



**Lillooet Resort  
Opportunity Study**

**31 March 2005**

Prepared for:

**Ministry of Agriculture & Lands and  
members of the Lillooet TSA Community and  
Forest Economic Interests Memorandum of Agreement**



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## Preface -

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Along with other techniques, this study uses digital modeling and mapping tools to identify tourism development potential in the Lillooet Timber Supply Area's (TSA's) existing, newly established and proposed Protected Areas (PA's).

Applying Provincial land and resource databases as the analysis foundation, the study's results should be interpreted as broad-based, or "coarse-filter" in nature.

It is hoped that this information will provide a good overview of the terrain's capability to host various commercial recreation products, as well as to provide a general understanding regarding existing land and resource values in and around each PA.

This being stated, for high value development areas, additional research is required to further determine the terrain's site-specific features, as well as additional land and resource values.

Helios Touring Planning Group takes no responsibility for future commercial recreation activities that may occur within this study area.



## Part 1 – Introduction & Area Profile

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### 1.0 Background & Study Rationale

Canada-wide, two major employment challenges exist in rural communities. These include job losses in primary sector industries, and the exodus of youth in search of work. Tourism is viewed as one way to generate revenue within rural communities, as well as assist with maintaining local employment. Generating in excess of \$6.1 trillion globally, and growing rapidly, tourism is currently the world's largest industry.

In British Columbia tourism generated \$9.3 billion in revenues in 2003, and supported 114,000 direct jobs. Growth prospects in this industry are excellent, especially given BC's recent award to host the 2010 Winter Olympics and the game's associated global publicity endeavours.

BC's tourism industry markets itself to the world using the theme or brand of 'Super Natural British Columbia'. This is based on the fact that, due to the abundance of wildlife, fisheries, wilderness and dramatic scenery, much of our province's key product offerings are nature-related.

Travelers visit BC from around the world to enjoy our high-quality natural environment. Nature-based tourism in particular offers promise to rural communities given that the tourism products it markets are found throughout rural British Columbia. A recent Statistics Canada study determined that, on a national-scale, rural regions closest to urban centres took advantage of these nearby markets to generate a 17% increase in tourism employment between 1996 and 2003.<sup>1</sup>

The Lillooet area has traditionally featured an economy based on resource extraction, particularly forestry and mining. Due to a number of factors, however, growth opportunities in the forestry and mining sectors have become limited in recent years. As such, rural communities are actively seeking new opportunities to diversify their economies.

On July 22, 2004 subject to further consultation with First Nations, the Provincial government announced a draft Land and Resource Management Plan (LRMP) for the Lillooet area. Consisting of 11,000 square kilometres, 17% of this is designated to be Protected Areas and conservancy. This will consist of a new Class A park of 56,500 hectares (South Chilcotin protected area); eight new parks/protected areas, comprising 23,500 hectares; and another 14,600 hectares will be designated for tourism and mining, but not logging.

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<sup>1</sup> Statistics Canada. 2003. The Rural and Small Town Canada Analysis: Bulletin, Vol. 5, No. 8, entitled "Tourism Employment in Rural Canada."



It is believed that the establishment of these new parks will facilitate new opportunities for tourism in the area.

## 1.1 Study Purpose

In recognition of a regional interest to enhance tourism opportunities in the Lillooet LRMP area, the Ministry of Sustainable Resource Management (SRM) has commissioned Helios Tourism Planning Group to identify commercial recreation (CR) product development opportunities within existing, newly established and proposed Protected Areas (PA's) and Crown land in their adjacent buffers. A main goal of this initiative is to identify physical terrain attributes that could support a variety of wilderness and adventure tourism activities that, in turn, could support the development of new lodges or resorts in the immediate area.

The main objectives of this report include:

- Identifying new economic development opportunities resulting from the establishment of new Protected Areas, as well as within existing Protected Areas;
- Identifying high value Commercial Recreation areas for potential resort development to be analyzed in more detail by government or private sector investors;
- Providing Commercial Recreation terrain capability maps for Protected Areas and their associated buffers within the Lillooet LRMP area.

## 1.2 Methods

To conduct this study, the following steps occurred:

### 1. Commercial Recreation (CR) Product Identification:

Upon selecting broad CR products to be reviewed, each product is further netted-down to establish what type of product would most likely hold a viable market demand in each given area? For example, with horseback riding, will visitors be more inclined to go for one-day or multi-day rides? Will this be in front, mid-, or backcountry locales?

Once activities are selected, each one is assessed to identify the specific criteria involved to establish a quality product. For example, to present a quality heli-skiing product, a prospective operator needs to find terrain with a slope ranging from 20 - 35°, snowpack depth greater than 250 centimetres, and a mix of gladed runs ranging from “no trees” to tree cover featuring 10 - 40% crown closure.

The result of this analysis is a quantitative table listing the necessary criteria each product requires to produce a quality CR opportunity.





## 2. Terrain Capability Analysis:

Once products have been established quantitatively, a digital terrain analysis occurs to identify areas capable of hosting each CR activity. In this phase, data is gathered to produce digital maps and models of the area's biophysical and infrastructural attributes.

Features reviewed in this section include: biogeoclimatic zones, elevation, major water bodies, existing roads/tenures/trails/ infrastructure, jurisdictional boundaries, snowfall/precipitation data, sensitive fish and wildlife habitat information and other data.

Digital maps are analyzed to identify tourism development opportunities. Because these opportunities range in quality, each product has ranked attribute ratings to identify high, medium and low-quality terrain.

The end product of this analysis is a series of maps presenting specific tourism development opportunities based solely on the study area's biophysical and infrastructural attributes.

## 3. Suitability Analysis:

Once high value terrain is identified, a suitability analysis occurs to identify existing land and resource values and overarching management directives. Once determined, this data provides transparent rationale for ranking the relative appropriateness of a given tourism product. In many cases, where sensitive land and resource already occur, this process will devalue a given product to a lower overall product development ranking.

Because this study focuses on Protected Areas, overarching Park Management Plans (PMP) are referenced to identify management priorities and appropriate activities for existing parks. For proposed PA's, as well as newly established PA's lacking a PMP, the draft Lillooet LRMP is referenced. For park buffer areas, land and resource values are again identified in the draft Lillooet LRMP.

The end result of this section is a broad review of existing land and resource values and management directives that prospective developers should be aware of.

## 4. Overall Product Feasibility Analysis:

Factoring-in information gathered in the capability and suitability assessments, this final step summarizes and ranks each CR product's development potential. For existing Protected Areas, only those activities deemed feasible to occur are assessed. For proposed Protected Area's, while many products may be deemed unacceptable





once formal Park Management Plans are established, all products have been assessed for their feasibility.

The end product of this analysis is a table ranking and rationalizing CR products' relative development feasibility for each study unit.

### *1.2.1 Study Limitations*

This research uses coarse-filter analysis methods to identify tourism product development potential. As such, in order to more accurately ascertain a product's potential in a given area, fine-filter research into specific areas-of-interest is expected to occur to determine its features, existing values/sensitivities and other prescribed governance/policy.

In addition to the above-mentioned general caveat, some key limitations associated with this study involved a tight project timeline and data gaps. Another factor--more a challenge than a limitation--was assessing a fragmented land base within two main provincial management jurisdictions. In general, larger, contiguous land tracts are assessed, facilitating a more holistic perspective of tourism development potential in a given area.

A fairly restricted time allocation was awarded to conduct this project; as such, some tasks were either amended or omitted from the standard style of CR analysis Helios TPG conducts. This involved limiting the number of CR products to be assessed.<sup>2</sup> Also, no field-based research or stakeholder consultation occurred with existing CR operators, public recreationists, local tourism experts, and other parties. This communication can provide valuable anecdotal information regarding such factors as the viability of certain activities over the seasons, and visitor demand trends.

Other limitations included a lack of solid baseline data regarding tourism and public recreation values and associated infrastructure. While the Province has commissioned "Tourism Opportunity Studies" or TOS' for most of BC, this baseline information does not occur for the Lillooet TSA. With respect to public recreation use and values, no research has been conducted by the Ministry of Forests. Finally, no ortho-map coverage for Spruce Lake was available, limiting our ability to "eyeball" the landscape's features and infrastructure.

## 1.3 General Area Profile<sup>3</sup>

The Lillooet LRMP area also coincides with its Timber Supply Area (TSA) (See Figure 1). Comprising 1, 125, 025 hectares, most of this TSA rests within the rugged,

<sup>2</sup> Additional CR Products of interest include: whitewater rafting, heli-biking, self-propelled mtn. biking, ATV touring and power (snowmobile assisted) skiing/boarding.

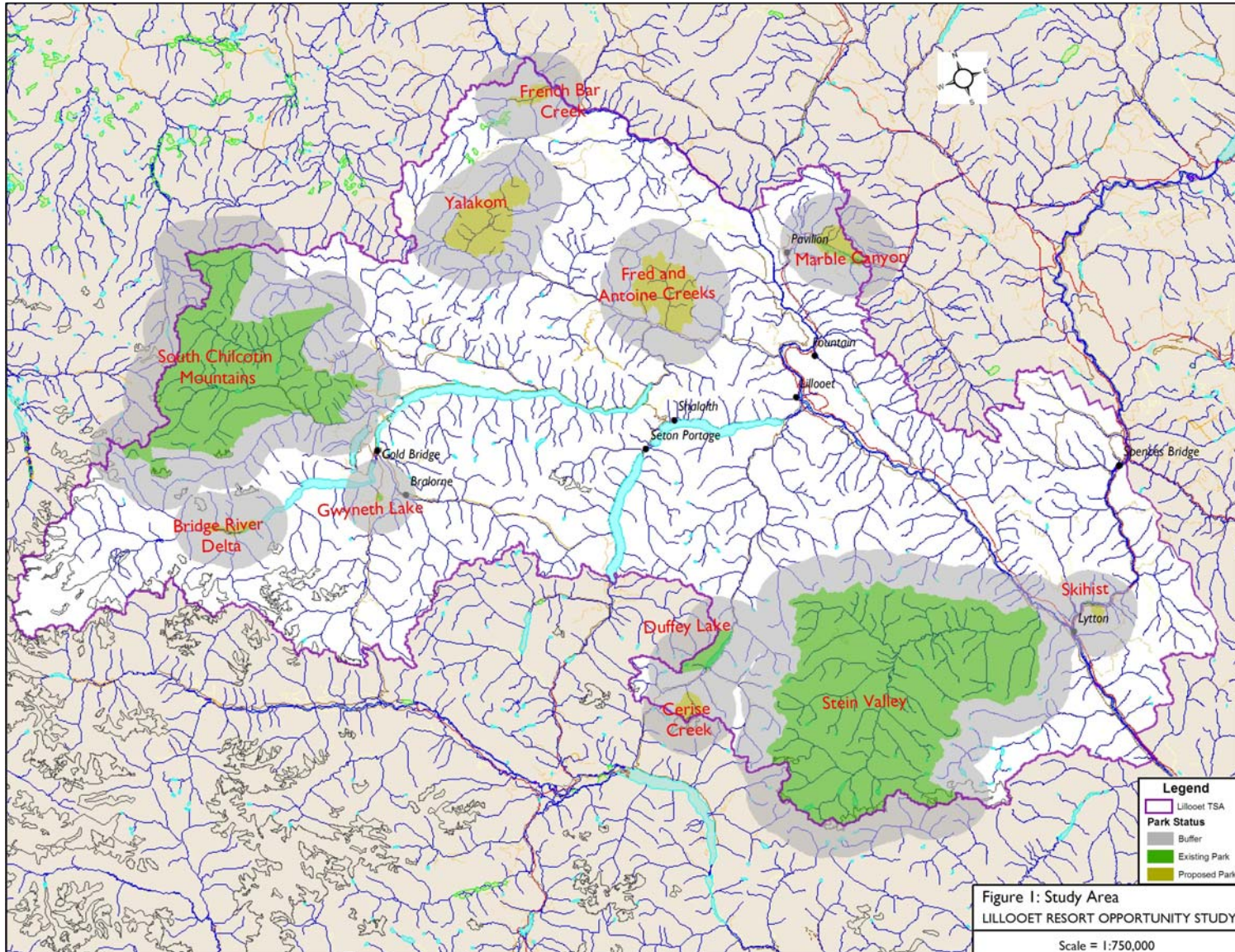
<sup>3</sup> Section's information mainly derived from the Draft Lillooet LRMP. July 22, 2004. Ministry of Sustainable Resource Management. Southern Interior Region. Kamloops, BC.



mountainous Coast Mountain complex. Elevation ranges from 2,944 metres (Skihist Mtn.) to about 140 metres in the Fraser Valley south of Lytton. Some identifiable mountain ranges include the Bendor; Camelsfoot; Cantilever; Cayoosh; Chilcotin; Clear; Dickson; Leckie; Scarped; and Shulaps. Topographic exceptions include terrain occurring in the Chilcotin Plateau in the study area's northern reaches, and the Thompson Okanagan Plateau in its eastern reaches (See map #1 – Lillooet LRMP/TSA area).

Resulting from the Coast Mountains' rain-shadow effect, most of the area is semi-arid; however, three major air masses converge in the area, causing major weather fluctuations. These masses involve wet, coastal air from the west converging with cold plateau air from the north and dry air from the east. An effect of this phenomenon includes an average annual precipitation ranging between 2,000 mm in the west to 300 mm in the east.





Eight biogeoclimatic zones occur in the Lillooet LRMP area including in ascending order: Ponderosa Pine (PP) and Bunchgrass (BG) along the Fraser and Thompson River Valleys; Interior Douglas Fir in remaining valleys and above the PP and BG zones; Montane Spruce (MS) and, in the southeast valleys, Coastal Western Hemlock (CWH); followed throughout by Engleman Spruce/Subalpine Fir (ESSF), and finishing with Alpine Tundra (AT).

Major rivers in the study area include the Fraser, Thompson and Bridge. The Bridge River hosts a series of hydroelectric dams and reservoirs. Additional watercourses of significance include, but not limited to the following: Cayoosh, Seton, Stein, Tyaughton, and the Yalakom. The area's four largest lakes include Anderson, Seton, Downton and Carpenter, which also serve as hydroelectric dams.

First Nations comprise about half the existing population, representing four broad cultural groups: St'at'imc, Nlaka'pamux, Secwepemc, and Tsilhqot'in. Twelve bands have communities or reserves within the area, with sixteen additional First Nations communities using this area for traditional activities.

Since the 1850's, settlers of European-descent have made the area their home. Main population centres include Lillooet, Seton Portage-Shalalth, Fountain, Lytton and Pavillion. Smaller centres include Bralorne, Gold Bridge and Spences Bridge. Population is sparse (about 6,500), however diverse in nature. First Nations comprise about half the existing population. Over one third of the area's population reside in more rural areas including Moha, Yalakom Valley, Anderson Lake, Gun Lake, Marshall Lake, Tyaughton Lake, Pavilion Lake, and Texas Creek.

Forestry is the largest industrial sector in the study area, supporting approximately 19% of the area's employment. The tourism sector currently accounts for 15 % of the area's employment. Additional sectors include agriculture at 12% and mining at 2%. The public sector is a very significant employer in the area, accounting for 38% of plan area employment.

According to the Lillooet LRMP, a key challenge for the area's communities, and fundamental goal of the plan, is to diversify the local economy and ensure its sustainability.

### *1.3.1 Management Jurisdictions*

The Lillooet LRMP area also coincides with the boundaries of the Lillooet Timber Supply Area (TSA) occurring within the Cascades Forest District. The Province administers approximately 96% of the area, with the remaining 4% equally divided between Indian Reserves (IR's) and private land. The specific study area of this project involves existing, newly established and proposed Protected Areas (PA) within the



Lillooet LRMP area. Additional buffer areas adjacent to these designated areas have also been incorporated into the analysis.

The Ministry of Water, Land and Air Protection (WLAP)--under the Parks Division--manages protected Areas. Using the *Provincial Parks Act* as a framework for planning and management strategies, each PA is provided a unique set of guidelines, taking the form of a Park Management Plan (PMP), or, for smaller parks, a Management Direction Statement (MDS). For this study, these management directives are referred to; however, for PA's yet to have a formal management plan, or in areas occurring outside of the park boundary, the draft Lillooet LRMP is referred to for proposed management intent of these areas.

Aboriginal rights and title exist in BC and receive protection under Section 35(1) of the Constitution Act (1982). While the Lillooet LRMP provides strategic, higher-level planning direction for the area, the plan does not limit treaty negotiations and settlement. Furthermore, additional First Nations consultation is required for both the draft Lillooet LRMP and future Park Management Plans.

Within the St'at'imc Nations traditional territory, the Nxekekmenlhkalha lti Tmicwa (St'at'imc Preliminary Draft Land Use Plan) has been established.<sup>4</sup> This plan establishes the St'at'imc Nations' vision and land use principles for their traditional land, as well as general management direction and special management direction for water, cultural heritage, wildlife, fish, and sensitive ecosystems. The document also identifies community economic development (CED) areas and general principles.

This current analysis simply provides information regarding tourism development opportunities; no specific areas or products will be developed as a result of this research. Rather, in light of First Nations' interest in community economic development opportunities, it is hoped that the findings in this report will contribute to tourism development opportunities.

### *1.3.2 Area-based Access*

Access to the general area can occur by road via the following major road corridors (Figure 5a):

- Hwy. 1 through Lytton and Spence's Bridge
- Hwy. 12 from Lytton to Lillooet
- Hwy. 99 (the Sea-to-Sky route) from Pavilion, Lillooet, and down en route to Pemberton and the coast
- Hwy 40. Bridge River to Seton Portage

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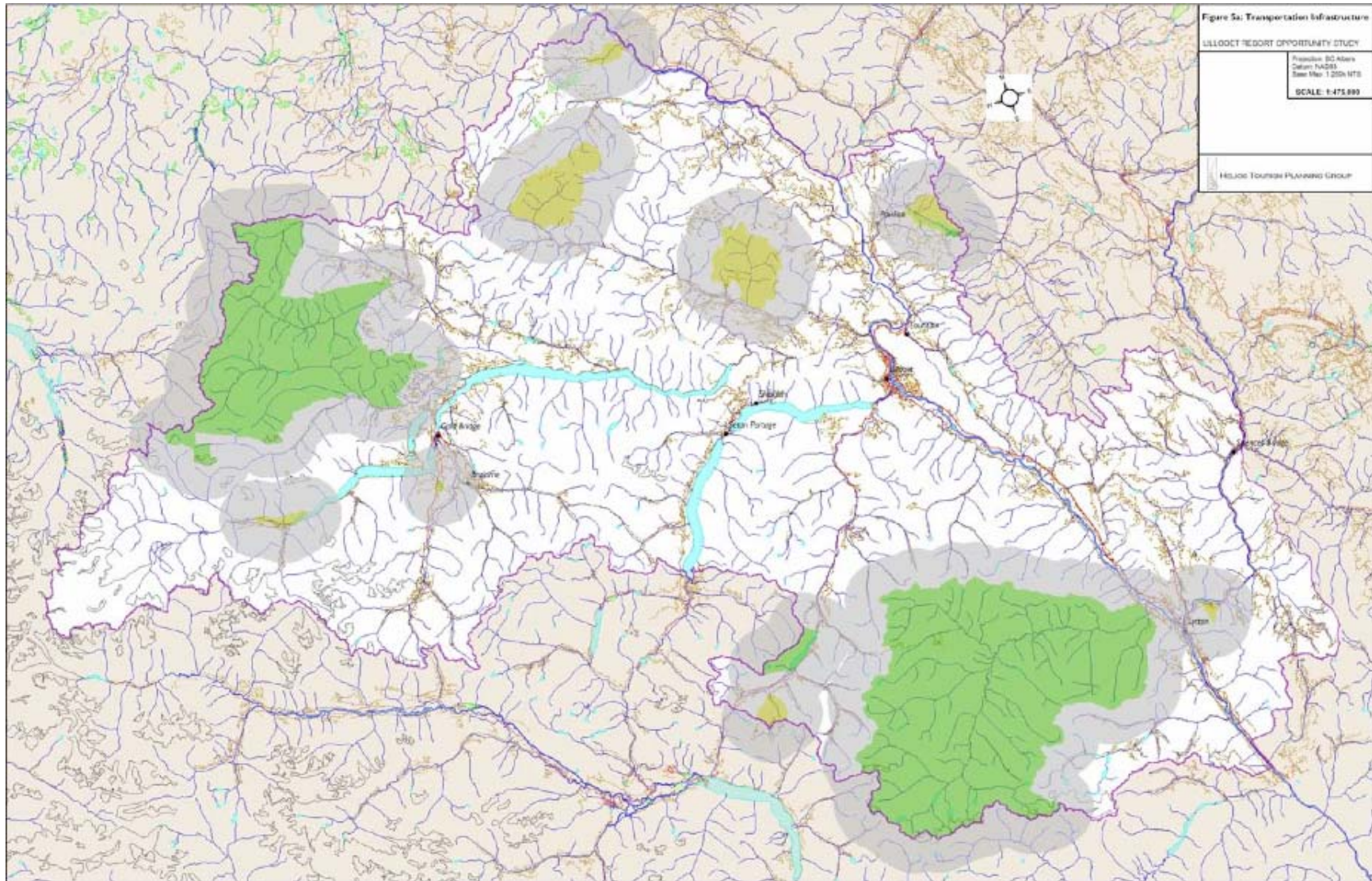
<sup>4</sup> St'at'imc Preliminary Draft Land Use Plan, Part 1. March, 2004. St'at'imc Land and Resource Authority. St'at'imc Chief's Council. Lillooet, BC



Travel time from Vancouver to Lillooet via Hwy. 99 and to Lytton via Hwy 1 is approximately 4 hours.









