing clientele that are used to more modern comforts. This would require an upgrade to the existing camps, moving them, or having additional camps. This may also include providing for longer stays and, in the case of bike riders, a move to more hut-to-hut operations that will provide a multi-day, cross-country experience.

The following facility concerns and suggestions were also raised by the public and stakeholders:

- Campgrounds can be overcrowded at times. Designated campsites have been suggested at Lorna Lake, Hummingbird Lake, Trigger Lake, Warner Lake, Deer Pass/Tyax Creek Junction and at the end of Relay Creek.
- Facilities for horses (e.g., hitching rails, feed storage) have been requested to prevent tree damage from tying up.
- Garbage, vandalism, littering, noise and human waste can be found in some areas.
- Many people opt to camp in close proximity to commercial tourism camps, impacting the experience of visitors, as well as conflicting with the ability of commercial operators to provide enough forage for their horses.
- There have been instances of public use of commercial tourism and range cabins or camps without permission.
- Lack of preparedness by individuals in a backcountry area. Lack of preparedness and cabin break-ins may be related as people seek shelter.

Spruce Lake is the major centre of activity, with evidence of overuse, especially at the north end of the lake where private land, two commercial camps, floatplane access docks and a public campground are located. Multiple groups arrive for different activities at the same time. Some visitors want the shoreline view undisrupted by facilities such as docks in order to retain a wilderness experience while others want to have additional docks available. There is an expectation that park management will not introduce any developments that will take away from the scenic backdrop of the lake.

The parks were recommended through land use planning processes that stated hunting was an acceptable activity. However, some public interests see hunting as a safety issue and inconsistent with a park designation.

Helicopters undertaking mineral exploration have been flying over the park, impacting the backcountry experience and causing possible wildlife disturbance and displacement. For similar reasons, much of the public and stakeholder input did not support heli-hiking as an appropriate use in the parks, with the expectation that there should be some solitude as a reward for the effort taken to hike to higher elevations.

Illegal motorized access with motorcycles and ATVs is a concern in summer, with associated impacts on wilderness values, vegetation, visual aesthetics and trails (from the tracking), as well as safety issues with other park users.

Winter activities include backcountry skiing, snowmobiling and heli-skiing. Backcountry skiing primarily occurs in the Eldorado Creek watershed and Taylor Creek, including the adjacent mining and tourism area. Interactions between snowmobiling, heli-skiing and backcountry skiing creates potential for conflict. Landing poles left over from winter heli-skiing activity are regularly found by summer visitors.

Snowmobile enthusiasts wish to continue to use the popular route up Slim Creek and over the passes west of Gun Mountain to Griswold Creek. The Gun Creek Trail between Jewel Bridge and Gun Creek Road has been historically used by snowmobiles and ATVs, and there is a desire by some members of the public to keep this access for this purpose. Upper Big Creek and Eldorado Mountain are also occasionally used for snowmobiling. Taylor Road and Cinnabar Road have been used for snowmobiling in the past but this is also a popular backcountry ski area and has high value wildlife habitat, specifically Mountain Goat range immediately to the north.

Commercial Operations

Tourism is a major economic driver in the region, with tourism operators having a longstanding presence in the parks. Commercial tourism operations provide visitors with the opportunity to experience a wilderness setting and learn about the area. The expectation is that commercial tourism operators will continue to be an important option for visitors to experience the parks.

Ranchers have a long history of grazing cattle in Big Creek Park and part of South Chilcotin Mountains Park, with a requirement to maintain associated infrastructure such as fencing and range cabins. There have been issues with groups using range cabins and corrals and having their horses eat nearby forage that is needed by the ranchers. Recreational use of trails that are used for cattle movement could also conflict with ranch operations.

Management Services

A common request from the public and tourism operators is to have more BC Parks presence and a ranger cabin(s) to monitor and enforce regulations, greet and educate the public and provide information.

First Nations and many organizations, tourism operators, nearby communities and individuals have strong interests within the parks, with a need to be fully informed and have meaningful input into park management. This is seen as providing a sense of ownership to park values and encouraging ongoing stewardship. Also, volunteers have assisted with trail maintenance and collection of information, which is an important contribution that should be encouraged.

A recommendation for self-funding of the parks was raised by some members of the public, with the suggestion to charge fees for entry into the parks to assist with research and the many maintenance challenges, especially trails.

Visitor Information/Visitor Experience

Communication, education and outreach are important tools for park management and user enjoyment. Public perception and use of the parks are influenced by the type, nature and methods of conveying information. Information provision is one of the principal means of how potential visitors gain an understanding of the conditions and recreation opportunities found in a park. Visitor information assists with pre-trip planning and plays a role in establishing expectations of the park experience, resource and facility conditions, management limitations, level of contact with other users, and potential conflicts or safety considerations.

Communications products provide important management tools, and can be used to influence visitor behaviour. Interpretation enhances awareness, appreciation and understanding of the protected area environment, and encourages personal responsibility towards park stewardship. Information should also advise people of the sensitive environments and potential impacts.

Potential visitors should be made aware that visiting these parks is not for the inexperienced or ill-equipped.

Appendix 3: Wildlife Considerations for South Chilcotin and Big Creek Parks, 2018

Recommendations on wildlife management were provided during the park management planning process. These were obtained from Ministry of Forests, Lands and Natural Resource Operations and Rural Development biologists, BC Parks staff or analysis of available habitat information. These are presented below.

Wildlife in general:

- Identify and protect areas of highest value habitats and movement corridors and manage as areas of minimal disturbance or core habitats within the parks, including low level carrying capacity for visitors and placing a priority on habitat protection over recreational use in these areas. Based upon the best available habitat information at this time, suggested core areas are provided in Figure 1 (attached). These could change as analysis of more current information is made available. Wildlife will not be displaced from important habitats at critical times; this may preclude the expansion of facilities in these areas and/or require gradual facility removal (e.g., Relay and Leckie creeks are important areas for bear movement in and out of the park that should not be interrupted at critical times; Eldorado Ridge is an important movement area for Mountain Goat and is also a highly popular trail). It is important to assess whether there are any impacts on wildlife and implement corrective measures where necessary, including moving or closing trails and limiting entry.

Specifically for Grizzly Bear:

- Participate in the preparation of a regional habitat restoration and management plan specifically for Grizzly Bear management.
- Identify and maximize remote, core security areas for productive adult females and secure landscape level connectivity within the parks to adjacent areas. The interim core habitat areas for all wildlife include most high capability and movement areas for Grizzly Bears (Figures 1 and 2). Enhance or maintain bear habitat at or near the natural carrying capacity to support survival and reproduction. This includes using prescribed burns to increase berry production on high capability sites to enhance feeding for Grizzly Bears, especially adult females, maintaining the condition of important feeding areas, such as late spring and summer subalpine meadows (Figure 2) and stands of whitebark pine that are important feeding areas in the fall.
- High potential movement routes include to the west from Big Creek Park and south to the Slim Creek watershed, which was identified as a Grizzly Bear core area (the Leckie Lake area is a high potential route between watersheds, and would encourage bears to move to the south around the west end of Downton Lake rather than between Downton Lake and Carpenter Lake where bears would be likely to come into contact with people in the Gold Bridge area). Discourage public access, minimize human presence and mitigate bear attractants in these areas, especially in areas used by sows with cubs.

Reduce or minimize human presence in important foraging areas, such as whitebark pine stands in fall or wetlands in spring and early summer. Move campsites and trails if necessary and possible, and consider seasonal closures. Avoid or minimize human presence in areas with concentrations of spring Grizzly Bear forage areas (Figure 2). Presently of note are six general areas:

1. Large areas in the southwest corner of South Chilcotin Mountains Park, just outside of the park but also in the pass entering Leckie Creek in the area of Leckie Lakes.
2. The upper portions of North Cinnabar, Pearson, Taylor and Eldorado creeks.
3. The meadows south and west of Spruce Lake and extending north along Spruce Lake Creek.
4. The meadows along the north side of Tyaughton Creek downstream of the confluence of Spruce Lake Creek.
5. The wetland areas in the northern half of Big Creek Park.
6. A large area encompassing much of Big Creek downstream from Lorna Lake to the confluence of Graveyard Creek, lower Grant Creek, Tosh Creek, Graveyard Creek, Little Graveyard Creek, and the area from Dash Hill to the northeast and into Dash Creek to the east.