Additional access roads in the area include a section where Hwy. 40 turns to gravel along the north side of Carpenter Lake, heading west to Gold Bridge. Spur roads from this area include a gravel road north up Tyaughton Cr., and another near Downton Lake. Also, the Hurley River Forest Service Road (FSR) is a summer-use only gravel road extending south from Gold Bridge to north of Pemberton on the Lillooet Rd.<sup>5</sup> According to TRIM data and the BC Recreation Atlas, a number of Forest Service Roads (FSR's) occur in the study area. These are outlined in the report's suitability analysis table.

A small car ferry shuttles cars and passengers across the Fraser River just north of Lytton to access the other shore, and the trailhead to the Stein Valley Nlaka'pamux Heritage Provincial Park.

A BC Rail line through Lillooet hosts a new tourism rail operator, Rock Mountaineer Vacations. Commuting from Vancouver, through Whistler and up to through Pavilion and Lillooet (Andersen & Seton Lakes as well) through to Jasper, AB

Airstrips exist in Lillooet and Lytton. Floatplane access occurs in to some of the area's lakes (including Tyax). A skip plane service is offered through Tyax Air Services for glacier-related recreation pursuits. Cariboo-Chilcotin helicopters based in Lillooet is the only operator based in the Lillooet TSA. Other nearby helicopter bases are in Merritt, Pemberton and Whistler. The closest international plane terminals include Vancouver International and Kamloops.

## 1.4 Nature-Based Tourism Profile

With its prime location, and ability to offer a diversity of world-class winter and summer recreation opportunities, Protected Areas within the Lillooet TSA area hold high tourism values.

Because very little baseline research has occurred in this part of the province, this section summarizes existing tourism activities and the area's products marketed by Tourism BC and other marketing organizations. Sources for this section include: Tourism BC's marketing material, the draft Lillooet LRMP, the Hurley Road Study, a recently published report identifying tourism diversification opportunities for Lytton and Lillooet,<sup>6</sup> and summary data from Tourism BC regarding visitor statistics gathered at the Lytton and Lillooet Visitor Information Centres (VIC's).

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<sup>5</sup> Note: An informative report about this road exists entitled: "A Cost-Benefit Assessment of the Hurley River Road." September 2002. Prepared by Urban Systems for the Squamish-Lillooet Regional District. Squamish, BC.

<sup>6</sup> "Lillooet-Lytton Tourism Diversification Project." February, 2005. Prepared by: Wilderness Tourism Association. Prepared for: Fraser Basin Council & the Ministry of Sustainable Resource Management.



To establish an understanding about existing commercial tourism values in the area, as well as viable products in area this section also identifies existing CR operators in the Lillooet TSA. Finally, a trends analysis will occur to identify any important information regarding potential barriers or opportunities relating to tourism development in the area.

### *1.4.1 Tourism BC's Marketing Regions*

As a marketing-oriented organization, Tourism British Columbia's mandate is to promote the growth and development of the tourism industry through innovative programs and industry development initiatives. Protected Areas in the Lillooet TSA falling within this agency's tourism regions, including the: Cariboo Chilcotin Coast (~2/3<sup>rd</sup>s), Vancouver & Coast Mountains (~1/3<sup>rd</sup>), and a small section within the Thompson Okanagan region (including Spences Bridge). This sub-section reviews each region, identifying visitor trends, and key-marketing features highlighted by regional and provincial tourism organizations.

#### 1.4.1.1 Cariboo Chilcotin Coast Region

New and proposed protected areas included within the Cariboo Chilcotin Coast Region include: the South Chilcotins (Spruce Lake), Fred and Antoine Creeks, Yalakom Creek, French Bar Creek, Marble Canyon Park extension, Bridge River Delta and Gwyneth Lake. This represents all but one (Cerise Creek) of the area's proposed or newly established PA's.

A Visitor Information Centre (VIC) situated in Lillooet has found peak visitation to occur between July to September (the VIC is closed between November – April), with April and June hosting the second highest visitation numbers.<sup>7</sup> For 2003 and 2004, summertime visitation more than tripled that of other times of the year. Furthermore, 2004 hosted the highest annual visitation numbers; however, due to unknown factors, visitor numbers have been erratic over the past decade.

Additional data regarding inquiries made to the Lillooet VIC regarding “adventure/recreation” and “parks” between 2000 to 2004 determined that the first category is a more sought-after topic; with about double-to-one-third the number of inquires than parks. While, in some cases, this data may suggest that visitors to the area have a greater interest recreating in non-designated Crown Lands, because the Protected Areas in the region are either new, or still in the proposed stage, more time is required to understand visitor preferences.

The Cariboo Chilcotin Coast Region is branded for its guest ranches and cowboy culture, where guests can base at a lodge and enjoy a number of nature-based recreation

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<sup>7</sup> Visitor Information Data: 2005 – 1995. “Year-to-Year Visitor Info. Centre Statistics” obtained from Tourism BC.



opportunities. Tourism BC and the area's various tourism websites list a number of summer-based activities including: horseback riding/packing/ ranch vacations, fishing, guide-outfitting/hunting, hiking, mountain biking, 4x4'ing/ATV'ing, nature viewing/bird watching, flat- and whitewater kayaking and canoeing, jet boating and flight seeing adventures.

The area's diverse terrain, cold winters and high snow load facilitates a number of winter-based tourism opportunities including: heli-skiing, ski touring, snowmobiling, snowshoeing, dog-sledding, ice fishing, ice skating, and others.

Key destinations cited by Tourism BC include Gold Bridge, the Duffey Lake Road, and South Chilcotin Mountains Park.<sup>8</sup> The following provides an overview of how these areas are branded/highlighted within the province's marketing materials, as well as each area's associated activities.

#### Duffey Lake Road:

- "...Dramatic 84.5 km road through the Cayoosh Mountains... is an exciting and extremely scenic route from Whistler to Lillooet.
- The route is popular with tourists and marketed as the "Discovery Coast Passage" circle route tour and the "Fraser River Trail" routes.

#### Gold Bridge:

- Once the richest gold-producing pocket of BC, employing 5,000 people in its heyday at Bralorne mine.
- "Today the big draw... is the great outdoors, and adventure is now the principle enchantment..." To facilitate this interest, several resorts and outfitters operate in the area
- Summer-based activities: fishing, horseback riding, mountain biking, hiking, wildlife viewing. Winter-based activities: heli-skiing, snowmobiling, backcountry skiing, and cross-country skiing

#### Hurley River Road:

- Summer-based visitor access

#### South Chilcotin Mountains Park:

- Lying in the transition between the Coast Mountains and the Chilcotin Plateau, this area is renowned for its biodiversity, with a variety of wildlife inhabiting the Park
- "...an abundance of outdoor activities from horseback riding to fly fishing."

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<sup>8</sup> "Cariboo Chilcotin Coast 2005 Travel Guide." Tourism BC and the Cariboo Chilcotin Coast Tourism Association. Booklet available through Tourism BC at: [www.helloBC.com](http://www.helloBC.com)



#### 1.4.1.2 Vancouver Coast Mountain Tourism Zone

Involving Vancouver, Whistler, the Sunshine Coast and Fraser Valley, the Vancouver Coast Mountain Tourism Zone hosts BC's largest tourism volume. Consequently, this zone tends to highlight these major tourism destinations. Within the Lillooet TSA, key destinations cited by Tourism BC include: Lytton (which belongs in this zone), Gold Bridge, Bralorne, Seton Portage and Lillooet.<sup>9</sup> Existing, newly established or proposed protected areas occurring in this region include the Stein Valley Nlaka'pamux Heritage Park, Duffey Lake, Skihist, and Cerise Creek.

A Visitor Information Centre (VIC) situated in Lytton has found peak visitation to occur between July to September (the VIC is closed between November – April), with May - June hosting the second highest visitation numbers.<sup>10</sup> The year 2004 saw a 7.5% decline in visitor numbers for a nine-year time period, with a peak spike occurring in the years 2000-2001. Additional data regarding inquiries made to the Lytton VIC regarding “adventure/ recreation” and “parks” between 2000 to 2004 has found that, again, the first category is a more sought-after topic. Furthermore, a large spike in enquiries occurred in the year 2000, with a declining number occurring to 2004.

Key destinations marketed by Tourism BC for this region include Lytton and Spences Bridge. These are branded within the “Mighty Fraser Country” (Lytton) and “Gold Country” (both Lytton and Spences Bridge). Additional areas marketed in this region include communities within the “Sea-to-Sky” corridor, involving: Duffey Lake Road, Gold Bridge, Lillooet and Seton Portage. While these latter places fall within the Cariboo Chilcotin Coast Region, it appears as though Tourism BC provides an overlapping marketing strategy for visitors' information.

The following provides an overview of how these areas are branded/highlighted within the province's marketing materials, as well as each area's associated activities.

##### Lytton:

- “Mighty Fraser Country” & “Gold Country”
- One of the oldest continually settled communities in Canada, and regularly hits the top of the country's temperature chart (“Canada's Hot Spot”)
- Hwy. 12 from Lytton to Lillooet is marketed by Tourism BC as part of the Gold Rush Trail route
- River rafting in the “Rafting Capital of Canada” featuring “superb whitewater and amazing scenery draws thousands of rafters each year, ready to take on the 18 major rapids ...between Spences Bridge and Lytton.”
- Walking tours: historic spots around town
- Stein Valley Nlaka'pamux Heritage Park

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<sup>9</sup> Note: Some of these referenced destinations occur in other tourism regions (i.e. Gold Bridge, Seton Portage, Lillooet), however, are marketed within this region as well.

<sup>10</sup> Visitor Information Data: 2005 - 1995. “Year-to-Year Visitor Info. Centre Statistics” obtained from Tourism BC.



Lytton & Spence's Bridge:

- Branded as "Gold Country." An adventure guide to the area states that the region is: "...founded on aboriginal cultural and the dream of untold riches."
- Visitor activities listed include: horseback riding, river rafting, stagecoach trips, mountain biking, hiking, fly fishing, cross-country skiing, gold panning, and fossil digging.

Duffey Lake Road ("Sea-to-Sky" section):

- 104 km road from Pemberton to Lillooet traversing the Cayoosh Range, taking travelers from the lush, temperate forests of the coast to the dusty brown, semi-arid ranchlands of the Cariboo and BC's Interior

Gold Bridge ("Sea-to-Sky" section):

- Marketed to visitors as "the most northerly route from the Coastal Mountains and Pemberton to Lillooet ..." ... "The area today boasts spectacular views, a number of resorts, and a multitude of recreational opportunities.
- In the summer, visitors can drive "the Hurley" – a unique mountain road experience with breathtaking ice field views."

Lillooet ("Sea-to-Sky" section):

- Marketed to visitors for the area's First Nation's and gold mining history, it is Mile "0" of the historic Cariboo Trail.
- Activities include walking tours of the town, viewing the area's ginseng farms and partaking in U-pick activities.

Seton Portage ("Sea-to-Sky" section):

- Marketed as an alternative route for the adventurous... on Highline Rd. from Mt. Currie to Seton Portage and beyond to Hwy. 40.
- Activities include 4x4'ing, and visiting the town of Seton Portage, as well as Terzaghi dam and Carpenter Lake.

### 1.4.1.3 Thompson Okanagan Tourism Region

A small eastern portion of the study area (including Spences Bridge) is located within the Thompson Okanagan tourism region. Traveling on Highway 1 from Lytton to Spences Bridge, this scenic corridor wends along the dry, sage and bunchgrass dominant Thompson River valley couched-in by sparsely vegetated mountains and a few highly productive agricultural terraces. Protected Areas occurring in this small section of the study area include Skwaha Lake Ecological Reserve and Goldpan Provincial Park.

Summer-based front country tourism activities are dominant in this area. The main opportunity is river rafting on the Thompson River. Fly-fishing along the Thompson is



also a popular activity later on in season. Another popular destination in this corridor is its fruit stands, where tourists can buy fresh seasonal fruit and vegetables.

A search in the Thompson Okanagan's specific marketing brochures and websites for specific tourism highlights in the Spence's Bridge area came up with nothing more than the rafting activities offered by Kumsheen.



### 1.4.2 Existing Commercial Recreation Products

A number of commercial recreation (CR) operators occur in the Lillooet TSA: tenured, and untenured. Table 1 lists CR operators either tenured to operate in the Lillooet TSA, or found to be advertising on-line or in printed tourism marketing material.

Based on this table, the most popular product in the area appears to be mid-country ranch-resorts offering a diversity of recreation opportunities.<sup>11</sup> Based on Tourism BC's annual visitor statistics and acquired marketing material, summer-based activities appear to be the key products these resorts market. However, given skier's growing interest in backcountry skiing, the area's prime terrain and close proximity to Whistler and the Lower Mainland, winter-based products are also offered out of every lodge. Tyax Mtn. Lake Resort provides upscale accommodations for TLH Heli-skiing's operation during the winter months.

The majority of products are mid- and backcountry in nature. Presently, with the exception of heli-biking, jet boating and floatplane accessed features, summer-based activities are non-motorized. Day use and multi-day activities appear to be popular products. River- based activities are day-use in nature and appear to be the only front-country CR products in the Lillooet TSA.

Table 1. Existing CR Operators in the Lillooet TSA

Company Name	Activities Offered	Operation's Base	Season**	F/C, M/C, B/C***
Big Bar Guest Ranch	<ul style="list-style-type: none"> <li>• Horseback riding/packing</li> <li>• Hiking</li> <li>• Mtn. biking</li> <li>• Ski touring</li> </ul>	North of Jesmond/Marble Range	S/W	m/c & b/c
Chilcotin Holidays Ltd.	<ul style="list-style-type: none"> <li>• Horseback riding/packing*</li> <li>• Hiking/wildlife viewing*</li> <li>• Mtn. biking* (horse-assisted)</li> <li>• Ski touring*</li> <li>• Snowmobiling</li> </ul>	North of Gold Bridge  (summer access – Hurley FSR)	S/W	m/c & b/c
Fraser River Jet Boat Adventures	<ul style="list-style-type: none"> <li>• Jetboating on the Fraser River</li> </ul>	Cayoosh Campgrounds	S	f/c
Gravity-Fed Adventures	<ul style="list-style-type: none"> <li>• Mtn. bike touring*               <ul style="list-style-type: none"> <li>○ Heli-biking</li> <li>○ Floatplane-assisted biking</li> <li>○ Horse-assisted biking</li> </ul> </li> <li>• Horse-assisted hut-to-hut</li> </ul>	Gold Bridge/Tyughton Lk.	S	b/c

<sup>11</sup> Note: Big Bar Ranch is based just outside the Lillooet TSA, but is tenured to provide horseback riding within the Marble Range.





	hiking			
Kumsheen River Rafting & Resort	<ul style="list-style-type: none"> <li>Whitewater rafting on the Thompson &amp; Fraser Rivers*</li> </ul>	Just north of Lytton on Hwy. # 1	S	f/c
Lillooet Fishing Adventures	<ul style="list-style-type: none"> <li>Guided angling</li> </ul>	Marble Canyon & S. Chilcotin	S	f/c & b/c
Mt. McLean Trailrides	<ul style="list-style-type: none"> <li>Guided horseback riding</li> </ul>	Lillooet	S	f/c, ?
REO Rafting	<ul style="list-style-type: none"> <li>Whitewater rafting</li> </ul>	Stein Valley Park	S	m/c & b/c
Spruce Lake Wilderness Adventures	<ul style="list-style-type: none"> <li>Horse-pack trips*</li> <li>Hiking*</li> <li>Mtn. biking (horse-assisted)*</li> <li>Ski touring*</li> </ul>	Gun Lake Rd., Gold Bridge	S/W	b/c
TLH Heliskiing	<ul style="list-style-type: none"> <li>Heli-skiing/boarding</li> </ul>	Tyaughton Lk.	W	b/c
Tyax Air Services	<ul style="list-style-type: none"> <li>Guided hiking &amp; mtn. biking</li> </ul>	S. Chilcotins/Spruce Lake	S	b/c
Tyax Mtn. Lake Resort	<ul style="list-style-type: none"> <li>Wildlife viewing/hiking</li> <li>Horseback riding</li> <li>Fly-out fishing</li> <li>Mtn. biking</li> <li>ATV Tours</li> <li>Flight-seeing</li> <li>Snowmobiling</li> <li>Heli-skiing (with TLH)</li> </ul>	Tyaughton Lk.	All	m/c & b/c
Valley Fishing Guides	<ul style="list-style-type: none"> <li>Guided angling</li> </ul>	S. Chilcotins/Spruce Lake	S	b/c
Whistler Outback Adventures Inc.	<ul style="list-style-type: none"> <li>Hiking tours</li> </ul>	Whistler	S	b/c

\* Multi-day, backcountry & single-day, day use options

\*\* Season S, W, S/W = Summer, Winter, Summer & Winter

\*\*F/C, M/C, B/C = Front-country, Mid-country, Backcountry

The following companies are registered with BC Parks to hold commercial Park Use Permits within existing and/or newly established PA's within the Lillooet TSA:

Table 2. Commercial Park Use Permit Holders in Existing Protected Areas

Protected Area	Company Names	Activities Offered Multi & single day options*:	Season
Marble Canyon	<ul style="list-style-type: none"> <li>Lillooet Fishing Adventures</li> <li>Educo Adventure School</li> <li>UCC Guide School</li> <li>ACMG (Blanket permit)</li> </ul>	<ul style="list-style-type: none"> <li>Guided Angling</li> <li>Rock Climbing</li> </ul>	Summer
S. Chilcotins/ Spruce Lake	<ul style="list-style-type: none"> <li>TLH Heliskiing</li> <li>Spruce Lk. Wilderness Adventures</li> </ul>	<ul style="list-style-type: none"> <li>Heli skiing</li> <li>Multiple activities</li> </ul>	Summer &



	<ul style="list-style-type: none"> <li>• Lillooet Fishing Adventures</li> <li>• Valley Fishing Guides</li> <li>• Chilcotin Holidays</li> <li>• Tyax Mtn. Lake Resort</li> <li>• Tyax Air Services</li> <li>• Whistler Air Services</li> <li>• Sea-to-Sky Expeditions</li> </ul>	<ul style="list-style-type: none"> <li>• Guided angling</li> <li>• Dito</li> <li>• Multiple activities</li> <li>• Multiple activities</li> <li>• Guiding &amp; air taxi</li> <li>• Air taxi service</li> <li>• Hiking</li> </ul>	Winter
Stein Valley Nlakapamux	<ul style="list-style-type: none"> <li>• REO Rafting</li> </ul>	<ul style="list-style-type: none"> <li>• Whitewater Rafting</li> </ul>	Summer

### 1.4.3 General Tourism Trends

Tourism trend data allows insight into changing visitor supply and demand factors that can affect CR products and the natural resources they depend upon. This section reviews a number of tourism trends which may have a bearing on CR products in the Lillooet TSA.

At a macro-scale, tourism is currently the world’s largest industry, generating somewhere in excess of \$6.1 trillion globally, and is growing rapidly. In British Columbia tourism generated \$9.3 billion in revenues in 2003, and supported 114,000 direct jobs. A recent study on nature-based tourism determined that most businesses have grown over the past 5 years and project approximately 34% revenue increases to occur between 2002 and 2007.<sup>12</sup>

Lillooet TSA is situated in what some term Whistler’s “sphere of influence.” As such, the 2010 Winter Olympics will likely generate strong tourism development and growth potential for winter-based activities in this area. The high level of focus on the Whistler area may also increase demands for summer-based CR products.

In addition to the area’s favourable positioning near Whistler, a recent federal study determined that rural regions close to urban centres took advantage of these nearby tourism markets, generating a 17% increase in tourism employment between 1996 and 2003.<sup>13</sup> Given the Lower Mainland’s appetite for outdoor recreation adventure, coupled with its increasing population, demands on pursuing recreational activities within the Lillooet TSA will likely grow over time as well. This trend has been witnessed in the Lillooet area through increased recreational property purchases.

According to the above-mentioned nature-based tourism study, five markets are projected to hold strongest demand in the next 5 years, including the Northwest United States,

<sup>12</sup> Characteristics of the Commercial Nature-Based Tourism Industry in British Columbia. January, 2005. Tourism British Columbia, Research Services in cooperation with the Wilderness Tourism Association

<sup>13</sup> Statistics Canada. 2003. The Rural and Small Town Canada Analysis: Bulletin, Vol. 5, No. 8, entitled “Tourism Employment in Rural Canada.”



British Columbia (residents), United States (other), Alberta, and the United Kingdom. This trend bodes well for the South Chilcotin protected areas, which hosts about 2/3<sup>rd</sup>s of its visitors from outside of BC. Anecdotal information from Lillooet also supports this trend, with a local motel's main clientele stemming from Europe, and traveling through the area en route to the Rocky Mountains via Vancouver/Whistler. This cohort will stay in Lillooet where accommodation is much more reasonable than in Whistler, and then commute in the morning over the Coast Mountains to spend the day around Whistler.<sup>14</sup>

Additional demand trend information has found that tourism's economic impacts in South Chilcotin Mountain Park have allowed operators to enjoy 40-50% increases in total revenues over the past 5 years. This status is dependent on keeping the area pristine for future revenue growth.<sup>15</sup>

Access to areas is an additional factor in the equation. In 1992, the Duffey Lake Road was paved, causing significant increases in visitation, particularly from the US.<sup>16</sup> This route is now marketed by Tourism BC as part of the "Sea-to-Sky" country, and is included in three different scenic road-touring routes. The Hurley River Road, linking recreationists to the Upper Bridge River Valley from Pemberton has also witnessed staggering increases in use. Between 1993 and 1999, this summer-access (May-September) only route experienced a 900% increase.<sup>17</sup>

Another trend that may support increased tourism demand in the Lillooet TSA is the establishment of additional provincial parks. For many outdoors enthusiasts, because National and Provincial parks are designated for their unique natural, recreational and/or cultural attributes, these areas provide a focused destination for leisure activities. Given the number of proposed PA's in the Lillooet TSA, this in itself could be a major draw, particularly in the Cariboo Chilcotin Coast tourism region.

Some additional trends in the area include a strong international interest in cultural tourism coupled with a growing interest by First Nations in the area to develop Aboriginal tourism products. Places like the Stein Valley Nlaka'pamux Heritage Park have potential to feature world-class cultural tourism products.

A new railway tour offered by Rocky Mountaineer Vacations offers a well-marketed, high-quality product, funneling tourists through the heart of the Lillooet TSA. Opportunities to establish additional products to accommodate this company's clientele

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<sup>14</sup> Personal Communication. Operator of the Mile 0 Motel. March 14, 2005. Lillooet, BC.

<sup>15</sup> "The Economic Impacts of Tourism In the South Chilcotin Mountains Park." September 2001. Pacific Analytics Inc. Victoria, BC.

<sup>16</sup> "Lillooet Area Community Profile." November 1999. Ross Smith, Simon Fraser University Community Economic Development Centre.

<sup>17</sup> : "A Cost-Benefit Assessment of the Hurley River Road." September 2002. Prepared by Urban Systems for the Squamish-Lillooet Regional District. Squamish, BC.



are currently being sought.<sup>18</sup> Intrawest has also been scoping-out the Lillooet-Lytton area for development potential.<sup>19</sup>

Finally, with respect to product-specific trends, the following observations have been made. Due to better access, and technology, mountain biking in the general Lillooet TSA is increasing. In fact, the Lillooet area hosts some top-notch single-track riding. Technology, including more affordable full-suspension mountain bikes and GPS units, is facilitating increased use of the area. One website states that Pemberton riders head up to the Chilcotins (via the Hurley Lake Rd.) whenever they get a chance.<sup>20</sup>

To facilitate mountain biking activities, some existing operators are providing heli-biking; floatplane-access biking and horse-assisted biking. One operator-- Gravity Fed Adventures--specifically caters to the mountain biking sector, and it is expected that this activity's popularity may attract additional commercial development interest in the area.

While other area-specific trends are unknown, on a provincial scale, a number of additional CR products are either enjoying steady growth trends, or gaining in popularity. For summer-based tourism, heli-hiking opportunities are expanding. This generally involves expanding products into the summer season from winter-based backcountry heli-ski lodges.

A rising popularity in ranch-based horseback riding vacations also appears evident with the growing number of destination ranch-themed resorts. Being partially situated in Cariboo-Chilcotins' tourism marketing area as well as the Gold Country's area, and given the strong economic forecasts by ranch-style operators, a continuing demand for this style of vacation is anticipated.

For winter-based tourism pursuits, strong provincial demand trends for heli-skiing and cat-skiing are present, evidenced by the continued growth of operators into this market. It is anticipated that for these activities as well as backcountry-based ski touring, the supply factors including terrain and access to market will be the limiting growth factors for these products.

Another burgeoning product is "power-skiing/power-boarding." This involves snowmobile-assisted lifts up to prime ski terrain, and is gaining popularity in certain parts of the province including Valemount. Because of its lower cost overhead, this product will likely appeal to lower income bracket ski enthusiasts, of which there is a large sector to draw upon in the Whistler/Squamish/Pemberton area. Guided snowmobile touring is also a steadily growing product. While the unguided snowmobiling sector is booming throughout BC, the guided sector incorporates beginners interested in slow touring,

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<sup>18</sup> "Lillooet-Lytton Tourism Diversification Project" February 2005. Prepared by the Wilderness Tourism Association. Prepared for the Fraser Basin Council and Ministry of Sustainable Resource Management.

<sup>19</sup> Ibid.

<sup>20</sup> Source: TrailPeak.com. Page: "Mountain Biking"; Query: "Epic Southern Chilcotin Rides!". August 2003.



single-day activities. This product requires a large capital investment, and is likely best suited to be located near a high-use winter hub including a lodge/resort or a popular winter-based tourism community.



## Part 2 – CR Product Descriptions

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### 2.0 Methods

To understand what type of terrain and other infrastructure is required to facilitate a quality CR product, a first step is to define the nature of each product. This baseline is then used to identify more specific parameters. Seven CR products are reviewed in this report including:

- Heli-hiking,
- Self-propelled hiking,
- Horseback riding/packing,
- Heli-skiing,
- Cat skiing,
- Ski touring, and
- Snowmobile touring

Activities were selected based on currently viable CR products in the area, as well as a few currently encountering strong provincial demand trends. It should be noted that a number of additional CR products were identified with growth potential in the Lillooet TSA; however, due to time limitations these could not be assessed. This latter group of products include: river rafting, mountain biking, heli-biking, ATV touring and power skiing/boarding.

Each of the above-mentioned activities can have a significant range of diversity. For example, while one ski-touring product may involve visitors enjoying a mid-country, pre-tracked adventure for a few hours, another product may entail a multi-day, backcountry wilderness adventure geared to maximize skiing on vertical terrain in deep powder snow. With this in mind, this section takes a number of variables into account regarding the type of CR product likely to have the highest, or most appropriate, development potential in the study area. To more specifically define each CR product, the following factors have been reviewed: historic use patterns; regional and provincial market demand trends; and terrain-specific features required to host a given activity.

The result of this review is an outline for each CR product identifying what type of an opportunity each one will provide and the parameters necessary to facilitate this. Once complete, this data will form the foundation of the capability and overall feasibility analyses.



## 2.1 Defining Commercial Recreation Products

In assessing existing CR products in the study area, it was determined that the majority of opportunities are offered from a resort-base in a remote, picturesque setting. From this base, activities appear to be both multi-day, backcountry adventures, as well as day-use oriented. The relative popularity of these two main types of opportunities is unknown. Furthermore, apart from pre-existing lodges, future resort sites are unknown. Consequently, product definitions will remain broad at this stage, and subsequently discussed for their feasibility as day and/or multi-day opportunities within the report's feasibility section.

General assumptions made about prospective CR products in the Lillooet TSA include the following:

- With the exception of river rafting, existing CR products are based in mid-and backcountry settings, generally catering to clients interested multi-day stays at destination lodges offering multiple recreation opportunities;
- Commercially guided day-use activities are likely only viable in areas featuring major traffic volume. This includes Highway 1 in the summer season (insufficient snow in the winter) and Highway 99 in summer and winter seasons.
- Hiking and horseback riding operators generally prefer high elevation terrain for the following reasons: cooler summertime temperatures; fewer biting insects; excellent vistas; special features present including alpine lakes and flora; better opportunities to view wildlife at a safe distance; vegetation cover is not as dense.

## 2.2 Summer-Based Commercial Recreation Products

The following section provides product-specific overviews resulting in lists of criterion necessary to facilitate each activity. More detailed, quantitative tables resulting from this review can be found in Appendix 1. This information will then be used in the capability analysis in Section 3.0.

### 2.2.1 *Guided Hiking*

Commercially guided hiking in the study area is associated with lodge/resort-based facilities. Excursions are both day-trip and multi-day oriented. While the popularity of unassisted hiking is unknown, additional products include pack-horse assisted hiking and hut-to-hut hiking. To date, no heli-hiking opportunities are known to occur in this area.





Based on product research, the following variables are identified as key criterion necessary to facilitate a quality hiking experience:<sup>21</sup>

- Primarily an alpine product;
- Highly desirable natural features include alpine lakes, glaciers, alpine flora;
- Gentle, contiguous terrain is more desirable than rugged, fragmented terrain;
- Southerly aspects are preferred over other aspects, facilitating an extended season, drier terrain conditions and more pleasant temperatures;

Using the above descriptors as guidance, the following variables are used in the capability analysis to identify feasible hiking terrain in the Lillooet study area:

- Slope – measured in degrees
- Aspect
- Elevation
- Crown Closure, or Forest Cover – measured in % canopy density
- Proximity to alpine lakes
- Proximity to Primary and Secondary Roads

Using the above criterion, tables have been produced identifying the range of high, medium, and low value terrain (Appendix 1). This is described in Section 3.

### *2.2.2 Horseback Riding/Pack Adventures*

Partially situated in the Fraser River's badlands and the Cariboo country's rangelands along with its gold-mining wagon route, this area is steeped in pioneer-related nostalgia associated with horseback riding activities.

Guided horseback riding opportunities in the Timber Supply Area (TSA) are mainly associated with ranch resorts including Chilcotin Holidays, Tyax Mountain Resort, Spruce Lake Wilderness Adventures, and Big Bar Ranch. These opportunities are both day- and multi-day products. Quality day use products depend on existing trails and infrastructure to allow riders to reach scenic vistas, or natural features of interest. Multi-day products also depend on trails to ride into higher elevation terrain, where riders can enjoy scenic vistas and open country for extended periods.

Based on product research, the following descriptors and assumptions have been made for horseback riding:

- Day-use riding duration spans from 1-5 hours;

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<sup>21</sup> Note: these descriptors only include capability variables; no variables suitability variables (ie. # of human encounters, appropriate activities, sensitive wildlife habitat) are factored in.



- Operations base is at an existing lodge or in close proximity to primary/secondary road;
- Day-use activities are generally mid- and back-country in nature;
- Gentle, rolling slopes are more desirable than rugged terrain;
- Mixed forest cover/alpine terrain is preferred;
- Viewpoints, ridgelines and lake features are considered highly desirable; and
- Southerly aspects are preferred, facilitating an extended season, drier terrain conditions and warmer experience.

Based on the above assumptions and additional research, the following variables are used in the modeling exercise to identify feasible mid- and backcountry horseback riding terrain in the Lillooet LRMP plan area:

- Slope
- Aspect
- Forest Cover Type (also relates to elevation)
- Proximity to Lakes
- Proximity to Primary and Secondary Roads

Using the above criterion, tables have been produced identifying the range of high, medium, and low value terrain (Appendix 1). This is described in Section 3.

## 2.3 Winter-based Commercial Recreation Products

The following section provides product-specific overviews resulting in lists of criterion necessary to facilitate each activity. More detailed, quantitative tables resulting from this review can be found in Appendix 1. This information will then be used in the capability analysis in Section 3.0.

### 2.3.1 Guided Ski-Touring

Guided ski touring opportunities are offered through Chilcotin Holidays and Spruce Lake Wilderness Adventures. Day touring from the lodge base is available, as is either multi-day backcountry hut-to-hut, or basing from one backcountry hut and enjoying the area's surrounding terrain.

Depending on ski tourers' main motivations, there are two different goals: the first is to tour to prime vertical ski terrain and yo-yo up and down these areas; the second is to access gentler terrain with an interest in touring. While it is unknown which commercial product is preferred in the Lillooet area, provincial trends points to the sector whose main



motivation is to ski vertical terrain.<sup>22</sup> Consequently, for this project, this product type will be reviewed.

Based on product research, the following assumptions have been made about ski touring:

- Backcountry, high elevation (alpine & sub-alpine) setting required;
- Untracked powder snow on prime downhill ski terrain is highly desirable;
- Single and multi-day ski touring product;
- For single hut-based clients, and day-use skiers, a main motivation is to ‘yo-yo’ up and down ski runs;
- Activities are lodge or hut-based;
- Access can occur by helicopter, snowmobile, or foot;
- A pristine, quiet setting is sought with little-to-no evidence of other human activities;
- Equipment used includes fixed-heel (alpine touring) and non-fixed (telemark) gear, with some split-board snowboarders also entering the market

Based on the above assumptions, personal experience, input from CR operators and product research, the following variables are used to identify feasible ski touring terrain and opportunities in the study area:

- Snowpack (as it relates to elevation)
- Slope
- Forest crown closure/vegetation

Using the above criterion, tables have been produced identifying the range of high, medium, and low value terrain (Appendix 1). This analysis is described Section 3.

### 2.3.2 Heli-Skiing

TLH Heli-skiing is the sole heli-ski company known to be operating within the study area. Based on product research, the following assumptions have been made about heli-skiing:

- Backcountry, high elevation (alpine & sub-alpine) setting is required;
- Untracked powder snow on prime ski terrain is sought;
- Packages vary from one- to multi-day, with operational bases being located in front- mid- and backcountry areas;
- Guests’ main motivation is to ski vertical terrain;

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<sup>22</sup> Valemount Area Tourism Resource Opportunity Modeling Project. March 2004. Prepared by: Helios Tourism Planning Group and the Wilderness Tourism Association. Prepared for: Ministry of Sustainable Resource Management and the Ministry of Water, Land and Air Protection. Prince George Region.



- Terrain access occurs by helicopter;
- A pristine setting is desirable;
- Equipment involves fixed-heel skis (alpine touring), snowboards, or free-heel telemark ski gear.

Based on the above assumptions, input from CR operators and additional product research, the following variables are used to identify feasible heli-ski terrain in the Lillooet study area:

- Snowpack (as it relates to elevation)
- Slope
- Forest crown closure/vegetation

Using the above criterion, tables have been produced identifying the range of high, medium, and low value terrain (Appendix 1). This analysis is described in Section 3.

### *2.3.3 Cat-Skiing*

Currently no cat-skiing operations occur in the Lillooet TSA. This product depends on accessing viable ski terrain using a caterpillar-tracked vehicle to mechanically lift guests up to ski runs. The following assumptions have been made about product expectations/parameters for cat-skiing:

- Mid- to backcountry, high elevation (alpine & sub-alpine) setting is required;
- Untracked powder snow on prime ski terrain is sought;
- Packages vary from one- to multi-day, with operational bases being located in front- and backcountry areas;
- Guests' main motivation is to ski vertical terrain;
- Once at the staging area, terrain access occurs by snowcat;
- A pristine setting is desirable;
- Equipment used includes alpine touring, telemark, snowboarding gear

Based on the above assumptions, input from CR operators and additional product research, the following variables were used to identify cat-ski terrain in the Lillooet LRMP area:

- Snowpack (as it relates to elevation)
- Slope
- Forest crown closure/vegetation

Using the above criterion, tables have been produced identifying the range of high, medium, and low value terrain (Appendix 1). This analysis is described in Section 3.



### 2.3.4 Snowmobile -Touring

Chilcotin holidays and Spruce Lake Wilderness Resort offer snowmobile-touring opportunities in the Lillooet TSA. Due to advancing technology, recreational snowmobiling has experienced considerable growth over the past decade. While this sector mainly consists of non-guided recreationists, a small niche enjoys guided touring opportunities. Of this latter group, the majority are beginners, interested in learning how to run a snowmobile in unchallenging environs. Based on this description, the following parametres are tailored to commercially guided beginner snowmobilers:

- Front- and mid-country areas ranging from valley bottom to sub-alpine with some alpine terrain;
- Gradual slope gradient;
- Groomed, packed trail conditions;
- Duration is approximately 2.5 – 5 hours;
- Operational base located near a primary or secondary road base;
- Guests' main motivation is to experience riding a snowmobile in a scenic, pleasant setting.

Based on the above assumptions, the following variables are used to identify feasible snowmobile touring terrain in specific parts of the Lillooet LRMP area:

- Snowpack (as it relates to elevation)
- Slope
- Forest crown closure/vegetation

Using the above criterion, tables have been produced identifying the range of high, medium, and low value terrain (Appendix 1). This analysis is described in Section 3.



## Part 3 – Digital Terrain Assessment – Product Capability Analysis

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### 3.0 Methods

To identify whether an area's terrain is capable of facilitating a given CR product, a capability analysis is conducted. To accomplish this, three main components occur. These include:

1. Conducting a baseline data assessment involving the assembly and examination of available biophysical, spatial, and attribute data to identify available terrain and infrastructure features in the study area;
2. Quantifying necessary-to-optimal feature requirements ('Feature Quantification') for each CR product; and,
3. For each specific activity, ranking or weighting each feature's relative importance and modeling this data.

These steps are outlined below followed by a review of the assumptions used in this component as well as its limitations.

### 3.1 Baseline Data Assessment

The Province's Terrain Resource Inventory Mapping (TRIM) data is the key baseline data used to conduct the capability analysis. Linear, or *vector*, information derived from TRIM's database includes: elevation contours, water features, transportation networks, and Digital Elevation Models (DEMs), which is cell-based, or *raster*, information providing the elevation, slope and aspect layers.

Additional baseline data includes MSRM's Vegetation Resource Inventory (VRI) data, which provides information on vegetation, stand density, species and land use. The MOF's Biogeoclimatic Zone (BEC) data is also used to paint a broad picture regarding the TSA's precipitation dynamics. A description of the variables assessed in the modeling exercise and their corresponding data sources are provided below.

#### **Elevation**

Elevation is the land's height relative to sea level, expressed in terms of meters above sea level. The digital elevation model (DEM) raster coverage (25m x 25m cell) developed by the MSRM, based on TRIM elevation data, was employed in this project.

#### **Slope**

Broadly defined as the rate of elevation change, slope is also referred to as *pitch* or *gradient*, and, for this study, is expressed in degrees or in percent (percent being the vertical rise, or decline, divided by the horizontal run, multiplied by one hundred). For



the purpose of this study, degrees were used to express the slope; however, when discussing the gradient of a watercourse, the slope's percentage is used since this is considered the normal convention. A raster coverage defining the slope was derived from the elevation DEM and utilized for this study.

### **Aspect**

Aspect is defined as the relative orientation of a slope. Among other things, aspect describes a given area's exposure to sun and wind. For the purpose of this study, aspect was categorized using cardinal (N/S/E/W) and semi-cardinal (NE/SE/SW/NW) bearings. A raster coverage describing the aspect was derived from the elevation DEM and used in the modeling.

### **Vegetation**

Baseline vegetation data consists of the Vegetation Resource Inventory (VRI) information compiled and maintained by the MSRM and MOF. A large amount of information exists in this database. For the purpose of this study, the main information derived from the VRI is the British Columbia Land Classification System (BCLCS).

In general terms, the BCLCS describes a given area of land as it relates to the dominant vegetation or feature that is present. When forest vegetation is present, additional descriptors are available to describe the density of the vegetation as it relates to percent crown closure the vegetation occupies when aerially viewed. Where forest vegetation is not present, information describing non-productive forested land (such as alpine tundra, lakes, rocks, glaciers, etc) was also incorporated.

### **Biogeoclimatic Ecosystem Classification (BEC)**

BEC is the Ministry of Forest's accepted framework for describing and understanding basic landscape ecology. It incorporates climate, soil, and vegetation data. In the study area, BEC has been completed to a scale of 1:250,000, providing the coarsest level of detail. It was employed with other primary data to derive secondary data on snowpack depth.

### **Transportation Networks**

TRIM provides the transportation road network information used in this study. Primary roads are defined as major, paved transportation Highway 99 and Highway 97/1; secondary roads are defined as those stemming off primary networks, as well as mainline forest service roads. All other roads and trails are considered tertiary.



## 3.2 Derived Data – Modeling Assumptions

### **Snowpack Depth**

Snowpack depth is generally measured with snow course stations, or snow pillows. There are sixteen snow courses, both active and inactive (i.e. no longer measured), within or just outside the Lillooet LRMP boundary. This network of stations provides information on snowpack depth throughout the study area, at a variety of elevations and in different BEC zones.

As with similar studies Helios has conducted in the province, snow course information is used in combination with BEC data to derive an estimated snowpack for the study area. Within the study area, there are three climate regions as described in Lloyd *et al* (1990). These include the: Coast-Interior Transition, the Northern Dry, and the Central Very Dry, and relate to the amount of precipitation an area receives.

Examining the snow course data, a pattern became apparent relating to the climate regimes as well as the elevation of the snow course. As such, the following models were developed to generate an estimate of snowpack depth throughout the study area:

Coastal-Interior Transition: At 1200m, on March 1<sup>st</sup>, snowpack depth will be 140 cm. For each increase in elevation of 100m, the depth will increase by 10cm.

Northern Dry: At 1200m, on March 1<sup>st</sup>, snowpack depth will be 75 cm. For each increase in elevation of 100m, the depth will increase by 10cm.

Central Very Dry: At 1200m, on March 1<sup>st</sup>, snowpack depth will be 30 cm. For each increase in elevation of 100m, the depth will increase by 10cm.

The resulting estimated snowpack is presented in Appendix 2. Another observation is that above 1500m in elevation, snowpack depth increases until April 1, and then starts to decline. However, in areas below 1500m in elevation, snowpack decreases after March 1st. This observation was not modeled, but incorporated into the overall product feasibility assessment.

### **Proximity Analysis**

For a number of the models used in this project, some elements are related to an area's relative proximity to a certain attribute (road, trail, lake, glacier, etc.). To conduct this analysis, the desired feature is buffered by a given distance interval, and then values are assigned for each buffered area.





## Feature Quantification

Based on specific CR product definitions collected through industry-based research, a range of data is gathered for each attribute delineating necessary-to-optimal conditions required to provide a quality visitor experience (Appendix 1). An example of this is with heli-skiing. In order to provide optimal terrain, the following attributes are necessary:

Slope range (measured in degrees): 20° - 35°

Snowpack depth: 300 centimetres and above

Vegetation: Alpine terrain, or vegetated terrain with density less than 25 %

Once these necessary-to-optimal conditions are identified, they are then weighted in order to rank the study area's terrain base. This is described below.

## Feature Ranking and Modeling

In developing each CR product's model framework, three main components occur. These include: scoring each feature, or attribute, weighting them, and then conducting a final rating. These are described as follows:

**Feature Score** - Once key biophysical features are identified for each CR product, raw biophysical data is translated, or quantitatively *reclassified*, into a *score* on a scale of 0 to 100. A score of 100 indicates the most ideal value for that feature as it pertains to a given activity.