A priority should be given to verify these areas as being important to Grizzly Bear or to determine the actual locations of the most valuable and most used habitats.

In the absence of current and accurate assessment of habitat values, it is difficult to create appropriate management strategies that will result in minimal impacts to Grizzly Bear values. In the interim, this will require a more adaptive approach until the significant information gaps are addressed. This would involve assessment of all available information, consultation with affected parties to assess options and mitigate possible impacts, and using an adaptive management approach to address concerns.

The high recreational use area of Spruce Lake should receive specific management attention due to the concentration of human activities and proximity to bear habitat. Specific strategies for this area include:

- Discourage use and facilities within or immediately adjacent to the meadow complexes, focussing activities to reduce impacts.
- Consideration should be given to reducing the existing activities (e.g., closing or moving trails, moving facilities that are in areas of bear movement, directing visitors away from Grizzly Bear use areas) during times when Grizzly Bears are expected in the meadows.
- Prepare a Grizzly Bear conflict/mortality prevention/response plan in co-operation with Fish and Wildlife Section, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, as well as Ministry of Environment and Climate Change Strategy staff. A close working relationship with adjacent land managers is needed to ensure that the bears that migrate from the park source area are not subjected to unacceptable mortality risk in high road density areas outside of the parks.

- Evaluate new and existing facilities for the purpose of minimizing bear-human interaction. This includes a thorough review of bear habitat values, including seasonal food sources, travel, and known/expected use.
- Grizzly Bears should not be displaced from critical habitats as a result of expanding recreational activities.
- Use predator control as a last resort in the case of predation on livestock, and then only target specific problem animals.
- Follow existing guidelines and best management practices for preventing and responding to Grizzly Bear conflicts with cattle and horses in backcountry situations. Livestock conflict prevention may benefit from adjustments to where and when cattle are set out to graze in the parks and reporting of dead animals and their management. A better understanding of the distribution and abundance of early spring habitat may lead to better spatial separation between tenured cattle range and Grizzly Bears and prioritize areas for range monitoring to ensure bears have adequate forage. Work with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to investigate the placing of limits on timing, numbers or location of cattle grazing to avoid Grizzly Bear conflicts. Encourage use of tools to avoid and mitigate wildlife conflicts, such as electric fencing, camp structures for garbage, etc.

Ensure a high level of bear aware and bear management strategies to prevent bears from habituating to human presence.

- Have a zero tolerance for attractants (pack in, pack out policy).
- Wildlife viewing should be done from a distance, especially for Grizzly Bears; areas known to be regularly used by bears should be avoided.
- Ensure proper storage of food and cleaning of fish. Prepare standards for human food and livestock feed transport and storage, and garbage and human waste management.
- Ensure bear-proof food containers are used at regularly used campsites.
- Education materials on wildlife and how to behave around them (pamphlets, educational signs) should be available at trailheads and through tourism operators.

Consider the development and implementation of bear harassment measures to discourage habituation of bears to humans.

Recognize that successful integration of recreation and Grizzly Bear recovery means that not all areas of the parks will be available for travel and there may be a limit to the number of users in specific areas of the parks.

Specific attention should be put toward managing the characteristics of different user groups to minimize the potential for bear interactions:

- Hikers should be encouraged to stay on trails and in open areas.
- Develop ongoing, co-operative relationships with mountain bike organizations.
- With input from commercial operators and any other mountain biking organizations, management of mountain biking should focus on further investigation into the possibility of adjusting biking activity (e.g., make mountain biking predictable, travelling in groups, slowing down in areas of limited visibility).

- Agreeing to a “Bear Smart Code of Conduct” for various users on how to avoid conflict with bears or other wildlife and how to respond if wildlife are encountered.
- Monitoring of visitor activity.

Decrease human presence in the area of Grizzly Bear habitat that is located on the north and northwest shore of Spruce Lake and north along the outlet, and to alleviate congestion in this area. Through consultation with tourism operators, consider moving the docks on Spruce Lake to the east side of the lake, as well as moving tourism facilities to another location.