An example of applying a feature score is as follows: the most desirable slopes to facilitate heli-skiing are those ranging between 20° to 35°. Any area with this slope would have a slope feature score of 100. Slopes on the fringes of these values, for example, between 15°-20°, and 35°-40°, receive a lower score of 60 and 70, respectively. Slopes considered too steep to ski (greater than 55°) receive a score of 0.

**Feature Weighting** - The second step involves comparing a given feature's importance relative to the other features identified as important for a given CR product. To achieve this, a numerical weight is assigned to convey the relative significance of each attribute factored into the model.

An example of weighting a feature is as follows: with heli-skiing, of the three features used to determine prime terrain (slope, snowpack depth, and crown closure), slope is weighted to be slightly more important than snowpack depth and crown closure. As such, slope is weighted at 40%, with snowpack depth and vegetation weighted 30%, respectively.



Final Rating - To surmise an overall understanding of a landscape's development capability for specific CR products, a final rating occurs. This involves multiplying a feature's *score* by its *weighting* and adding all of the features, resulting in a Final Rating based on a scale of 0 to 100, with 100 being optimal. This final step enables the viewer to understand the relative ranking of a product's potential in a given area.

Based on each product's modeled parameters, Protected Areas in the Lillooet TSA have been queried using digital mapping tools. From this, areas featuring good-to-excellent development opportunities for each activity are geographically highlighted.

### 3.3 Limitations

Because on-site ground-truthing does not occur with modeling, a number of inherent limitations occur. To address these, a number of assumptions are necessary regarding such factors as snowpack; the relative importance of natural features and infrastructure; and others. Assumptions made to derive this study's models are provided in Section 3.2; however, it must be noted that this is a coarse-filter terrain assessment. As such, on-the-ground reconnaissance is also required to determine specific area-of-interest's terrain capability. Due to time limitations, anecdotal information from local recreationists and other user groups was not obtained. Other limitations included the lack of ortho-map coverage for the Spruce Lake area, as well as a limited amount of trail-based information.

### 3.4 Terrain Capability Assessment Results

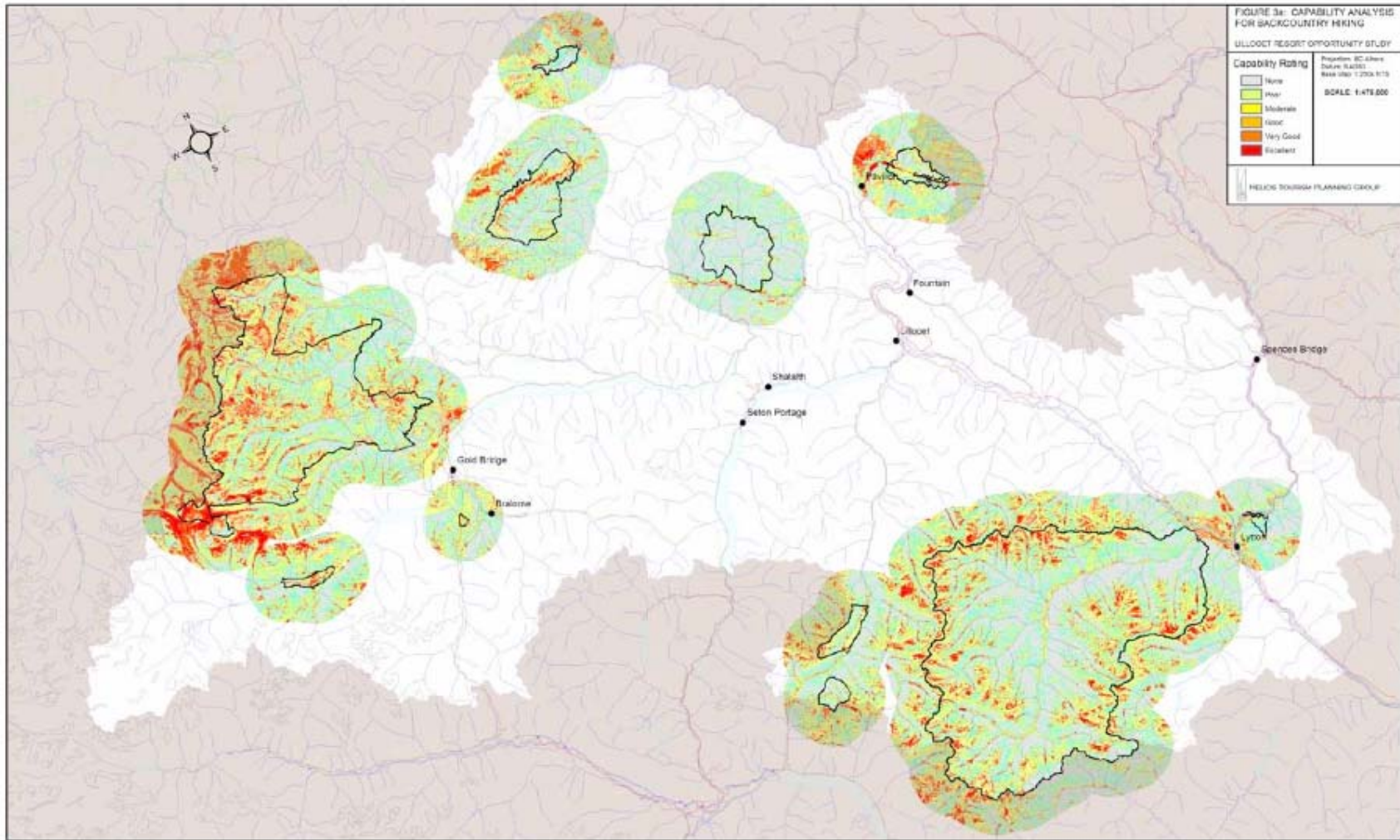
The results of this analysis are summarized in a series of CR product-specific maps displayed over the following six pages. These maps should be referenced when reviewing this report's capability, suitability and overall feasibility analyses.

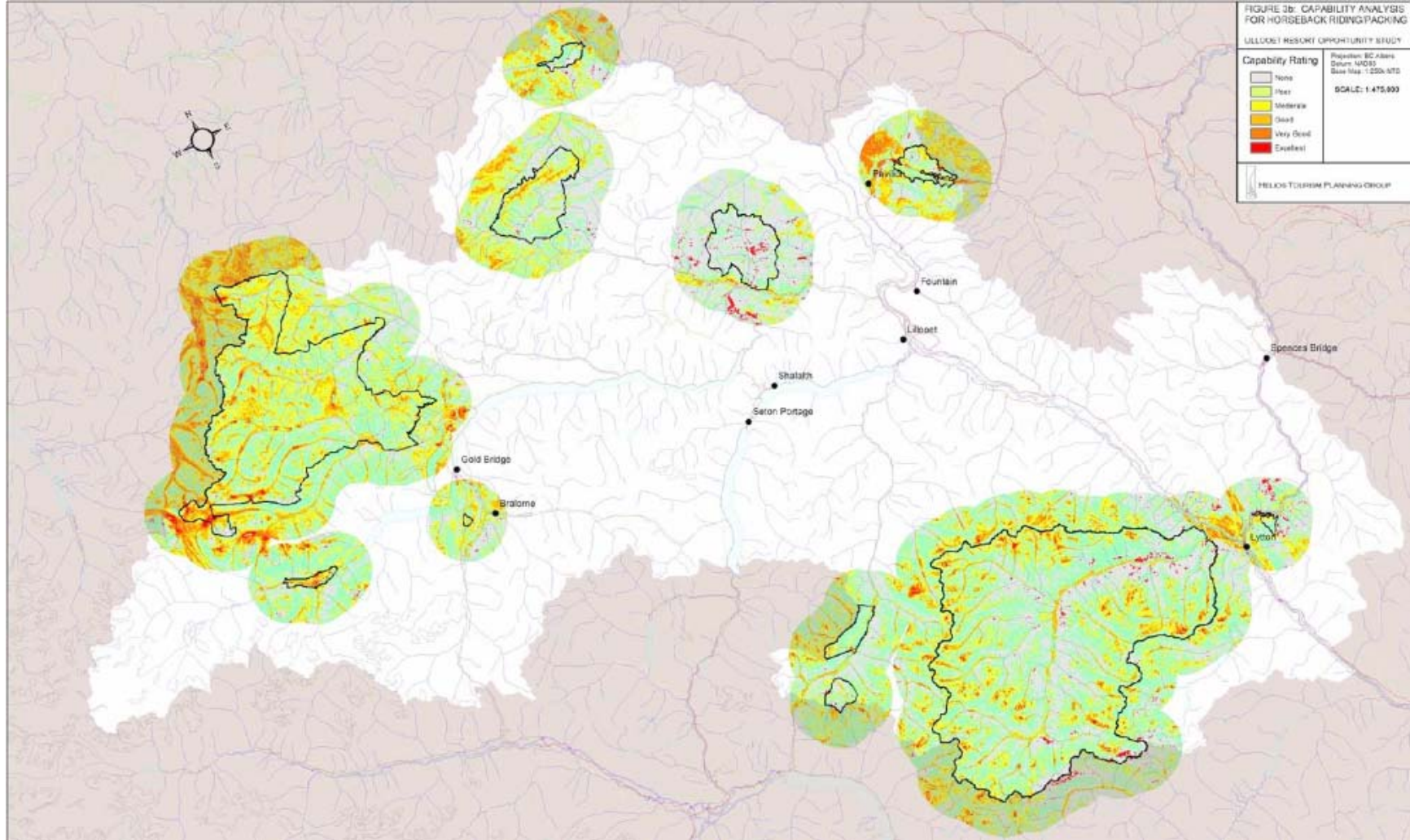
Each area's terrain capability is been summarized in Table 3. It must be emphasized here that this analysis only identifies what activities may be possible in each analysis unit. Higher-level policy in the form of Park Management Plans will ultimately determine what activities are acceptable to occur in protected areas and their buffers.

Furthermore, as outlined in the report's preface, the following findings should be interpreted as being coarse-filtered in nature. Additional area-specific analysis is required to determine the terrain's features and overall capability to facilitate specific CR products.

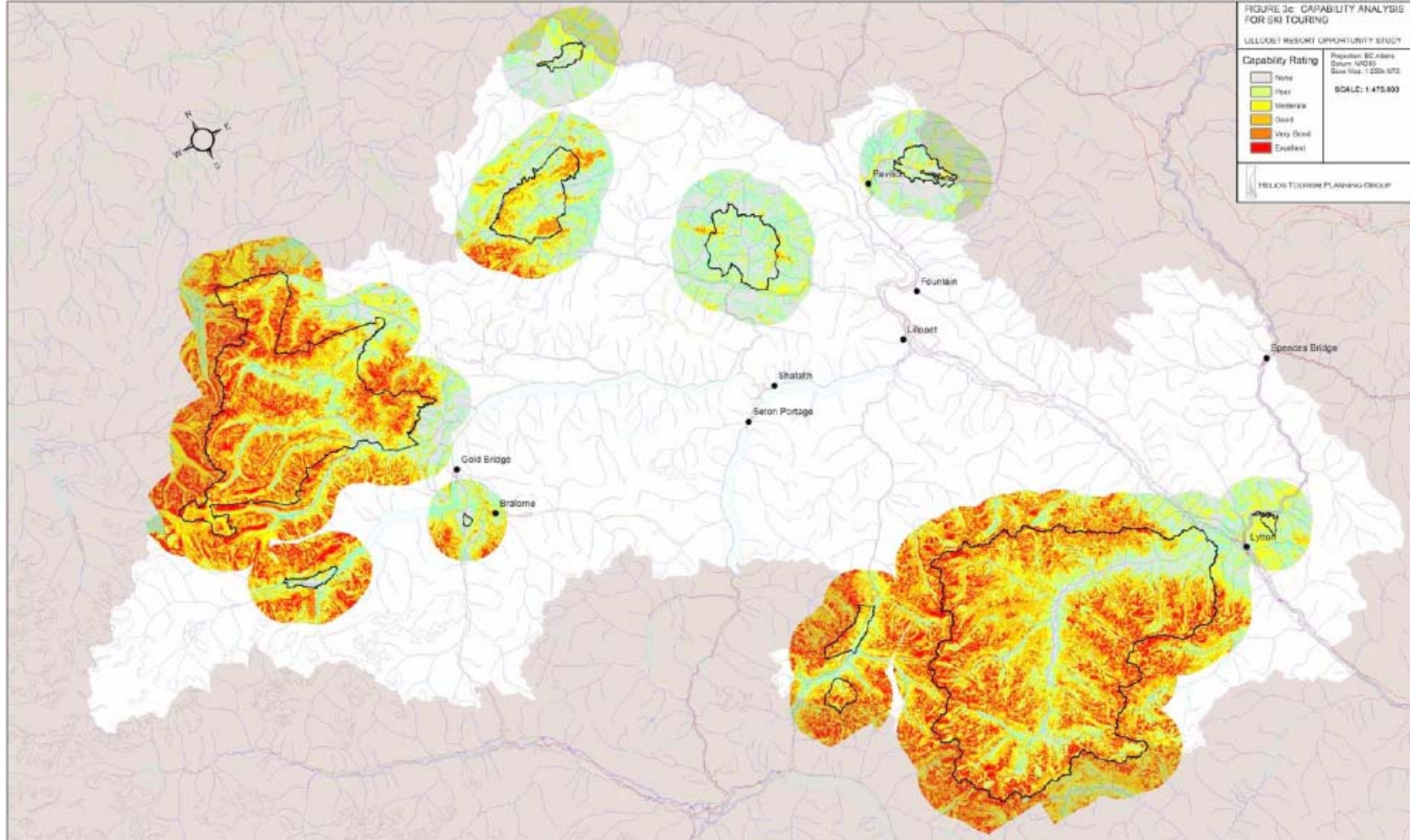
Finally, where similar results occur for CR products, these are summarized as such in the capability analysis table.

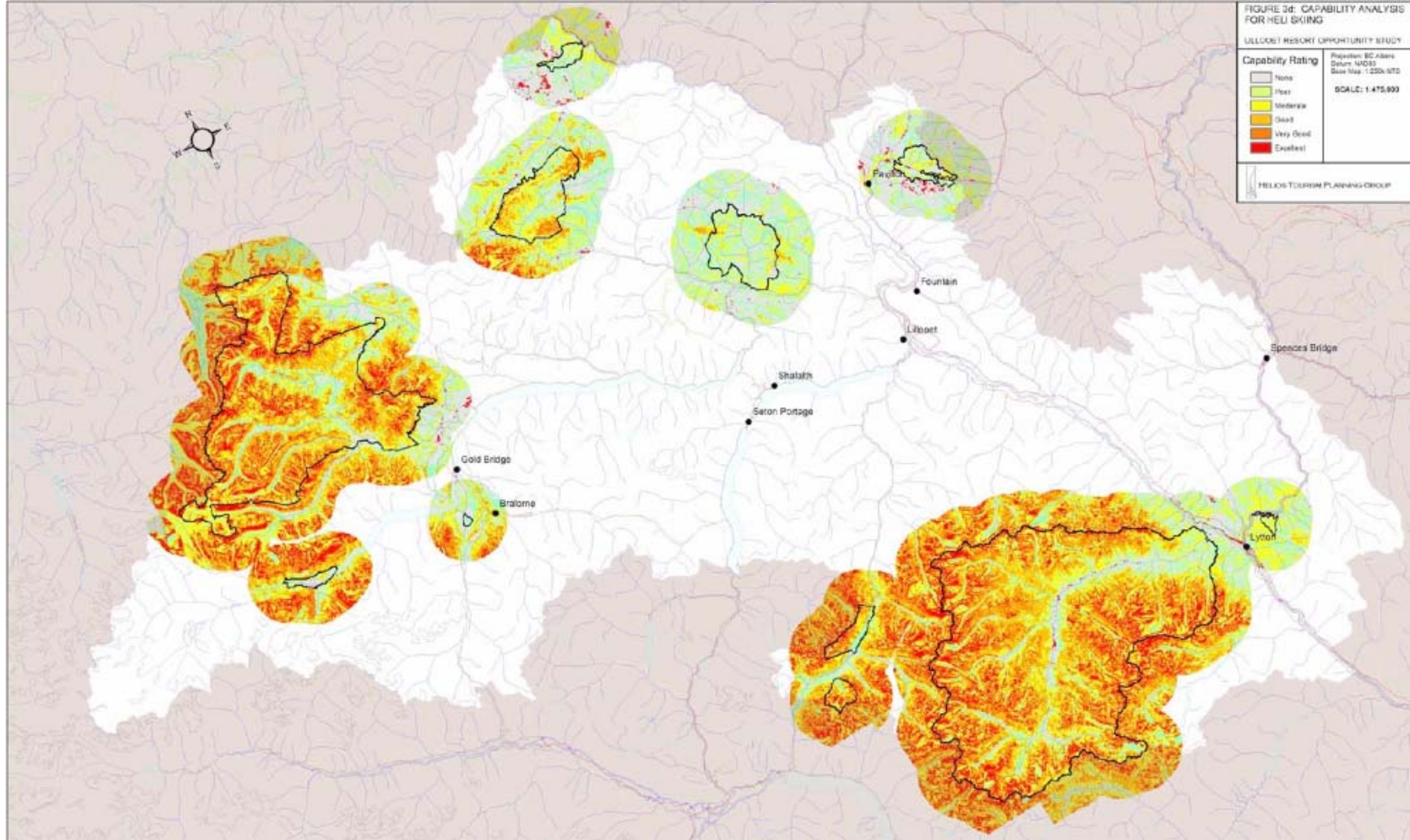




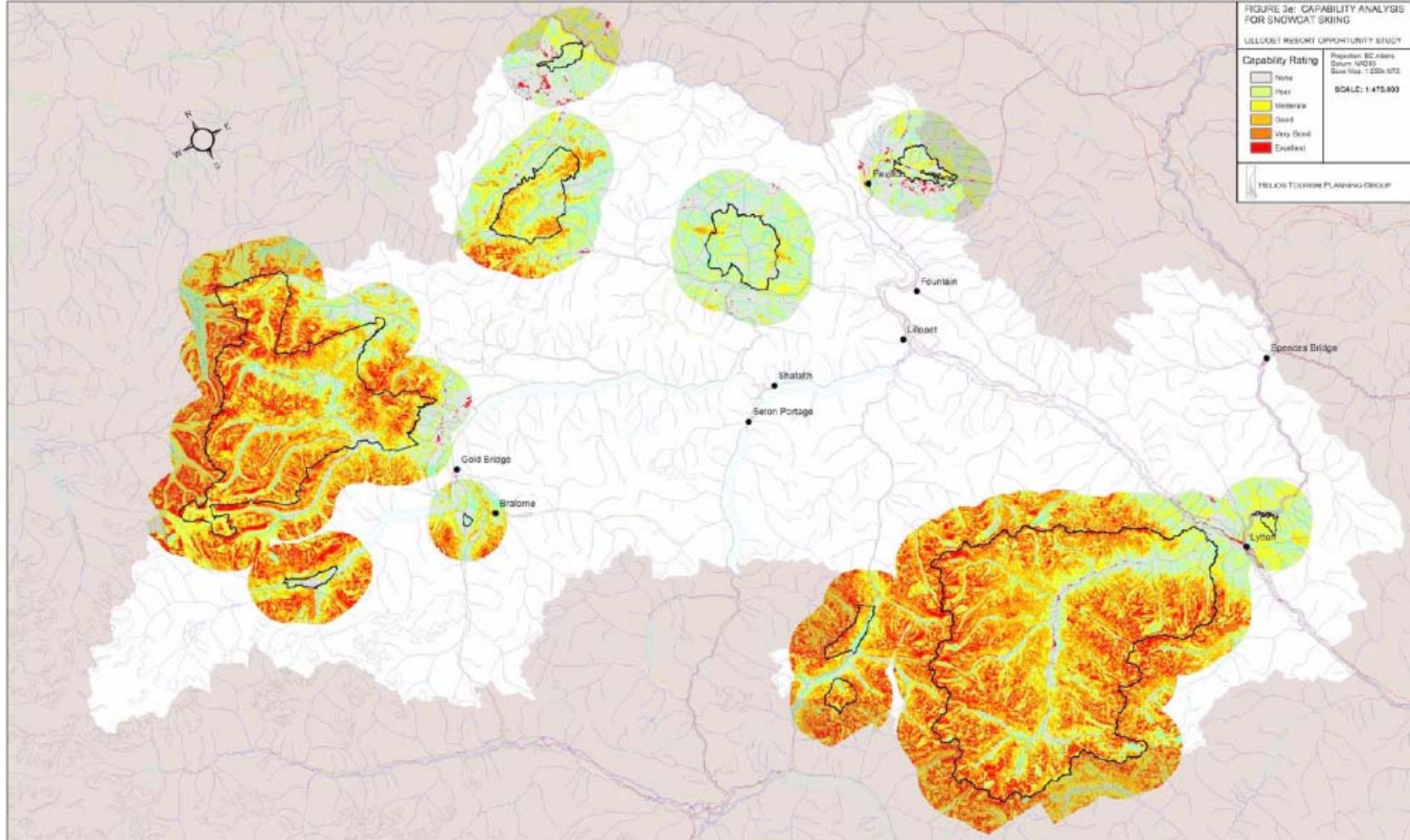


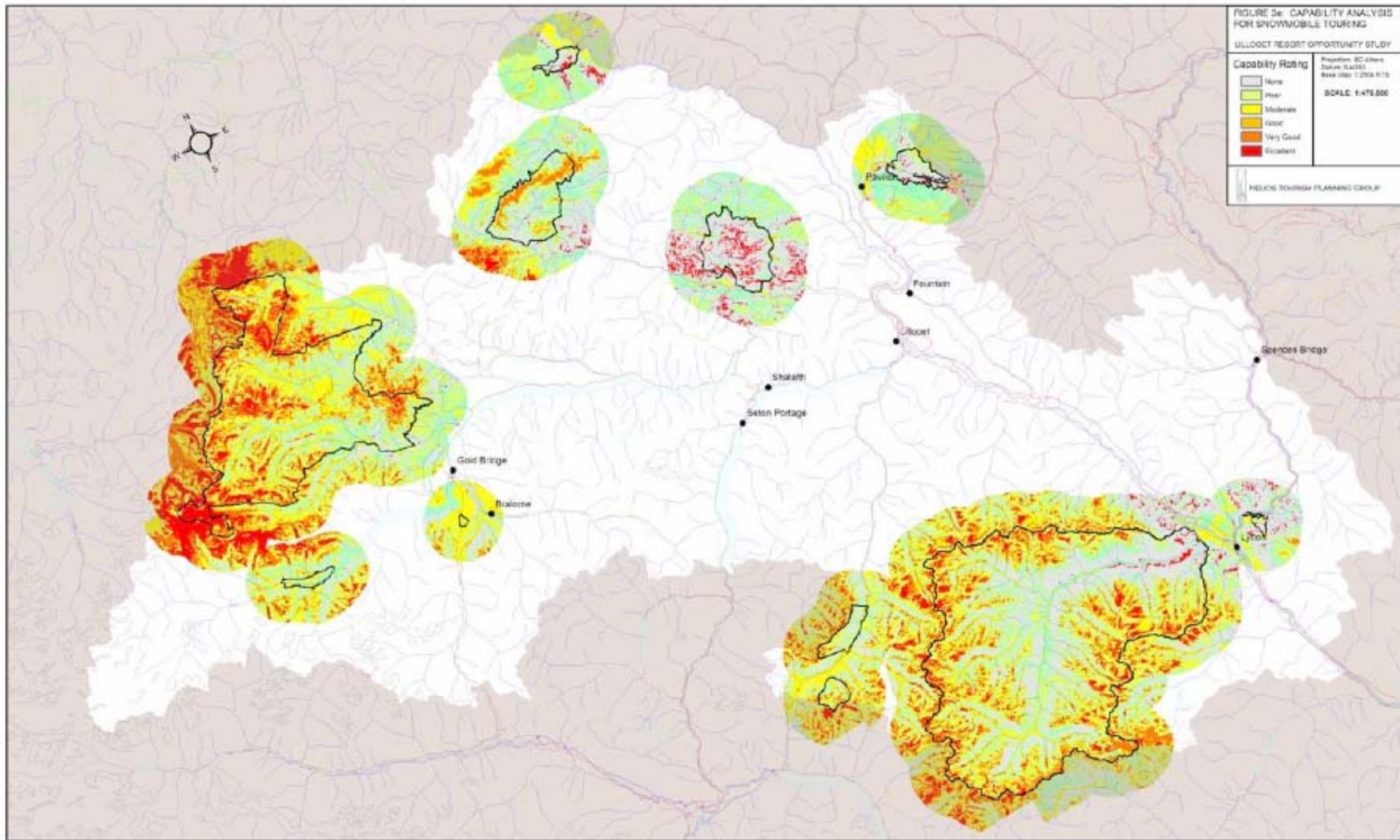












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 Helios Tourism Planning Group



Table 3. Park-Specific CR Product Capability Summary

Park	Activity	Rank	Descriptor
Bridge River Delta	Hiking & horseback	Moderate	<ul style="list-style-type: none"> <li>Most of this park &amp; its buffer area features low-value hiking and horseback riding terrain. However, an area in the mid-section of the park scores higher due to its more gently sloped terrain and open valley-bottom features.</li> </ul>
	Ski Products	Very Good-Excellent	<ul style="list-style-type: none"> <li>Low ski terrain values occur in the park itself; however, where slope permits (gradient ranges between 20-35°), very high values exist along the park's northern and southern buffer areas (Dickson Range)</li> </ul>
	Snowmobile Touring	Very Good-Excellent	<ul style="list-style-type: none"> <li>Very good to excellent terrain occurs in the northern buffer area within the Dickson Range.</li> </ul>
Cerise Creek	Hiking & horseback	Mainly Poor – Moderate	<ul style="list-style-type: none"> <li>Within the park, with the exception of Cerise Creek's gentle gradient and slopes below existing glaciers, this area features little high value terrain. Some excellent hiking terrain does however occur in the buffer area around Joffre Peak, Anniversary Glacier, Vantage Peak and Mattier Glacier.</li> <li>Anecdotal information suggests high value hiking terrain and usage currently occurs in this area. Further investigation necessary to determine extent of commercial viability.</li> <li>Due to the area's extensive glaciers, high soil moisture content and limited access to alpine, low value is assigned to horseback riding opportunities.</li> </ul>
	Ski Products	Very Good-Excellent	<ul style="list-style-type: none"> <li>High ski terrain value assigned to the southern half of the park and southern 2/3's of the buffer area</li> </ul>
	Snowmobile Touring	Moderate	<ul style="list-style-type: none"> <li>While some terrain in this analysis area holds high value including south of Mt. Matier and around Mt. Duke, the area's steep terrain generally assigns it a moderate rank for snowmobile touring.</li> </ul>
Duffey Lake	Hiking & horseback	Some excellent	<ul style="list-style-type: none"> <li>Due to this area's very steep, rugged terrain, low hiking and horseback values occur in the park; however, some excellent terrain occurs in the Cayoosh Range, which features ridgelines and alpine lakes.</li> </ul>
	Ski Products	Very Good-Excellent	<ul style="list-style-type: none"> <li>Good to very good ski terrain occurs in the Cayoosh Range, located in the entire NW side of the park and its buffer. Low ski terrain values occur in the park itself; however, where slope permits (gradient ranges between 20-35°), very high values exist along the park's northern and southern buffer areas (Cayoosh Range)</li> </ul>
	Snowmobile Touring	Very Good-Excellent	<ul style="list-style-type: none"> <li>Very good to excellent terrain occurs in the northern buffer area of the park within the Cayoosh Range.</li> </ul>



Park	Activity	Rank	Descriptor
Fred & Antoine Creeks	Hiking & Horseback	Poor	<ul style="list-style-type: none"> <li>Very rugged terrain present, with majority of slopes steeply sided, grading between 25°-60°; alpine areas feature very narrow ridgeline; densely vegetated at lower elevations. Therefore, apart from an EW-running ridge by Mt. Duncan and Birch Mtn., low values are assigned to hiking and horseback riding.</li> </ul>
	Ski Products	Poor	<ul style="list-style-type: none"> <li>Low ski terrain values due to the area's rugged terrain, steep side slopes (25-60°), low snowpack and dense vegetation at lower elevations</li> </ul>
	Snowmobile Touring	Good-Excellent	<ul style="list-style-type: none"> <li>High touring values assigned to low-elevation, sparsely vegetation valley bottoms along Antoine Ck., and Yalakom R., as well as high-elevation plateau lands south of Antoine Ck.</li> </ul>
French Bar Creek	Hiking & Horseback	Poor	<ul style="list-style-type: none"> <li>Due to its very rugged terrain and steep slope gradient (majority of terrain &gt; 35°-60°), low values are assigned for hiking and horseback riding activities. Some higher value terrain occurs in this park's buffer, particularly across the Fraser on Big Bar Mtn.</li> </ul>
	Ski Touring	Poor	<ul style="list-style-type: none"> <li>Due to the area's steep, rugged terrain, exposed rock and low snowpack, ski-based products are assigned low values in this park and its buffer</li> </ul>
	Heli- & Cat-skiing	Poor	<ul style="list-style-type: none"> <li>While a limited amount of terrain in the park's buffer contains excellent terrain, an insufficient amount occurs to host a commercial operation.</li> </ul>
	Snowmobile Touring	Excellent	<ul style="list-style-type: none"> <li>High value touring terrain occurs on an unnamed mountain in the south-central part of the park, continuing into its buffer area. Additional high-value touring terrain occurs across the Fraser R. in the Edge Hills (part of the Marble Range)</li> </ul>
Gwyneth Lake	Hiking & Horseback	Moderate	<ul style="list-style-type: none"> <li>Apart from low-elevation activities, with the exception of a small part of Green Mtn., little opportunity to venture to higher elevation occurs here.</li> </ul>
	Ski Products	Ltd. Good-Excellent	<ul style="list-style-type: none"> <li>This area generally features low-value ski terrain; however, some higher value terrain occurs on Green Mtn. as well as the northern end of Mt. Noel</li> </ul>
	Snowmobile Touring	Moderate	<ul style="list-style-type: none"> <li>Moderately valued snowmobile touring terrain is considered to occur in this park and its buffer area.</li> </ul>
Marble Canyon	Summer-based	Excellent	<ul style="list-style-type: none"> <li>High value hiking and horseback riding terrain occurs in the SW part of the buffer area. Key attributes for this assignment include: high elevation (1200m), sparsely vegetated plateau lands.</li> </ul>
	Winter-based Products	Low	<ul style="list-style-type: none"> <li>While small patches of excellent terrain occur in the capability map, the area's size and likely snowpack duration assigns a low value for ski products</li> </ul>
Skihist	Hiking & horseback	Moderate	<ul style="list-style-type: none"> <li>Due to the area's steep terrain, low values occur within the park; however, excellent terrain does occur both on Botanie Mtn. and Lytton Ridge in the park's buffer area.</li> </ul>
	All Winter	Low	<ul style="list-style-type: none"> <li>Unsuitable snowpack and slope gradient in the park and most of its buffer area. Further</li> </ul>



Park	Activity	Rank	Descriptor
			scoping of Botanie Mtn. should occur, however.
Spruce Lake	Hiking & Horseback	Good-Excellent	<ul style="list-style-type: none"> <li>High value terrain generally occurs in this park's and buffer area's western region, where high elevation alpine terrain is gently sloped and contains features including lakes and glaciers. Towards valley bottoms, terrain value decreases due to steeper slopes and dense vegetation.</li> <li>Specific areas: SW part of the Dickson Range; north ridge and headwaters of Relay Ck., headwaters of Dash Ck, north end of Carpenter Lake</li> </ul>
	Ski Products	Very Good - Excellent	<ul style="list-style-type: none"> <li>Due to the area's high levels of snowpack (&gt;175cm in the alpine), high elevation and good slope gradient (15-30°) high value ski terrain is assigned for most high elevation areas within this park and its buffer. Lower elevation terrain is densely vegetated, and therefore has lower skiing values.</li> </ul>
	Snowmobile Touring	Very Good – Excellent	<ul style="list-style-type: none"> <li>Due to the area's high levels of snowpack (&gt;175cm in the alpine), high elevation and good slope gradient (15-30°) high value ski terrain is assigned for most high elevation areas within this park and its buffer. Lower elevation terrain is densely vegetated, and therefore has lower snowmobiling values.</li> </ul>
Stein Valley Nlaka'pamux Heritage Park	Hiking & horseback	Good - Excellent	<ul style="list-style-type: none"> <li>In general, this area features rugged, steeply sloped (45-60°) terrain. Alpine areas above the north Stein River and above Rutledge Ck .as well as Elton Lake, and Tundra Lake feature high value terrain in alpine areas.</li> <li>With the exception of lower-elevation valley bottom terrain which generally features well-spaced Interior Douglas Fir (IDF), mid-elevation vegetation consists of denser Englemann Spruce &amp; Subalpine Fir (ESSF)</li> </ul>
	Ski Products	Good - Excellent	<ul style="list-style-type: none"> <li>Where slope permits in alpine and sub-alpine areas, high skiing values are assigned. Particular attention should be paid on the area's snowpack as it relates to precipitation belts, as ranges occur both in the coastal transition and northern dry zones in this park and its buffer.</li> </ul>
	Snowmobile Touring	Very Good - Excellent	<ul style="list-style-type: none"> <li>While more limited terrain occurs here than for skiing, high SB touring values are assigned in areas featuring gentle slope gradients in the North, West and SE boundary/buffer areas.</li> </ul>



Park	Activity	Rank	Descriptor
Yalakom	Hiking & Horseback	Excellent	<ul style="list-style-type: none"> <li>▪ Excellent hiking &amp; horseback terrain occurs along Nine-Mile Ridge. Additional high value terrain occurs on ? China Head Mtn. as well as Big Dog Mtn. These areas feature gently sloped alpine terrain, with Nine Mile Ridge featuring an expanse of contiguous terrain. Some nice valley-bottom terrain also appears to occur up Yalakom Ck. towards Beaverdam Ck.</li> </ul>
	Ski Touring	Good - Very Good	<ul style="list-style-type: none"> <li>▪ Good to very good terrain on Nine Mile Ridge and Yalakom Mtn. within the park, as well as Big Dog Mtn. in the park's SW buffer area.</li> </ul>
	Heli- & Cat-Skiing	Good - Excellent	<ul style="list-style-type: none"> <li>▪ Good to very good terrain on Nine Mile Ridge and Yalakom Mtn. within the park. Excellent terrain featured on Big Dog Mtn. in the park's SW buffer area. Because Big Dog Mtn. occurs in a different precipitation zone, it likely features higher levels of snowpack than within Yalakom Park, where the maximum snowpack is 1 metre for 3 months' duration.</li> </ul>
	Snowmobile Touring	Good - Excellent	<ul style="list-style-type: none"> <li>▪ Good to very good terrain on Nine Mile Ridge and Yalakom Mtn. within the park. Excellent terrain featured on Big Dog Mtn. in the park's SW buffer area. Because Big Dog Mtn. occurs in a different precipitation zone, it likely features higher levels of snowpack than within Yalakom Park, where the maximum snowpack is 1 metre for 3 months' duration.</li> </ul>



## Part 4 – CR Product Suitability Analysis

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Once high value terrain is identified, a suitability analysis occurs to identify existing land and resource values and overarching management directives. Once determined, this data provides transparent rationale for ranking the relative appropriateness of a given tourism product. In many cases, where sensitive land and resource already occur, this process will devalue a given product to a lower overall product development ranking.

Because this study focuses on Protected Areas, overarching Park Management Plans (PMP) are referenced to identify management priorities and appropriate activities for existing parks. For proposed PA's, as well as newly established PA's lacking a PMP, the draft Lillooet LRMP is referenced. For park buffer areas, land and resource values are again identified in the draft Lillooet LRMP.

The end result of this section is a broad review of existing land and resource values and management directives that prospective developers should be aware of.

### 4.0 Methods

Using higher-level management directives from the draft Lillooet LRMP and existing Park Management Plans, the suitability analysis identifies existing land and resource values. This includes, but is not limited to: sensitive wildlife and their associated habitat, special features, existing commercial and public recreation, and, in areas just outside Park boundaries, other existing tenures.

In some cases, an area identified in the capability assessment with high development potential can be downgraded to a medium-to-low ranking due to existing sensitivities or management directives. This is accomplished through demoting/devaluing tourism land values using quantitative measures. For example, in areas containing pre-existing CR tenures, prospective development opportunities for that specific product are downgraded by a certain amount.<sup>23</sup> The following list outlines existing values where tourism product development suitability is downgraded:

- Existing CR tenures (if incompatible with potential product)
- Existing wildlife values for species-at-risk and sensitive wildlife habitat
- Existing seasonal access road and/or motorized use restrictions

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<sup>23</sup> Note: this amount is subjective, and can be altered.



- Any additional higher-level land and resource use and specific recreation activity restrictions (i.e. Park Management Plans)

Once these factors are taken into account, results are modeled and used as a second analysis layer on top of the existing capability analysis.

To assess the relative suitability of developing specific tourism products in the Lillooet TSA, existing values and management intent for each PA and its associated 5 km buffer area is summarized.

## Limitations

As with the capability analysis, because the suitability assessment conducts a broad overview of existing values and governance, additional research specific to a party's area-of-interests also needs to occur. With respect to data gaps, baseline tourism, public recreation, and First Nations' cultural land use values and usage information was not available. Finally, while comments of town councilors from Lillooet and Lytton have been incorporated into this section, no public and private sector consultation occurred in the process of developing this plan.

### 4.1 Higher-Level Management Guidelines

In establishing this section, BC Parks' Park Management Plans and the draft Lillooet LRMP were core reference documents. A series of relevant draft management directives are provided in Appendix 3 along with wildlife habitat maps for Mountain Goat (Figure 4a), Mountain Sheep (Figure 4b.), Grizzly (Figure 4c.) and Mule Deer (Figure 4d).<sup>24</sup>

The St'at'imc Nation has produced a land and resource management plan entitled: the Nxekekmenlhalha lti Tmicwa (St'at'imc Preliminary Draft Land Use Plan, Part 1) in March of 2004. This document was reviewed; however, no specific directives were applied in this study, since, at this stage, this opportunity study is more technically focused and abstract in nature. It is anticipated that this document will be referenced by prospective developers to identify St'at'imc cultural land and resource values and general management principles in site-specific areas. This procedure should also occur with respect to other First Nations governments and communities who have traditional territories located in prospective areas of interest within the Lillooet TSA.

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<sup>24</sup> This includes directives on sensitive wildlife habitat for Mtn. Goat, Grizzly bear, Mule Deer and Bighorn Sheep, as well as Access Management Directives.



### *4.1.1 Existing Parks' Management Plans*

Within BC, provincial parks are managed under the *BC Parks Act*. On top of this policy foundation are Park Management Plans (PMPs) (and Management Direction Statements) providing specific management directives for each designated area. According to BC Parks' policy, recreational activities in Ecological Reserves (ER's) are deemed inappropriate. Consequently, Skihist and Skwaha Lake ER's are not reviewed in this study. Furthermore, due to their small size, Goldpan and Seton-Portage Historic Parks have also been omitted from this review.

To guide this research, PMPs for existing Protected Areas are used as higher-level directives. As such, while the capability analysis may have identified an array of operable terrain for specific CR products, the PMP dictates which activities are suitable. Based on these higher-level guidelines, only those activities deemed acceptable are assessed in the overall CR product feasibility analysis.

### *4.1.2 Assessment of Newly Established and Proposed Protected Areas*

For proposed or newly established PA's lacking a formal PMP, management categories from the Protected Area Strategy have been proposed within the draft Lillooet LRMP. Because these are only proposed directives, all products are assessed in this study's feasibility analysis; however, it is anticipated that some activities will be deemed inappropriate once formal PMP's are established for these PA's.

At this stage, negotiations are underway to determine the approval of these areas. Furthermore, according to the Province, until further negotiations occurs with First Nations communities whose traditional territories are within these jurisdictions, draft management intent should be considered as interim guidance.

## 4.2 Suitability Assessment Overview

This section reviews known land and resource values and management directives for existing PA's (Table 4) and newly established or proposed PA's (Table 5). The two main references for this section are the draft Lillooet LRMP and existing Park Management Plans. More in-depth descriptors of existing PA's can be found on the Province's website.<sup>25</sup>

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<sup>25</sup> More detailed descriptions can be found on BC Parks' website at: [wlapwww.gov.bc.ca/bcparks/](http://wlapwww.gov.bc.ca/bcparks/).