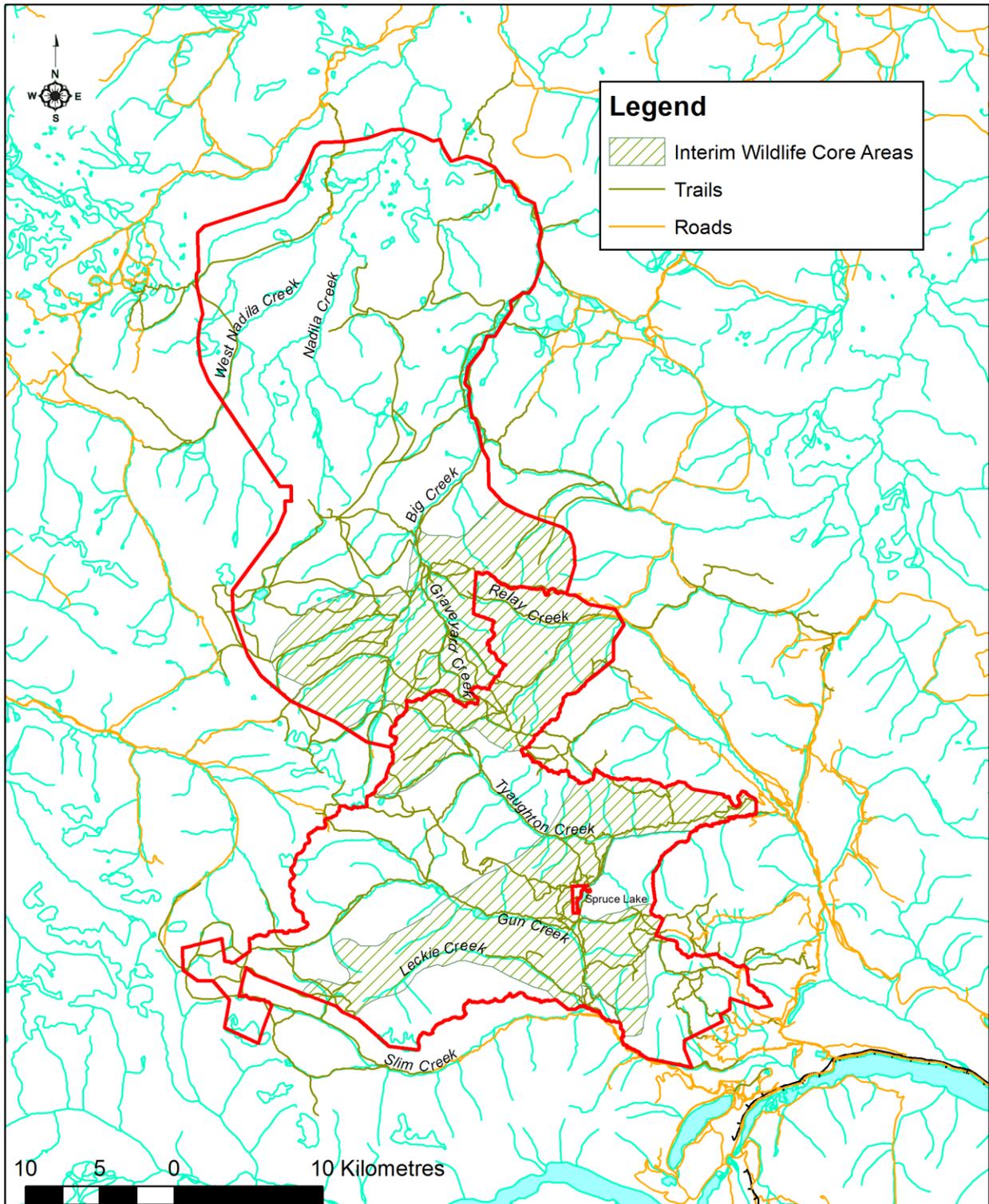


Figure 1: Core Wildlife Areas

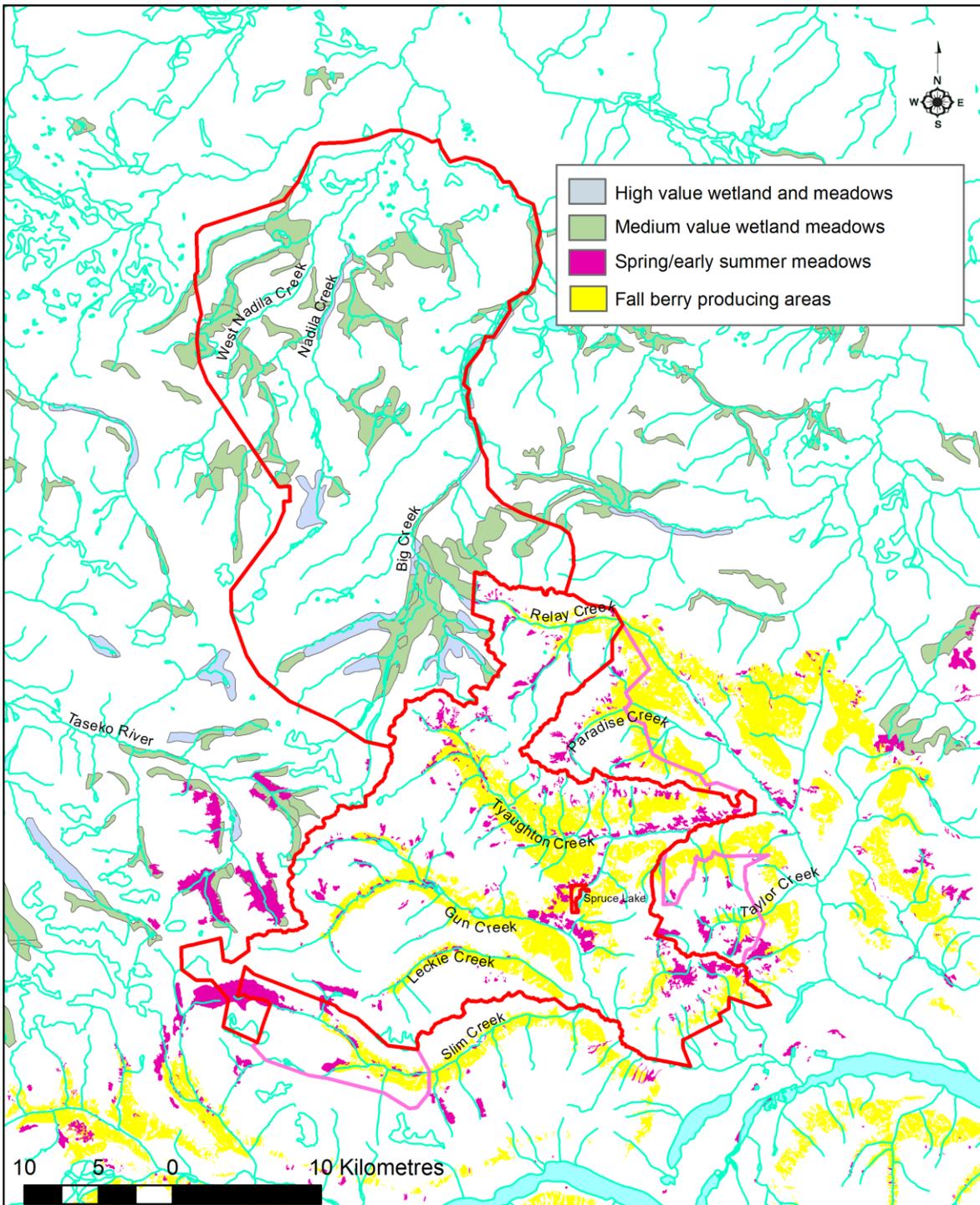


Figure 2: Grizzly Bear Seasonal Habitats

Note: Mapping derived from different habitat models for each park. Habitat areas in Figure 5 were derived from different sources that are not directly comparable between the two parks. The information shown in Figure 5 for Big Creek Park primarily shows spring and early summer habitats, while showing both spring and summer habitats for South Chilcotin Mountains Park. Portions of the parks with high concentrations of habitat are the most likely areas to attract Grizzly Bears. The areas shown as “high” in Big Creek Park and as “spring” in South Chilcotin Mountains Park are important to Grizzly Bears as a food source in spring and early summer. These are usually lower elevation wetlands or subalpine meadows. Summer and fall habitats are more dispersed and provide high energy food sources that bears require to prepare for winter. The two parks also provide a critical connection between an area of low populations of Grizzly Bear to the south and healthier populations to the northwest.