Table 4. Higher-Level Directives and Values for Existing Protected Areas & Associated Buffers

Selected Features	Management Categories	Appropriate Activities	Existing CR Use	Buffer Area Values <sup>26</sup>	Access to Area
Stein Valley Nlaka’pamux					
<p>Outstanding wilderness watershed with internationally significant cultural heritage features.</p> <p>Established to conserve cultural heritage values, vegetation, wildlife and fish habitats, traditional resource management systems and special features.</p> <p>Traditional Nlaka’pamux territory; lower Stein hosts 78 known archaeological sites (incl. ancient trails, pictograph, petroglyph sites,</p>	<p><b>Wilderness Conservation Zone:</b> large pt. Of the area south of the Stein River;</p> <p><b>Wilderness Recreation Zone:</b> north side of Stein River and Elton Ck. watershed as well as Stryen Ck. drainage on the south side of the Stein.</p> <p><b>Natural Environment</b> (Now “Nature Recreation”) Zone: Corridor along the Stein River from its mouth to Scudamore Creek.</p> <p><b>Intensive Recreation Zone:</b> Small area near the trailhead of the “Stein</p>	<ul style="list-style-type: none"> <li>• Hiking (self-propelled)</li> <li>• Natural &amp; cultural interpretation</li> <li>• Fishing</li> <li>• Hunting</li> <li>• Boating</li> <li>• Mountaineering</li> </ul> <p>Winter Activities: non-mechanized:</p> <ul style="list-style-type: none"> <li>• Cross-country skiing</li> <li>• Backcountry skiing</li> <li>• Snow Shoeing</li> </ul> <p>Not permitted: snowmobiles, mtn. bikes, other mechanical recreation equipment, helicopter and floatplane access, horse use.</p>	REO Rafting	<p><b>First Nations:</b> Traditional Nlaka’pamux territory; number of federal Indian Reserves along the Fraser</p> <p><b>Community:</b> Town of Lytton</p> <p><b>Mtn. Goat:</b> Winter/kidding range located along Mt. Neesen, Doss Peak, and Antimony Mountains</p> <p><b>Grizzly Bear:</b> Stein-Nahatlatch GBPU; high value habitat in Texas Crk &amp; Van Horlick Ck. areas</p> <p><b>Minerals:</b> Silver Creek Mine</p> <p><b>Access:</b> Seasonal (May 1 – June 30) restrictions in the following areas:</p> <ul style="list-style-type: none"> <li>• Texas Creek Road</li> <li>• Texas Crk. Watershed</li> <li>• Van Horlick Creek Road</li> </ul> <p><b>Tourism:</b> High development</p>	<p>Hwy 1, Hwy 12, and a number of FSR’s:</p> <ul style="list-style-type: none"> <li>• Texas Creek FSR</li> <li>• Van Horlick Ck</li> <li>• Kwoiek Ck.</li> <li>• Lizzie Ck.</li> <li>• Rogers Ck.</li> </ul> <p>Main trailhead occurs just west of Lytton.</p> <p>According to PMP directives, an interest in discontinuing horse-based access exists and air-access is only allowed in the case of emergency.</p>

<sup>26</sup> Please refer to Appendix 3 to identify wildlife & access management guidelines as provided within the Draft Lillooet LRMP



Selected Features	Management Categories	Appropriate Activities	Existing CR Use	Buffer Area Values <sup>26</sup>	Access to Area
CMT's)	Heritage Trail"			potential in Botanie Valley	
Duffey Lake					
<p>Alpine area below Mt. Rohr considered of high significance due to the sheltered valley terrain, vegetation, and alpine lake.</p> <p>Wildlife: - North side slopes high value habitat for black bear and very high value for Grizzly bear, deer and Mtn. goat</p> <p>Currently, park is primarily a stop-off for Hwy. 99 travelers.</p> <p>Winter Non-Mechanized Recreation Zone</p>	<p><b>Intensive Recreation Zone</b></p> <p><b>Natural Environment Zone</b> (~95% of the area) to be managed for low to moderate recreational use with trails being the primary form of development.</p>	<p>CR activities must meet BC Parks' principles of low impact</p> <ul style="list-style-type: none"> <li>• Non-mechanized, low impact wildlife viewing activities</li> <li>• Angling guiding</li> <li>• Non-mechanized hiking and backpack guiding</li> </ul>	None to date	<p><b>First Nations:</b> Traditional territory of the N'Quatqua and Lil'wat (Mt. Currie)</p> <p><b>First Nations.</b> The Cayoose Creek Indian Band likely has overlapping interests in this park</p> <p><b>Mtn. Goat:</b> Winter/Kidding Range along the ridgeline (Mt. Rohr) above Duffey Lake</p> <p><b>Grizzly Bear:</b> In the Stein-Nahatlatch Grizzly Bear Population Unit</p> <p><b>Public Rec.:</b> buffer overlaps with high-value backcountry ski touring &amp; mountaineering in Cerise Ck</p> <p><b>Access:</b> Winter Non-Mechanized Recreation areas including Mt. Rohr, Mt. Marriott, Cayoosh Mtn. &amp; Joffre Group</p>	Hwy. 99



Selected Features	Management Categories	Appropriate Activities	Existing CR Use	Buffer Area Values <sup>26</sup>	Access to Area
Marble Canyon					
<p>Rich habitats &amp; feature diversity incl. Crown, Turquoise &amp; part of Pavilion Lakes; mixed shoreline vegetation; old growth pocket</p> <p>Picturesque visual setting; multiple rec. opportunities; warm, dry climate</p> <p>Pictographs &amp; archaeological sites present associated with the current Pavilion Indian Band</p>	<p><b>Intensive Recreation</b></p> <p><b>Natural Environment</b></p>	<ul style="list-style-type: none"> <li>• Camping</li> <li>• Swimming</li> <li>• Picnicking</li> <li>• Canoeing</li> <li>• Fishing</li> <li>• Hiking</li> <li>• Nature Study</li> <li>• Ice &amp; rock climbing</li> </ul>	<p>Lillooet Fishing Adventures; Educo Adventure School (rock climbing); UCC (guide school); ACGM (guide school)</p>	<p><b>Park Interests:</b> approximate 2,300 ha proposed to be added to Marble Park.</p> <p><b>Moose:</b> Range exists in Marble Park and its proposed addition.</p> <p><b>Mule Deer:</b> Winter range.</p>	<p>Hwy. 99 &amp; three additional gravel roads (names unavailable)</p>
Skihist					
<p>Portion of the Cariboo Wagon Road; First Nations' traditional hunting area.</p> <p>Picturesque visual setting; multiple recreation opportunities; warm,</p>	<p><b>Intensive Recreation Zone</b></p>	<ul style="list-style-type: none"> <li>• Hiking</li> <li>• Picnicking</li> <li>• Viewing</li> <li>• Walking</li> <li>• Car-camping</li> </ul>	<p>None to date</p>	<p><b>Tourism:</b> Kumsheen operates whitewater rafting &amp; lodge just outside the park</p> <p><b>Parks:</b> Interest in extending the park another 360 hectares occurs</p> <p><b>Recreation:</b> Whitewater paddling</p> <p><b>Mtn. Goat:</b></p>	<p>Hwy. 1</p>



Selected Features	Management Categories	Appropriate Activities	Existing CR Use	Buffer Area Values <sup>26</sup>	Access to Area
dry climate  Special features: dramatic views				Winter/kidding range just above on Mt. Lytton <b>Mule Deer:</b> Winter range <b>Bighorn Sheep:</b> Winter/lambing range	

Table 5. Higher-level Directives and Values for New or Proposed Protected Areas and Associated Buffers

Selected Features	Proposed Management Categories & Key Issues	Existing Commercial Park Use Permits/CR Tenures	Buffer Area Values <sup>27</sup>	Access to Area
Bridge River Delta				
Represents broad valley, glacial-fed, braided stream complex in natural condition within the Bridge River system  Critical habitat for grizzly bears	<b>Natural Environment; Strict Preservation</b>  Balancing conservation of grizzly bear habitat with use of area (grazing; trapping; hunting)	None to date	<b>Grizzly Bear:</b> Located in the S. Chilcotin Ranges Population Unit <b>Mtn. Goat:</b> Winter/Kidding habitat located in the Dickson Range, Ochre Mtn. and Mt. Vayu areas <b>Access:</b> Appears to be managed in the spring and summer (May-November) for motorized vehicles (refer to p. 49 of the Draft Lillooet LRMP)	Road access appears to occur from Gold Bridge; however, controlled between May – November.

<sup>27</sup> Please refer to Appendix 3 to identify wildlife management guidelines and access restrictions as provided within the Draft Lillooet LRMP



Selected Features	Proposed Management Categories & Key Issues	Existing Commercial Park Use Permits/CR Tenures	Buffer Area Values <sup>27</sup>	Access to Area
Cerise Creek				
Popular mountaineering area (summer and winter) adjacent to Joffre Lakes Provincial Park  Grizzly bear and mountain goat habitat  Winter Non-Mechanized Recreation	<b>Natural Environment</b>  Balancing conservation of bear and goat habitat with use of area (recreation)	None to date	<b>Mountain Goat:</b> Winter/Kidding habitat located on Mt. Duke & Mt. Caspar <b>Grizzly Bear:</b> Located in the Stein Nahatlatch Population Unit <b>Recreation:</b> Popular backcountry skiing and mountaineering area <b>Access:</b> Winter Non-Mechanized Recreation areas including Mt. Rohr, Mt. Marriott, Cayoosh Mtn., Joffre Group & Duffey Lake	Hwy. 99 and an FSR near to the highway
Fred and Antoine Creeks				
Represents unique range of very dry forest types in rugged, steep terrain with delicate riparian areas, under-represented ecosystems and critical wildlife values in the southern Camelsfoot Range.  First Nations cultural artifacts and signs of traditional use and residence	<b>Natural Environment; Wilderness</b>  • Access for owners of private land and water rights Access into the park needs improving	None to Date	<b>Grizzly Bear:</b> Located in the S. Chilcotin Ranges Population Unit <b>Mtn. Goat:</b> Winter/Kidding Range in the Camelsfoot Range and Mission Ridge <b>Bighorn:</b> Winter/Lambing Range <b>Mule Deer:</b> Winter Range	Yalakom River Road; Leon Ck. FSR
French Bar Creek Canyon				
Under-represented ecosystems (dry forests; grasslands)	<b>Natural Environment</b>  Establish under	None to Date	<b>Mtn. Goat:</b> Winter/Kidding habitat located in the southern hills above Moore Lake	A rough series of roads appears to occur along French Bar Ck.,



Selected Features	Proposed Management Categories & Key Issues	Existing Commercial Park Use Permits/CR Tenures	Buffer Area Values <sup>27</sup>	Access to Area
Bighorn sheep migration route & all-season range  Seasonal Access Management Area	<i>Environment and Land Use Act</i> to allow: (a) Future development of water resources for agriculture, and (b) Future roads, pipelines or infrastructure along Fraser Canyon		<b>Mule Deer:</b> Winter Range <b>Bighorn Sheep:</b> Winter/Lambing Range <b>Grizzly Bear:</b> Located in S. Chilcotin Ranges Population Unit <b>Access:</b> Seasonal Access Management Area <b>Public Recreation:</b> Former Forest Rec. Campsite located at a lake off of the Creek as well as another Rec. site at South French Bar Creek.	South French Bar Creek, and two additional roads between these formerly mentioned ones.
Gwyneth Lake				
Protecting a small lake and marsh to meet the destination and day use needs of visitors to the Gold Bridge-Bralorne area and motorists on Hurley-Carpenter Lake Road tour route	Intensive recreation	None to date	<b>Grizzly Bear:</b> Located in S. Chilcotin Ranges Population Unit <b>Mtn. Goat:</b> Winter/Kidding Range located on Mt. Noel (above Mason Ck) <b>Watershed:</b> Community watershed	Hurley Lake Road (seasonal) and via Gold Bridge
Marble Canyon Extension				
Rock and ice climbing, fishing and geological history	<b>Natural Environment</b>  Allow right of way for improvements on Highway 99  Access for owners of	A number of Park Use Permits occur for the existing Park; however, it is unknown as to whether these extend into the proposed	<b>Mule Deer:</b> Winter Range <b>Bighorn Sheep:</b> Winter/lambing Range	Hwy. 99 & three additional gravel roads (names unavailable)



Selected Features	Proposed Management Categories & Key Issues	Existing Commercial Park Use Permits/CR Tenures	Buffer Area Values <sup>27</sup>	Access to Area
	private land	extension area.		
<b>Skihyst Park Extension</b>				
Extension to popular park beside Trans Canada Highway  Hiking trails  Under-represented ecosystems (dry forests)	<b>Natural Environment</b>	Kumsheen River Rafting operates here; however, this company is currently in the process of applying for CR tenure with LWBC.	<b>Mtn. Goat:</b> Winter/Kidding Range on Mt. Lytton <b>Mule Deer:</b> Winter Range <b>Bighorn Sheep:</b> Winter/lambing Range <b>Grizzly Bear:</b> Within the Stein-Nahatlatch Protection Unit	Hwy. 1
<b>Spruce Lake – South Chilcotin</b>				
Transition from wet coastal to dry interior ecosystems  Adjoins Big Creek Park  Wildlife habitat (grizzly bear; bighorn sheep; mountain goats)  Mtn. Goat winter/kidding range: north above Leckie Ck., above Eldorado Ck., and in the Leckie Range  Broad valleys and interconnected alpine basins	<b>Wilderness; Natural Environment</b>  Balancing conservation of grizzly bear, sheep and goat habitat with use of area  Integrating CR businesses with public use  Private ownern land access  Scientific research of	Chilcotin Holidays, TLH Heliskiing, Whistler Outback Adventures, Tyax Mountain Lake Resort, Spruce Lk. Wilderness Adventures, Lillooet Fishing Adventures, Valley Fishing Guides, Tyax Air Services, Whistler Air Services, Sea-to-Sky Expeditions	<b>Grizzly Bear:</b> Within the South Chilcotin Ranges Population Unit <b>Mtn. Goat:</b> Winter/Kidding Range in the Dickson Range, above Eldorado Mtn. <b>Recreation:</b> Horseback riding, hiking, mtn. biking, ski touring, snowmobiling. Forest Service <b>Rec. Sites</b> (former) located at: Spruce Lake, Gun Lake, Relay Creek, and Mud Creek. SMZ: Tourism – Mining Management Areas (note: management directives to conduct interagency/party interest-based communications)	Floatplane, helicopter, and a number of resource-related roads including: <ul style="list-style-type: none"> <li>• Marshall Ck. Rd.,</li> <li>• Tyax Lake Rd.,</li> <li>• Gun Lake/Slim Creek</li> <li>• Relay Creek</li> <li>• Paradise Creek</li> <li>• Mud Creek</li> </ul>



Selected Features	Proposed Management Categories & Key Issues	Existing Commercial Park Use Permits/CR Tenures	Buffer Area Values <sup>27</sup>	Access to Area
<p>suitable for long backpacking or horse riding trips</p> <p>Well-preserved Mesozoic marine fossils</p> <p>Provincially significant conservation and recreation resources</p> <p>Winter Non-mechanized Recreation around Spruce Lake; Seasonal managed motorized access (Slim Creek Drainage)</p>	<p>fossils</p> <p>Public snowmobilers need assured access into Upper Slim Creek</p>		<p><b>Access:</b> Winter Non-mechanized Recreation and All-Season motorized access regulation around Bonanza Creek</p>	
<p>Yalakom Creek</p>				
<p>Undeveloped watershed</p> <p>Old growth forests</p> <p>Bighorn sheep habitat and migration route</p> <p>Mtn. Goat: Winter/Kidding Range on edge of Yalakom Mtn.</p>	<p>Wilderness</p> <p>Balancing conservation of sheep habitat and migration routes with use of area</p>	<p>None to date</p>	<p><b>Mtn. Goat:</b> Winter/Kidding on Yalakom Mtn.  <b>Mule Deer:</b> Winter Range  <b>Bighorn Sheep:</b> Winter/Lambing  <b>Grizzly Bear:</b> South Chilcotin Ranges Population Unit  <b>Access:</b> All-season motorized access regulations Davey Jones, Evelyn &amp; Watson Creek Road; Wildlife Act restrictions on Nine Mile Ridge</p>	<p>Yalakom Creek Road</p>



## Part 5 - Overall Commercial Recreation Product Feasibility

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### 5.0 Methods

This stage incorporates information gathered in the capability and the suitability assessments. Additional analysis in this final layer includes conducting a recreation activity compatibility overview, as well as a proximity analysis. These are described below. The outcome of this review will be an overall assessment of each CR product's development potential as they relate to the terrain, higher-level policy, existing values, and accessibility.

#### **Limitations**

Due to time limitations and difficulties in sourcing and clarifying map data including polygon-based CR tenure data and existing recreation trails, the exact location of existing operators' tenure areas could not be interpreted, which limited our ability to conduct a more detailed recreation compatibility assessment. Additional information we could not incorporate is cultural land and resource values from First Nations communities in the study area.

The following sections describe the additional tools used to assess overall CR product development feasibility, and Section 5.3 provides a summary table of the overall development feasibility of each CR product reviewed in this report.

### 5.1 Commercial Recreation Compatibility

To mitigate potential situations of conflict, a recreation compatibility assessment is conducted. Assisting us in this analysis are two levels-of-tolerance matrices developed for winter- and summer-based activities.<sup>28</sup> Due to time-related analysis restraints, only those activities deemed incompatible to occur are discussed in this report; however, it is hoped that this table will be useful for assessing potential situations of tenure overlap. Activities listed on the left of each table are compared with those listed in each column.

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<sup>28</sup> Commercial Recreation Opportunity Study for the North Central Monashees. March, 2000. Prepared by: Alison Davis of Davis, Lack & Associates (note: now Helios Tourism Planning Group). Prepared for: Dave Bacon of BC Asset and Lands (note: now Land and Water BC). Southern Interior Region.





Table 6. Levels of Tolerance Matrix: Winter-based Activities

	Heli-ski	Ski-tour (p)*	Ski-tour (c)*	Cat-ski	Snowmobile (p)	Snowmobile (c)
Heli-ski	Low	Mod	Mod	Mod-High <sup>29</sup>	Low	Mod-High <sup>30</sup>
Ski-tour (p)	Low	High	Mod	Low	Low	Low
Ski-tour (c)	Low	Mod	Low	Low	Low	Low
Cat-ski <sup>31</sup>	Low	Mod	Low	Low	Low	Low
Snowmobile (p)	Mod-Low	High	High	Mod	High	High
Snowmobile (c)	Mod - High	Mod - High	Mod - high	Mod	High	Mod-Low

\* (p) & (c) = public and commercial

Table 7. Levels of Tolerance Matrix: Summer-based Activities

	Hiking (p)*	Hiking (c)*	Heli-Hiking	Horse/pack (p)	Horse/pack (c)
Hiking (p)	High	Mod	Low	Mod	Mod - Low
Hiking (c)	High-Mod	Mod-Low	Low	Mod	Mod - Low
Heli-hiking	Mod	Mod - Low	Low	Low	Low
Horse/pack (p)	Mod - High	Mod - High	Mod - Low	High	Mod
Horse/pack (c)	Mod - High	Mod - High	Low	High	Mod

\* (p) & (c) = public and commercial

## 5.2 Proximity Analysis

While the capability analysis identifies high value terrain, this model does not highlight areas featuring easier access or closer proximity to community settlements. Because existing infrastructure bears some economic advantages for development purposes, proximity analyses factors-in the presence of certain attributes including road and trail networks, as well as existing communities.

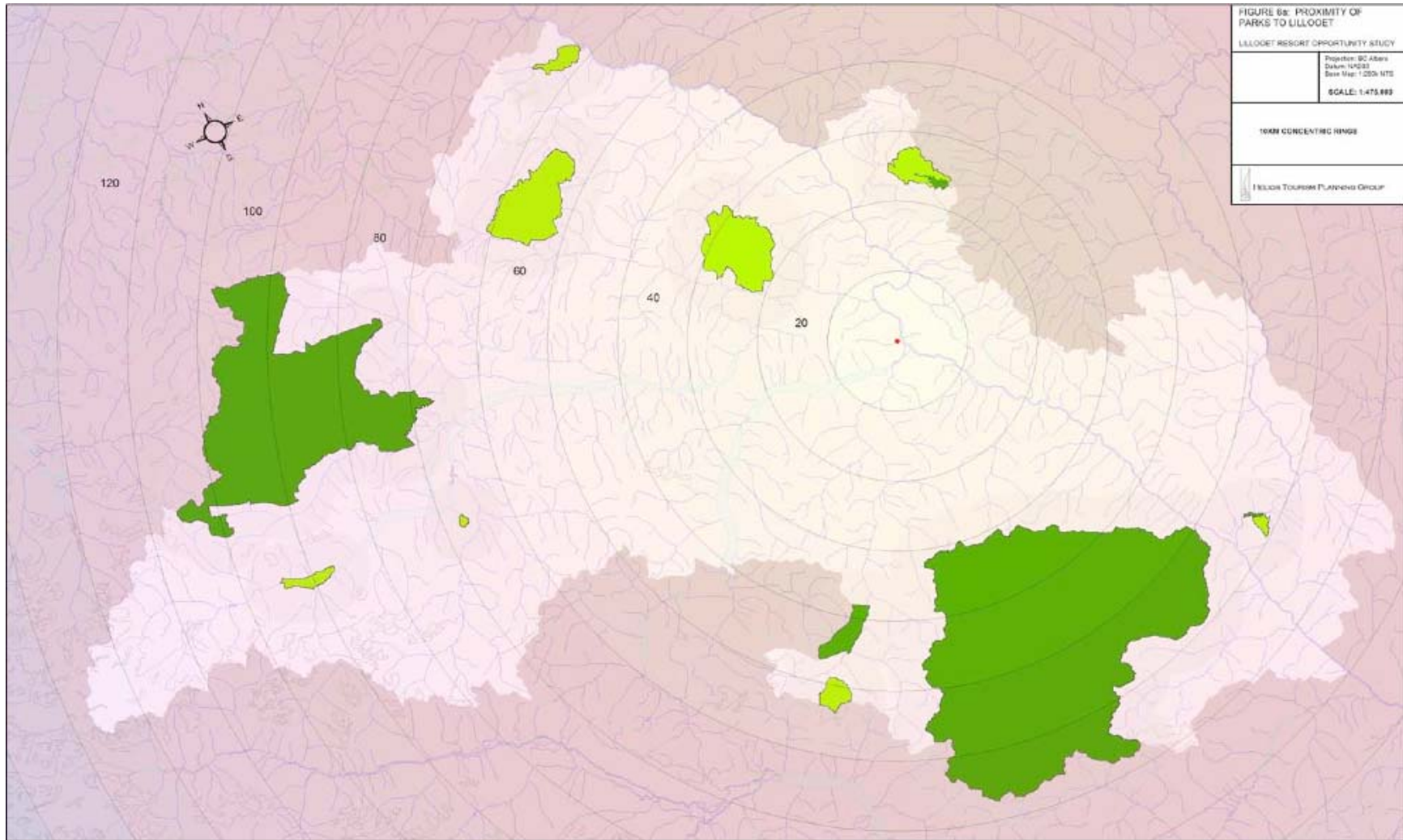
For the purposes of this study, proximity maps to major communities of Pemberton, Lillooet and Lytton have been produced (Figures 6a, 6b, 6c). These maps feature concentric rings around each community to provide prospective developers information regarding such factors as travel time from these nodes, and other logistical variables (i.e. food/gas supply; front-country accommodation options; guest pick-up locations, etc.).