Appendix 4: Appropriate Use Table

The following table summarizes existing and potential future uses in Big Creek and South Chilcotin Mountains parks that are and are not appropriate in each zone. This is not intended to be an exhaustive list of all uses that may be considered in these two parks in the future.

Please note that many appropriate uses are geographically restricted (i.e., only allowed in certain areas of Big Creek and South Chilcotin Mountains parks) or are only appropriate at certain times of the year. Please ensure that you are well informed of any use restrictions as indicated in the table. It is a good idea to review relevant sections of the management plan where indicated in the table.

Appropriate Use Table Legend		
N	Not an appropriate use	The use is not appropriate in the indicated zone. If the use currently exists but the management planning process has determined that the use is no longer appropriate in all or part of the parks, the management plan will include strategies for ending the activity (e.g., phasing out, closing).
Y	May be an appropriate use	Some level or extent of this use may be appropriate in the zone(s) indicated. If the activity/use already exists, the management plan provides guidance on the appropriate level of use and may address specific restrictions or planned enhancements (e.g., capacity, designated areas for a particular activity, party size, time of year, etc.). For new or expanded uses, this symbol indicates that the use <u>may be considered</u> for further evaluation and approval. The appropriateness of some activities may not be confirmed until a further assessment (e.g., BC Parks Impacts Assessment Process) or evaluation process (e.g., park use permit adjudication) is completed.
Y1	Appropriate use as per section 30 of the <i>Park Act</i>	Indicates that the use is not normally appropriate in the parks but was occurring pursuant to an encumbrance or Crown authorization at the time the park was established and is allowed to continue.

Activity/Facility	Wilderness Recreation Zone	Comments
Activities/Uses		
Aircraft Access	Y	Access management plan to be developed.
Beach Activities (swimming, sunbathing, etc.)	Y	
Boating (non-power)	Y	
Boating (power)	N	
Boating (electric)	Y	
Camping – vehicle accessible	N	No vehicle access to parks.
Camping – backcountry	Y	
Camping - other (at approved/designated sites)	Y	
Fish Stocking	N	Natural spawning population.
Fish Habitat Enhancement	Y	For restoration purposes only.
Fishing	Y	
Grazing (domestic livestock)	Y1	
Heli-hiking	N	
Hiking/Backpacking/Walking	Y	
Hunting	Y	
Mechanized Off-road Access (non-motorised – i.e. mountain biking)	Y	Mountain biking on trails only.
Motorised Off-road Access (not snowmobiles – i.e., 4x4, motorcycles, ATV)	Y	Existing use in localized areas only, as per stated restrictions.
Pack Animal Use	Y	Horses only.
Skiing (downhill and cross-country track based)	N	No facilities.
Skiing (helicopter or cat-assisted)	Y	Existing heli-ski tenure.
Snowmobiling	Y	Traditional area in Slim Creek watershed and over pass to the west; Ridges south of Taylor Creek. See section 3.1.5.
Trapping	Y	Existing use only.
Facilities/Infrastructure		
Administrative Buildings and Compounds	Y	Ranger cabin(s) only
Lodges, Huts, Shelters and Cabins	Y	Commercial operator, rustic, hidden cabins only. Improvements but no increase in capacity in core wildlife areas.
Boat Launches	N	No vehicle access to parks; floatplane access only.
Campgrounds (other)	Y	Backcountry, rustic in nature, can improve, but no expansion of capacity in core wildlife areas.
Campgrounds and Picnic Areas (vehicle access and serviced)	N	No vehicle access to parks.
Interpretation and Information Buildings	N	See Section 3.1.8.
Roads and Parking Lots	N	Public access roads and parking are provided outside

Activity/Facility	Wilderness Recreation Zone	Comments
		of the parks.
Trails (hiking, cross-country skiing, mountain biking)	Y	
Water Control Structures	N	None existing.
Water Sampling Structures	Y1	Existing hydrometric station with accompanying access (helipad).
Wharves/docks	Y	Private land owners on Spruce Lake; controlled docks for floatplane access.