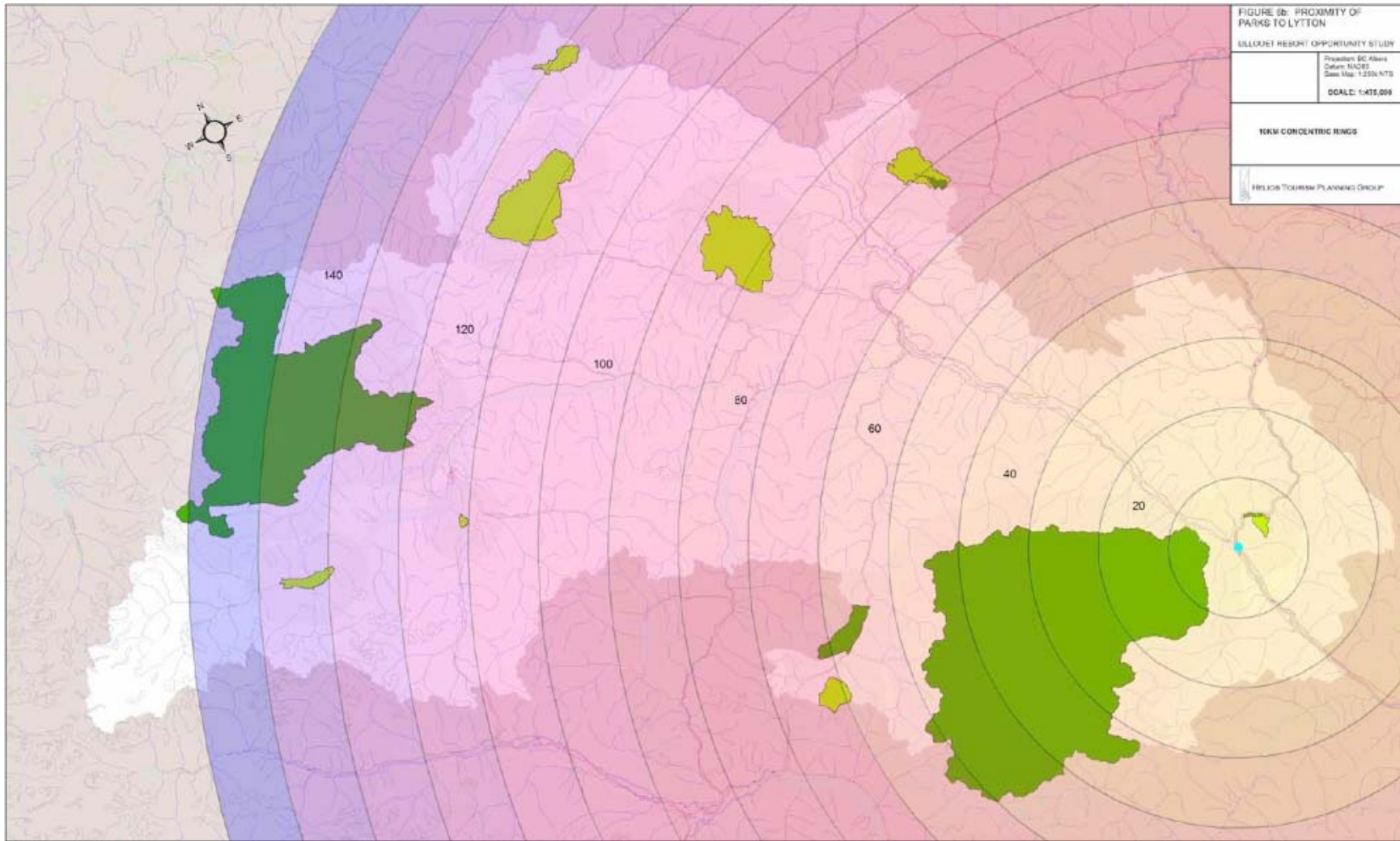
<sup>29</sup> Given heli-ski operations' large areas of operation, moderate-to-high levels of tolerance towards a concentrated cat-skiing operation.

<sup>30</sup> The assumption used here is that commercially guided snowmobilers will be using gently graded to flat aspects in a predictable, concentrated area.

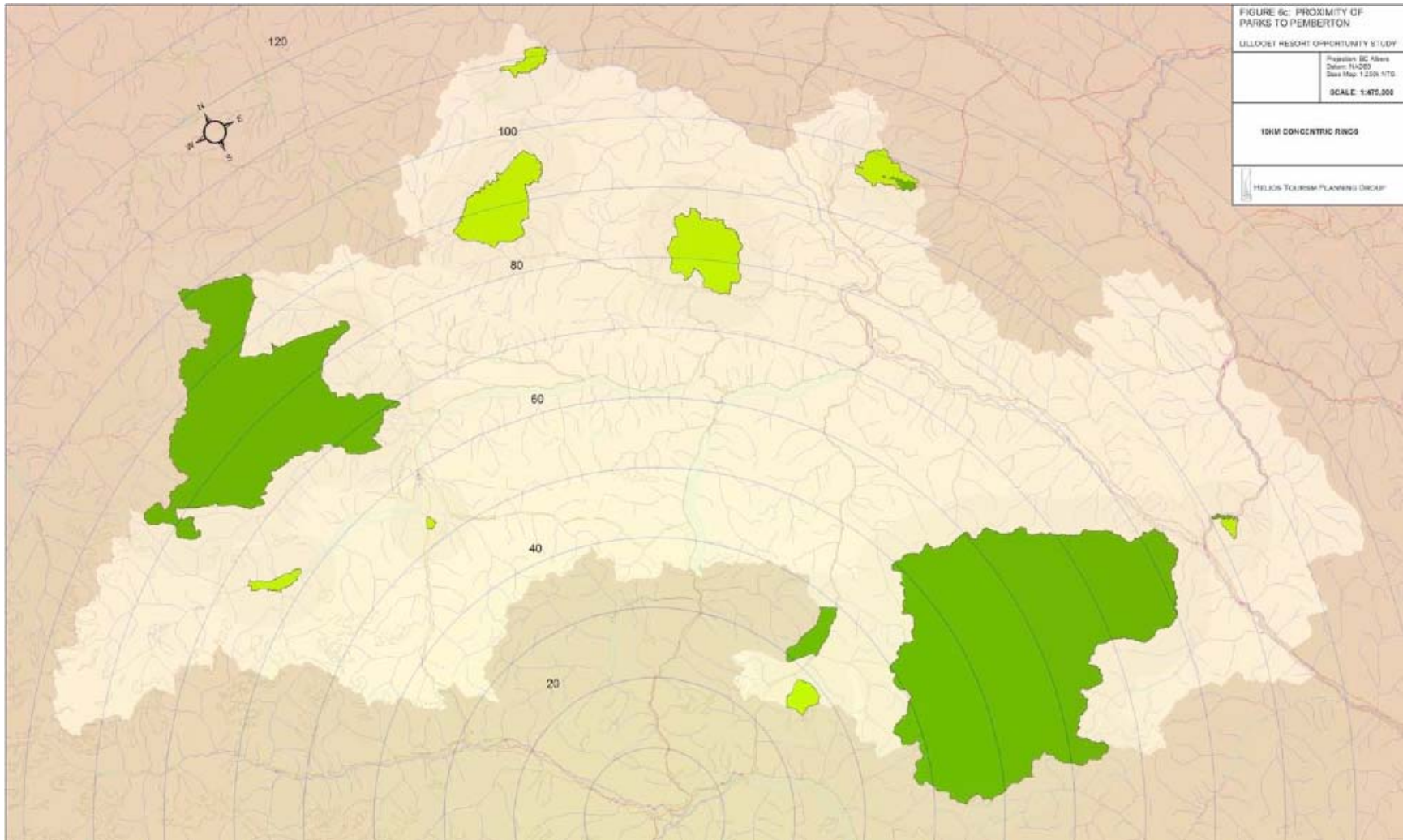
<sup>31</sup> Given the limited amount of operable terrain, with the exception of limited public ski tourers, low levels of tolerance for other activities occurs for cat skiing.











Due to time limitations, a review of existing roads' proximity to sub-alpine and alpine terrain did not occur. °

### 5.3 Area -Specific Overall CR Product Feasibility Assessment

Using the capability, suitability and above-mentioned feasibility analysis tools, this section features a table presenting the overall development feasibility for CR products as they relate to specific protected areas and their associated 5km buffer areas. Where similar findings occur for multiple products, these are jointly summarized (Table 8).

Some key factors involved in producing an overall ranking includes: snowpack, access, and existing heli-based tenures. With respect to snowpack, while the coastal transition and northern dry precipitation zones feature a high degree of certainty in its ability to provide four months of sufficient snowpack, the central very dry zone does not. As such, areas situated in this zone were assigned a lower development potential value for winter-based products.<sup>32</sup>

Access to areas is also another key feature. Because this many of this study's analysis units are located in remote areas, multi-day/activity destination resorts are most viable for CR product development. This is evidenced by pre-existing tourism use in this TSA. For some parks situated along major highways, day use product development potential occurs. In general, this will generally be winter- and summer-based activities off of Hwy. 99 and summer-based activities off of Hwy. 1.

Another key factor in assessing winter-based CR products' overall feasibility is the presence of tenured heli-skiing. Because overlapping helicopter use is a safety concern, and because heli-skiing activities are generally incompatible with other winter-based products (in active ski areas), in tenured heli-ski areas, the overall feasibility of other winter-based CR products has been assigned a lower value. Further investigation into use and frequency levels in specific areas could however occur to determine the extent to which pre-existing heli-use would deter other operations.

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<sup>32</sup> This includes: French Bar Creek, Yalakom Creek, Fred & Antoine Creeks, Skihist, and Marble Canyon. The far eastern section of the Stein Valley is also likely to feature inconsistent snowpack levels over a 4 month period.



Table 8. Overall CR Product Feasibility

Park	Product	Rank	Rationale
Bridge River	Summer-based	Low-Moderate	<p>Due to the park’s low elevation features and critical grizzly bear habitat, unless some well-managed viewing opportunities were developed, hiking and horseback riding at lower elevations would be both risky. Furthermore, due to the area’s braided stream complex, the terrain is likely too sensitive to support high horse use, and too wet/possibly too buggy to support the infrastructure required to facilitate quality hiking opportunities.</p> <p>Within the Dickson Range, some excellent hiking/horseback riding terrain occurs, which could be further investigated.</p>
	Winter-based	Moderate-High	<p>For all skiing activities as well as snowmobile touring, the Dickson Range as well as the southern mountains (Vayu, Ethelweard and Ochre) offers excellent development opportunities. The two main issues here include high value winter mtn. goat habitat in the Dickson Range, as well as existing heli-ski activities offered by TLH. Given the relatively low levels of tolerance afforded to recreational compatibility with commercial heli-skiing as well as the high value wildlife habitat, only moderate development feasibility is assigned where these values overlap. In areas that may not overlap, or are considered to be compatible (dependent on the TLH’s use frequency), development opportunities are excellent.<sup>33</sup></p>
Cerise Creek	Summer-based	Low-Moderate	<p>The area’s steep, rugged terrain combined with year-round snow cover<sup>34</sup> and glaciers assigns a moderate rank for hiking products and low rank for horseback riding due to Cerise Creek’s wet terrain. Access to higher elevations occurs both through a cut-block and along dense vegetation. Due to its close proximity to Whistler, guided day hikes into Flavelle Hut should be further investigated.</p>
	Ski Touring	High	<p>According to the draft Lillooet LRMP, non-mechanized winter-based recreation activities</p>

<sup>33</sup> Further investigation into road access necessary to determine potential development benefits or challenges. Also, due to safety reasons, additional heli-ski development feasibility is considered to be low.

<sup>34</sup> According to some hiker’s information on the TrailPeak.com site, knee-deep snow occurred at Flavelle Hut in mid-June.



Park	Product	Rank	Rationale
			<p>are the only acceptable pursuits in this area. Consequently, given the area's excellent ski terrain, high development opportunities occur here for the following reasons: prime terrain, proximity to Whistler and the Lower Mainland, highly reputed ski touring area already.</p> <p>While public b/c recreationists would likely welcome more traffic up Cerise Ck. to assist with cutting the trail, because untracked powder skiing is a goal for this sector, and due to the historically high use of backcountry skiers in this area, alternate areas should be sought to develop a lodge/hut. One area of particular interest is the range SW of Duffey Lake and NE of Van Horlick Ck.</p>
Duffey Lake	Summer-based	Moderate-High	<p>High value hiking terrain in the Cayoosh Range coupled with the presence of: alpine lakes, close proximity to an all-season access road, close proximity to high density population centres, and likely some stellar viewsapes make this buffer area attractive.</p> <p>Some existing issues include the presence of early summer snowpack, as well as the occurrence of high value wildlife habitat for: black and Grizzly bear, mtn. goat and deer.</p>
	Ski Touring	High	<p>For the same reasons as for summer-based products with the additional attraction of high snowpack levels as this area is located within the coastal transition zone.</p>
			<p>Comments: Given Duffey Lake area's steeply cut slopes, a gentle-to-moderate access route into higher elevation terrain may be an issue, especially since air-based transport is not allowed in the winter months.</p> <p>Depending on the overall volume of rubber tire traffic on Hwy. 99 during the summer months, additional products include guided hiking and horseback riding if a moderately sloped hill with a good look-out in about 2-3 km's proximity from Duffey Lake.</p>
Fred & Antoine Creeks	Most products	Low	<p>With the exception of low-elevation snowmobile touring (which may not be feasible due to low snow-load), this area appears to lack viable terrain to facilitate quality CR product development.</p>
			<p>Comments: Winter-based snowpack levels should be monitored in this area prior to developing any snow-dependent products here</p>



Park	Product	Rank	Rationale
French Bar Creek	Most products	Low	For the same reasons as Fred & Antoine Creeks, this area appears to lack viable terrain to facilitate quality CR product development.
	Snowmobile Touring	Moderate-Low	High value snowmobile touring terrain occurs in parts of this park and its buffer areas. Issues with this activity include high value winter mtn. goat and bighorn sheep habitat. Because there does not appear to be high opportunities to host a multi-use destination resort, and due to the area's distance to tourism markets, a low-to-moderate overall development feasibility has been assigned for this product here.
			Comments: Winter-based snowpack levels should be monitored in this area prior to developing any snow-dependent products here
Gwyneth Lake	Summer-based	Moderate-Low	Due to this area's small size and close proximity to Gold Bridge and Bralorne (and Pemberton during summer months), high summertime visitor volume likely occurs at Gwyneth Lake itself. An alpine lake in the headwaters of Ault Creek on Green Mtn. could be further explored for its development potential.
	Ski Products	Moderate-High	High skiing values occur in Green Mtn. and Mt. Noel areas, however, given the area's close proximity to Tyax Mtn. Resort and TLH, this area is likely tenured for heli-skiing activities.
		Comments:	Summer-based access route from Pemberton via Hurley River Rd. is good.





Park	Product	Rank	Rationale
Marble Canyon	Summer-based	High	High value hiking and horseback riding terrain occurs in the SW part of the buffer area. Key attributes for this assignment include: high elevation (1200m), sparsely vegetated plateau lands. Additional benefits of this area is its nearby proximity to Marble Canyon park, which enjoys high summertime visitor volume. As such, day use products may hold the highest development value in this area.
	Winter-based	Low	While small patches of excellent terrain occur in the capability map, the area's size and likely snowpack duration assigns a low value for ski products.
Skihist	Summer-based	Moderate-High	Given Hwy 1's high rubber tire volume, and that a steady number of visitors overnight in the area, good opportunities exist to develop guided hiking and horseback riding products here. A key issue, however, is the area's terrain. Further investigations in to the Botanie Mtn. and Mt. Lytton areas could occur.  Personal knowledge of the Botanie Mtn. area provides insight that it hosts numerous mid-elevation cut blocks and therefore visual quality could be an issue. This area also features beautiful, sensitive, higher elevation wild flowers. This area was recently identified (Lillooet-Lytton Tourism Diversification Project) as a good place for a lodge development.
	Winter-based	Low	There appears to be insufficient levels of snowpack in this area to sustain winter-based CR products
		Comments:	Because of this area's: prime location off Hwy 1, ability to facilitate multiple summer-based recreation activities, and presence of the Stein Valley, good development potential occurs. However, with respect to a lodge development in the area, unless helicopter access (or other) occurs to fly into a higher snow zone, the ability to facilitate a multi-season resort is questionable.



Park	Product	Rank	Rationale
Spruce Lake	All products	High	<p>Given the area's abundant high-elevation, moderately sloped terrain, and good winter-based snowpack, high development opportunities occur here. Some key issues here include:</p> <ul style="list-style-type: none"> <li>▪ High value winter wildlife habitat including mtn. goat kidding range above Leckie Ck. and Eldorado Ck. and in the Leckie Range.</li> <li>▪ Existing CR tenures. Low development values occur for most winter-based CR products in areas where TLH operates. Additional recreation compatibility research is recommended with existing CR operators on an as-needed basis.</li> <li>▪ Public snowmobiling into the upper Slim Creek area occurs.</li> </ul>
	Cat-skiing	High-moderate	In addition to building cat-tracks in the direct area of interest, this activity is dependent on existing road infrastructure to haul in snowcats. As such, a more in-depth assessment of the area's road infrastructure is required to occur here.
			Comments: With respect to winter-based product development potential, a detailed gap analysis is required to identify any viable ski terrain occurring outside of TLH's tenure area.
Stein Valley Nlaka'pamux	Hiking	High	<p>In addition to good, high elevation hiking terrain, a number of additional factors are present, which adds to the development opportunities here. These include: alpine lakes, cultural features/artifacts, the park's well-known reputation, proximity to the lower mainland and Kamloops, proximity to Hwy.'s 1 and 99, and access road potential in the park's buffer area.</p> <p>High value grizzly bear habitat occurs in the Texas Creek watershed/road and Van Horlick Ck. road, with associated seasonal access management measures as per the draft Lillooet LRMP</p>
	Ski touring	High	High value ski terrain combined with the above-mentioned development and marketing assets facilitates good development potential here. Areas include the Skihist/Antimony/Akaskik; Tundra/Elton/Stein Lake; and Gott Mtn. area. High levels of watershed sensitivity occur in this culturally high value area.
			Comments: This area provides an opportunity to host summer and winter-based CR opportunities. Note that the Park Management Plan only allows for non-mechanized activities, which includes aerial flights. As such, if air-access



Park	Product	Rank	Rationale
			were required into a prospective lodge/hut, access and/or development would have to occur on the park's periphery with activities possibly extending into the park. Heli-flight time assessments from Lillooet & Merritt should occur to determine viability of this product in the park's buffer areas
Yalakom Creek	Summer Products	Moderate-High	Nine-Mile Ridge's contiguous terrain, and close by access road provide good development opportunities here. Additional hiking and horseback riding terrain occurs in the park's buffer area and may be a good option for prospective resort/hut development.
	Ski Products	Moderate-High	While snow-load levels may be insufficient in the park, the Big Dog Mtn. area appears to host higher levels associated with the Northern Dry Precipitation Zone.
			Comments: this area appears to host a diversity of terrain and recreation activity options. Given its close proximity to the Yalakom River Rd., good access occurs here. Furthermore, if sufficient snow levels do occur in the Big Dog Mtn. area, and, if TLH does not use this area, opportunity to develop a multi-season destination resort in this area occurs. It should be noted that little rubber tire tourist traffic is anticipated to occur on this road, as it appears to be a "dead-end."



## 6.0 Analysis Summary

Given the Lillooet TSA’s terrain diversity and close proximity to the Lower Mainland/Whistler and Southern Interior, it holds a strategic development advantage for commercial recreation products. This area also features three marketing themes to be capitalized upon which include Sea-to-Sky country; the Chilcotin’s cowboy/ranchland country; and the Fraser Canyon’s Gold County.

Paralleling the area’s two higher precipitation zones, our winter-based analysis found high terrain capability to occur in the west and central parts of the Lillooet TSA, while areas in the eastern part of the TSA likely feature an insufficient amount of snowpack to facilitate a viable 4-month operation. A key development challenge here is to identify viable terrain not included within existing heli-ski tenure, or that receives low-frequency heli-use patterns.

With respect to summer-based CR development potential, the diverse terrain and large wilderness tracts belonging to the Spruce Lake and Stein Valley Nlaka’pamux parks and their associated buffers show some excellent development potential. Other areas of interest include Yalakom Creek, and the buffer areas of Duffey Lake (Cayoosh Range); Skihist Park (Botanie Mtn.), and Marble Canyon (below Pavillion Mtn.). Key development issues here are likely to involve ease of access, and existing commercial use and private land holdings.

The following table provides an overview summary of this research’s findings for area’s ranked with high (H), high-to-moderate (H/M) and moderate (M) development opportunities.

Table 9. Summary of Potentially High Value CR Development Areas

Park/Buffer	Product	Rank	Comments
Bridge R,	Winter-based	M-H	Higher-elevation terrain in the Dickson Range; Vayu, Ethelweard and Ochre Mtns.
Cerise Ck.	Ski Touring	H	Non-mechanized winter-based activities only
Duffey Lk.	Summer-based	M-H	Good terrain appears to occur in the Cayoosh Range with nearby access via Hwy. 99
	Ski Touring	H	Non-mechanized winter-based activities only
Gwyneth Lk	Ski Products	M-H	High elevation areas in buffer area
Marble Canyon	Summer-based	H	Good terrain conditions in buffer area, with Hwy. 99 and provincial park campers present in summer
Skihist	Summer-base	M-H	High value areas appear to occur around Botanie Mtn. & Mt. Lytton
Spruce Lk.	All Products	H	High value terrain and ample snowpack here
Stein Valley	Self-propelled Hiking	H	High value terrain around the boundary and in buffer areas
	Ski Touring	H	High value terrain around the boundary and in buffer areas
Yalakom Ck	Summer Products	M-H	Good, contiguous terrain & nearby access present
	Ski Products	M-H	Appears to be good terrain; questionable snowpack



## 7.0 Recommendations

Based on conducting tourism development opportunity research in the Lillooet TSA, the following recommendations occur:

- Coordinate tourism development initiatives to ensure strategic planning approach within the Lillooet TSA;
- Improve baseline information on public recreation values and existing tourism values in the Lillooet TSA. This data would provide more in-depth information regarding high land and resource values and issues and facilitate greater public and private input into the project's process;
- Establish ortho-photo coverage of the Spruce Lake area;
- Assess a number of additional CR products featuring strong regional and/or provincial growth trends. This includes, but is not limited to: power-skiing/boarding (snowmobile-assisted), heli-biking, mountain bike touring, whitewater activities, and ATV touring;
- Review this research with existing tourism operators, public recreationists and other tourism specialists in the area to ground-truth information and add additional public and commercial recreation values.



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## Appendix 1 – CR Product Attribute Tables

- a. Ski Touring
- b. Heli-Skiing
- c. Cat-Skiing
- d. Snowmobile Touring
- e. Hiking
- f. Horse-packing





Table a. Capability Parameters – Ski Touring

Slope	Score	Weighting
0- 5 °	30	40%
5°- 10°	40	
10° - 15°	50	
15°- 20°	70	
20°- 25°	100	
25°- 30°	100	
30°- 35°	100	
35°- 40°	70	
40° - 45°	30	
45°- 50°	10	
50°- 55°	10	
55°- 90°	0	
Snowpack Depth (cm)	Score	Weighting
0-50	0	30%
100	20	
125	50	
150	60	
175	70	
200	75	
225	80	
250	85	
275	90	
300+	100	
VRI Designation	Score	Weighting
Alpine	100	30%
Sparse Veg	100	
Open Veg	50	
Dense Veg	0	
Cut-blocks (openings)		
Sparse	20	
Open	10	
Dense	0	
Ice (glacier)	50	
Meadow, Open Range, Clearing	90	
Other (Swamp, River, Claybank, Graiel, Urban, Sand)	0	



Table b. Capability Modeling Parameters – Heli Skiing

Slope	Score	Weighting
0- 5 °	10	40%
5°- 10°	10	
10° - 15°	40	
15°- 20°	60	
20°- 25°	100	
25°- 30°	100	
30°- 35°	100	
35°- 40°	70	
40° - 45°	60	
45°- 50°	10	
50°- 55°	0	
55°- 90°	0	
Snowpack Depth (cm)	Score	Weighting
0-50	0	30%
100	20	
125	50	
150	60	
175	70	
200	75	
225	80	
250	85	
275	90	
300+	100	
VRI Designation	Score	Weighting
Alpine	100	30%
Sparse Veg	100	
Open Veg	65	
Dense Veg	0	
Cut-blocks (openings)		
Sparse	40	
Open	20	
Dense	0	
Ice (glacier)	50	
Meadow, Open Range, Clearing	90	
Other (Swamp, River, Claybank, Grael, Urban, Sand)	0	



Table c. Capability Modeling Parameters –Snowcat Skiing

Slope	Score	Weighting
0- 5 °	10	40%
5°- 10°	10	
10° - 15°	40	
15°- 20°	60	
20°- 25°	100	
25°- 30°	100	
30°- 35°	100	
35°- 40°	70	
40° - 45°	60	
45°- 50°	10	
50°- 55°	0	
55°- 90°	0	
Snowpack Depth (cm)	Score	Weighting
0-50	0	30%
100	20	
125	50	
150	60	
175	70	
200	75	
225	80	
250	85	
275	90	
300+	100	
VRI Designation	Score	Weighting
Alpine	100	30%
Sparse Veg	100	
Open Veg	65	
Dense Veg	0	
Cut-blocks (openings)		
Sparse	40	
Open	20	
Dense	0	
Ice (glacier)	50	
Meadow, Open Range, Clearing	90	
Other (Swamp, River, Claybank, Grae, Urban, Sand)	0	



Table d. Capability Modeling Parameters – Snowmobile Touring

Slope	Score	Weighting
0- 5 °	100	40%
5°- 10°	100	
10° - 15°	100	
15°- 20°	100	
20°- 25°	80	
25°- 30°	60	
30°- 35°	10	
35°- 40°	0	
40° - 45°	0	
45°- 50°	0	
50°- 55°	0	
55°- 90°	0	
Snowpack Depth (cm)	Score	
0-50	0	30%
100	20	
125	50	
150	60	
175	70	
200	75	
225	80	
250	85	
275	90	
300+	100	
VRI Designation	Score	
Alpine	100	30%
Sparse Veg	80	
Open Veg	20	
Dense Veg	0	
Cut-blocks (openings)		
Sparse	30	
Open	0	
Dense	0	
Ice (glacier)	0	
Lakes	75	
Meadow, Open Range, Clearing	100	
Other (Swamp, River, Claybank, Gravel, Urban, Sand)	0	



Table e. Capability Modeling Parameters - Hiking

Slope	Score	Weighting
0- 5 °	100	40%
5°- 10°	100	
10° - 15°	80	
15°- 20°	60	
20°- 25°	40	
25°- 30°	20	
30°- 35°	10	
35°- 40°	5	
40° and steeper	0	
Aspect	Score	Weighting
North	40	25%
Northeast	50	
Northwest	50	
East	70	
West	70	
Southeast	80	
Southwest	80	
South	100	
Flat	100	
VRI Designation	Score	Weighting
Alpine	100	35%
Sparse Veg	80	
Open Veg	40	
Dense Veg	10	
Cut-blocks (openings)		
Sparse	0	
Open	0	
Dense	0	
Ice (glacier)	0	
Lakes	0	
Meadow	100	
Open Range	70	
Clearing	100	
Sand	70	
Other (Swamp, River, Claybank, Grael, Urban,)	0	
Proximity to Lakes	Score	Weighting
0-250m	100	15% (bonus points)
250-500m	60	
500-750m	40	
750-1000m	10	
Greater than 1000m	0	



Table f. Capability Modeling Parameters – Horse-packing

Slope	Score	Weighting
0- 5 °	100	40%
5°- 10°	80	
10° - 15°	60	
15°- 20°	40	
20°- 25°	20	
25°- 30°	10	
30°- 35°	20	
35°- 40°	10	
40° and steeper	0	
Aspect	Score	Weighting
North	50	10%
Northeast	50	
Northwest	50	
East	60	
West	60	
Southeast	80	
Southwest	80	
South	100	
Flat	100	
VRI Designation	Score	Weighting
Alpine	100	35%
Sparse Veg	100	
Open Veg	80	
Dense Veg	10	
Cut-blocks (openings)		
Sparse	10	
Open	0	
Dense	0	
Ice (glacier)	0	
Lakes	0	
Meadow	100	
Open Range	100	
Clearing	100	
Sand	10	
Other (Swamp, River,Claybank,Grael, Urban,)	0	
Proximity to Lakes	Score	
0-250m	100	15%
250-500m	80	
500-750m	40	
750-1000m	10	
Greater than 1000m	0	



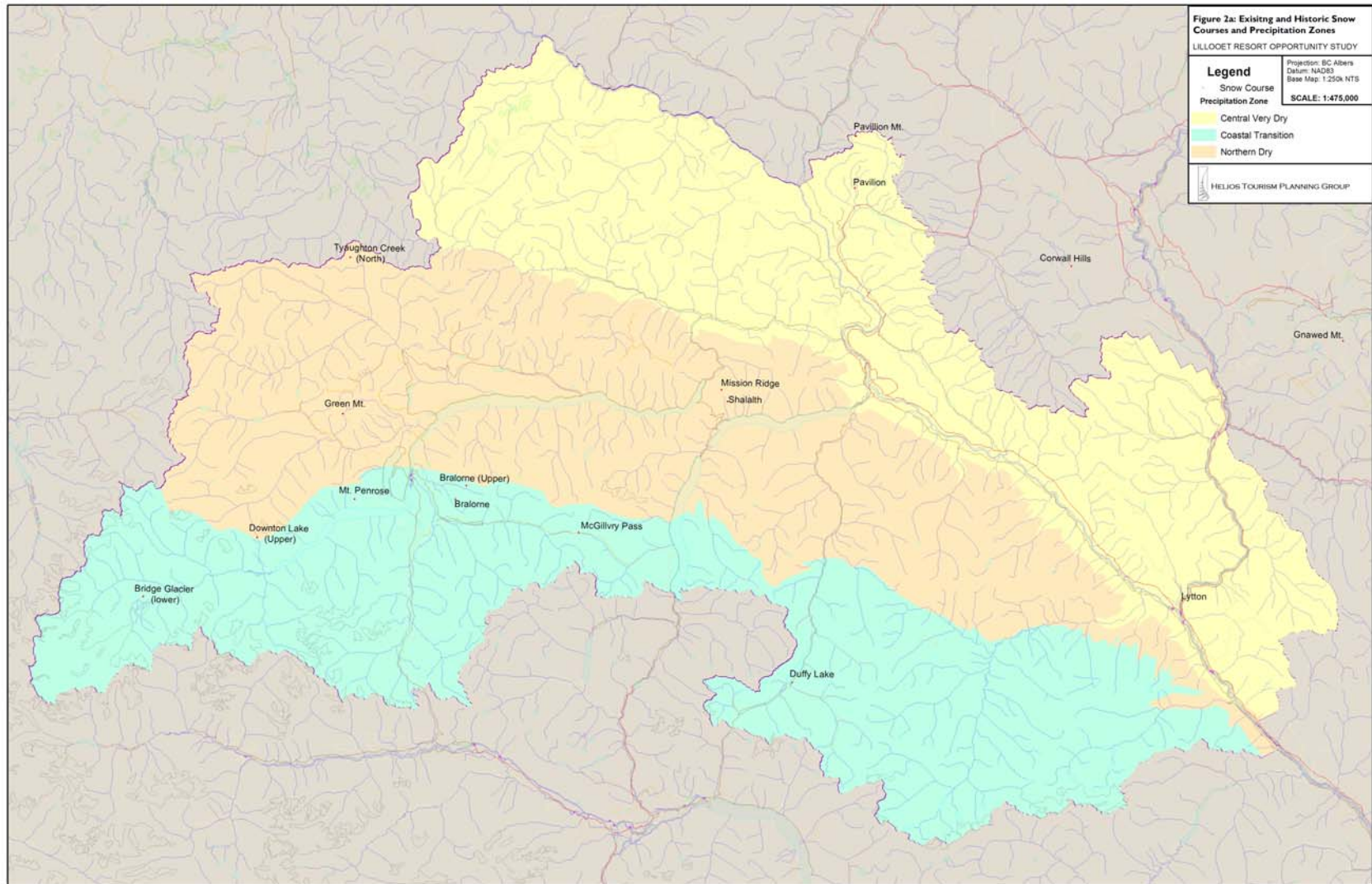
## Appendix 2 – Snowpack Data

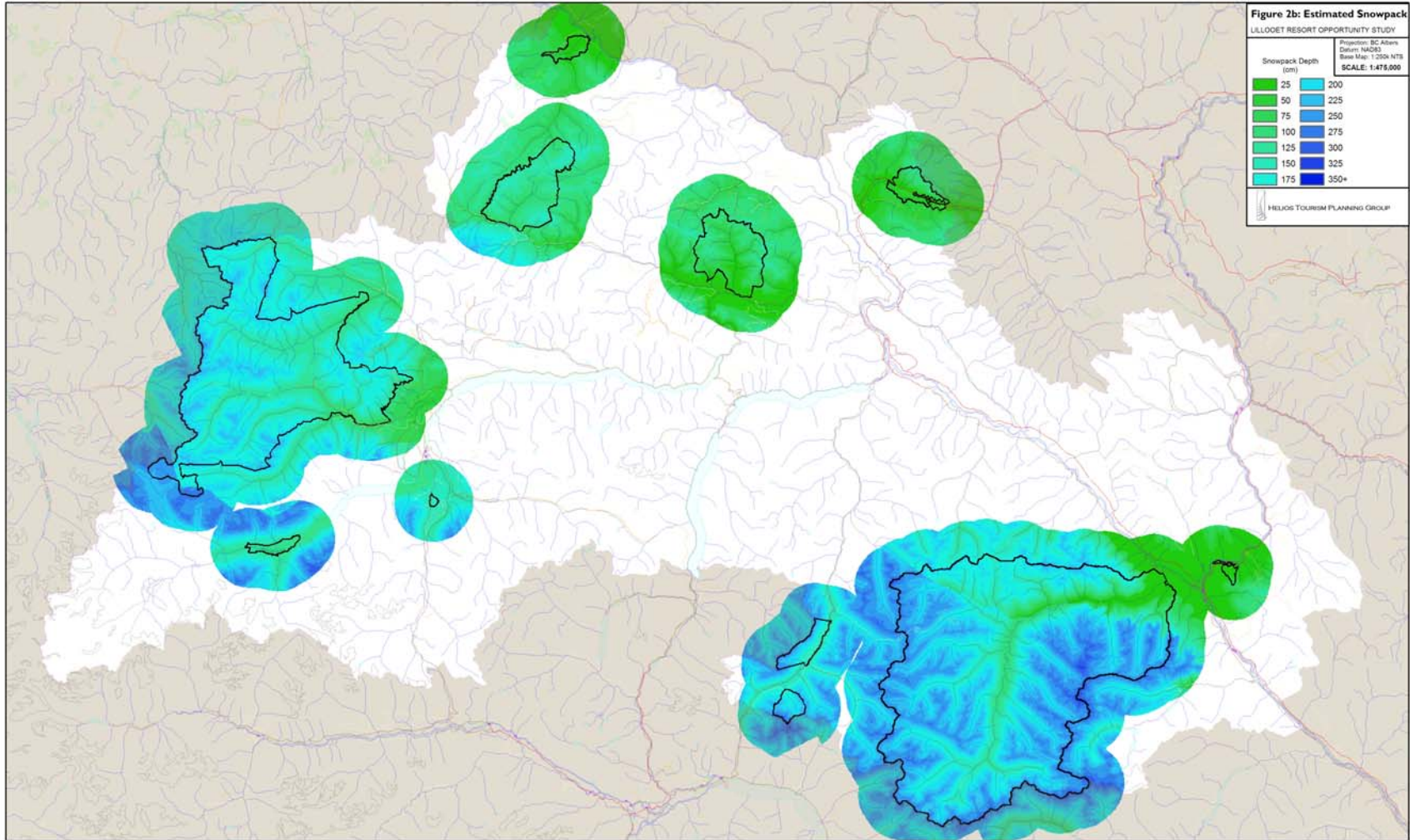
- 2a. Existing and Historic Snow Courses & Precipitation Zones
- 2b. Estimated Snowpack













**Lillooet Resort Opportunity Study - Phase One**  
Helios Tourism Planning Group

## Appendix 3 –Draft Lillooet LRMP Management Directives<sup>35</sup>

- a. Draft LRMP Tourism-Related Mountain Goat Management Directives
- b. Draft LRMP Tourism-Related Grizzly Bear Management Directives
- c. Draft LRMP Tourism-Related Mule Deer Management Directives
- d. Draft LRMP Tourism-Related Bighorn Sheep Management Directives
- e. Draft LRMP Tourism-Related Access Management Measures

### LRMP Wildlife Habitat Maps

- Figure 4a. Mountain Goat
- Figure 4b. Mountain Sheep
- Figure 4c. Grizzly Bear
- Figure 4d. Mule Deer

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<sup>35</sup> Draft Lillooet LRMP. July 22, 2004 Version.



Table a. Draft LRMP Tourism-Related Mountain Goat Management Directives

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
<p>Prevent 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.</p> <p>In no circumstances is use of current permanent helipads and common air transit routes near settlement areas and destination resorts to be restricted.</p>	<p>4.1 Avoid regular and repeated flights within a 2-km buffer line-of-site buffer around goats within identified winter/kidding range from December 1 to June 30<sup>th</sup></p> <p>4.2 Avoid regular and repeated flights within a 2 km line-of-site buffer around observed summer maternity groups from June 1 to September 15<sup>th</sup></p> <p>4.3 Where practical, all flights should fly as far away as possible from identified and suspected goat winter and kidding range from Dec. 1 to June 30<sup>th</sup></p> <p>4.4 Discourage recreational and tourism activities in winter and kidding habitats that disturb or displace goats during their season of use (Dec 1 – June 30)</p> <p>4.5 Provincial agencies issuing tenures on Crown land should make winter and kidding habitat mapping and maternity range information available to clients and user groups.</p>	<p>Disturbance or displacement to summer maternity groups is minimized;</p> <p>Regular and repeated aircraft flights within a 2 km line-of-site buffer around observed groups are avoided between June 1 and September 15<sup>th</sup>.</p>	<p>n/a</p>

Table b. Draft LRMP Tourism-Related Grizzly Bear Management Directives

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
<p>Minimize negative interactions between grizzly bears and recreational activities in identified watersheds (see Figure 4c.)</p>	<p>9.1 <i>Avoid trail or campsite development in or near critical habitats to minimize impacts and mortality risks to bears</i></p> <p>9.2 Conduct bear hazard assessments on existing high use trails (&gt; 10 parties/week) and campgrounds where hazards are moderate or high</p> <p>9.3 Where existing high use trails cross avalanche chutes (or other critical habitats), or where trail locations are proposed in or near critical habitats, relocate trail locations wherever possible at least 250 metres away from critical habitats</p> <p>9.4 When improving existing trails or considering new trails, and where relocation is not a practicable option, maintain visual screening between high use trails and critical habitats</p> <p>9.5 Consider seasonal trail closures to ensure human safety and minimize bear/human conflicts</p> <p>9.6 Utilize public education and signage...</p>		
<p>Manage recreation and tourism developments to minimize bear/human conflicts and limit impacts on grizzly bear populations and habitat</p>	<p>10.1 <i>Consider potential grizzly/human conflicts and options for mitigation prior to authorizing new commercial recreation activities within grizzly bear identified watersheds.</i></p> <p>10.2 Avoid fee simple sales of Crown land on or immediately adjacent to critical grizzly bear habitat within identified watersheds</p> <p>10.3 Refer to relevant memoranda of understanding or agreements respecting grizzly bears and management of their habitats.</p>		<p>The scope, detail, and extent of planning and monitoring will depend on the scale and location of the proposal.</p> <p>Consistent with existing legislation, large-scale recreation and tourism developments will be examined through the Environmental Assessment Process....</p>



Table c. Draft LRMP Tourism-Related Mule Deer Management Directives

Directives	Management Direction/Strategies	Measures of Success/Targets	Intent
4. Manage resource development and use activities by limiting impacts from road access and road densities within winter range	4.3 Do not promote disruptive recreational activities on deer winter ranges (e.g., non-organized snowmobiling, extensive cross country ski trails)  4.5 Where possible, avoid maintaining open ploughed forestry roads through winter range from November to March.	Disturbance within winter range is minimized	
5. Manage resource development and use activities by limiting the impacts of livestock grazing...	5.1 Through range use plans, restrict grazing by domestic livestock to less than 20% removal of leaves and 10% removal of current year's growth of shoots and twigs on shrubs.		

Table d. Draft LRMP Tourism-Related Bighorn Sheep Management Directives

Directives	Management Direction/Strategies	Measures of Success/Targets	Intent
Avoid alienation of Crown land for purposes that may disrupt bighorn sheep movement within mapped migration corridors or alienation of Crown land that may reduce known critical winter range and known lambing range			

Table e. Draft LRMP Access-Control Directives<sup>36</sup>

in Valley Nlaka'pamux & Buffer Area:

- Texas Creek Road: Downstream of junction with Molybdenite road: close road to public motor vehicle use in spring (May 1 – June 30) to minimize impacts to grizzly bear habitat. Existing tenure holders are allowed continued access to maintain their infrastructure and/or improvements. New tenure holders should minimize use in spring.
- Texas Crk. Watershed: Close watershed to off-road, public motor vehicle use in spring (May 1 – June 30) to minimize impacts to grizzly bear habitat.
- Van Horlick Creek Road: At bridge at 8 kilometres: close road to public motor vehicle use in spring (May 1 to June 30) to minimize impacts to grizzly bear habitat.

Spruce Lake/South Chilcotins & Buffer Area:

- Winter non-mechanized recreation (Dec. 1–April 30): located around Spruce Lake & in southern tip of the Bonanza Ck/ Eldorado Mtn. area
- In Park: Spring & Summer managed motorized access as per Wildlife Act, Forest Practices Code (May 1 – June 30; July 1 – Nov. 30): appears to be located up Roxie & Slim Creeks up to Taylor Pass at the Park's NW boundary
- Buffer area: All-season motorized access regulation as per Wildlife Act, Forest Practices Code: located in the Bonanza Ck/ Eldorado Mtn. area

Duffey Lake & Buffer Area:

- In park & buffer: Winter Non-mechanized Recreation (Dec. 1 – April 30): located around Duffey Lake to Hwy.99 and on ridgeline behind Duffey Lake, and then spanning around the inside LRMP boundary to capture Mt. Rohr, Mt. Marriott, Cayoosh Mtn. and south to the Joffre Group

Nine Mile Creek & Buffer Area:

- In proposed park & buffer: Winter Non-mechanized Recreation (Dec. 1 – April 30): throughout the proposed park as well as its buffer areas in the Joffre Groups and spanning across to the Duffey Lake and its surrounding ranges (see above)

Watson Bar Creek's Buffer Area:

Buffer area: All-season motorized access regulation as per Wildlife Act, Forest Practices Code: located in the Evelyn & Davey Jones Creek areas as well as ? Watson Bar Creek. Nine Mile Ridge also has year-round Wildlife Act restrictions

Watson Bar Creek & Buffer Area:

In park & buffer: Spring, summer & winter “Seasonal Access Management Area”

Please refer to pages 44-46 of the Draft Lillooet LRMP to identify additional access management directives and definitions.



