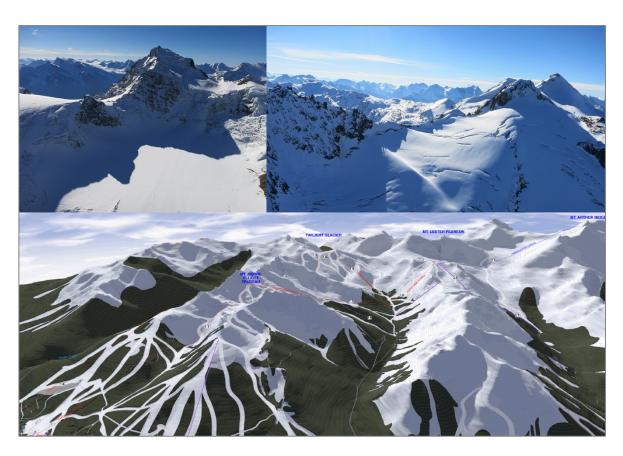


# Master Plan

for a Glacier Tourism Destination centred on Mt. Arthur Meighen near Valemount, British Columbia



Year-Round Skiing and Sightseeing for an International Clientele near Jasper and Banff National Parks

# Valemount Glacier Destination Master Plan

# Prepared for:

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August 2, 2016

# **FOREWORD**

It has been our pleasure to work together with the people of Valemount and the Simpcw First Nation to prepare this Master Plan for what will be an iconic project for the Robson Valley and tourism in British Columbia. The public support for this project has been overwhelming and we are privileged to work on a project of this nature.

We have been studying the Premier Range since the 1990s and due to climate, elevations, glaciers, snowfall and snow quality we believe it is one of the most suitable locations for a sightseeing and ski resort in North America.

Our experience in ski area planning and master planning dates back to the 1970s, when our company group was founded. Our approach and design philosophy is simple: always seek a better idea and a better solution for each unique project. We allow the natural environment to shape our decisions, rather than shaping the environment to fit.

For projects to be truly successful, they must offer a lasting vision that stands the test of time – even when faced with changing markets, trends, technology, and demographics. This is the intrinsic value of the project.

As architects, planners and engineers, we understand that time can shape the particulars of design, and where detailed design is present in this Master Plan, it is understood that this is a living document that will be updated over time.

In addition to the Simpcw and the people of Valemount, we wish to thank the many groups and individuals who have supported this vision, including the MLA for Prince George – Valemount, Shirley Bond, the current and past Directors and staff of the Regional District of Fraser Fort George, the current and past Mayors and Councils and staff of the Village of Valemount, the Valemount Ski Society, Joe Nusse, Curtis Pawliuk, Patricia & Rudi Thoni, Bruce Wilkinson and many others. Finally, we wish to thank the investors who are making this vision become a reality.

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# **EXECUTIVE SUMMARY**

#### Introduction

This Master Plan is for the creation of a year-round skiing and international-class sightseeing destination near Valemount, BC within the traditional territory of the Simpow First Nation and centred on the eastern approaches of the Mt Sir Wilfred Laurier massif. The plan is to provide lift access to the viewpoints and glaciers surrounding Mount Arthur Meighen by way of Mt. Pierre Elliott Trudeau.

It follows the Interim Agreement signed between the Province of British Columbia and Valemount Glacier Destinations Ltd. according to the All Seasons Resort Policy in 2012.

The project site is located near Mount Robson Provincial Park and Jasper National Park. Together with Banff and Yoho National Parks these make up the UNESCO Rocky Mountains World Heritage Site. In addition to views of high alpine glaciers and the Mt. Sir Wilfred Laurier massif and adjacent peaks, there are stunning views of Mount Robson, the highest peak in the Canadian Rockies, from the project site.

#### **Exceptional Sightseeing and Unique Tourism Experience**

The project is envisioned as an important sightseeing destination, offering better alpine experiences than those currently available in the Canadian Rockies or elsewhere in North America. It will provide safe and environmentally respectful sightseeing access to stunning 3,200 m (10,500 ft.) high mountains and glaciers, and it will provide an opportunity for an interpretive experience of the life of aboriginal people in these mountain ranges.

#### **Year-Round Skiing & Longest Vertical Drop in the North America**

The high elevations and large glaciers provide a large summer skiing area suitable for both public skiing and race training. At build out, the skiable terrain in winter will feature one of the longest vertical drops in the world at over 2,000 meters, substantially larger than anything else in North America.

Facilities for year-round skiing on glaciers and high-alpine glacier sightseeing do not currently exist in North America, although they are common in the European Alps and the economic model of combining access to spectacular sightseeing with year-round snow sports has been proven for over a century.

### **A Rare Geographic Opportunity**

North America is a huge continent with mountains that range from Alaska to Mexico, but unlike the Alps, which range from East to West in a latitude limited by a relatively narrow band, the North American mountains run from North to South, with a great difference of latitude and climate.

The North American mountains also divide themselves into coastal ranges, severely affected by climatic conditions generated by the Pacific Ocean, and interior mountains.

The interior mountains differ greatly in terms of base valley elevations, with the mountains of central American states, like Colorado and Utah, rising from valley bases at elevations of 2,500 meters and higher and mountain tops that do not create a significant vertical drop.

A combination of ideal climatic conditions and of mountains with the right elevations, great vertical and spectacular glaciers is only found in the narrow ranges of mountains on the western side of the trench that runs from Cranbrook to Prince George in British Columbia.



Environmental and conservation policies limit land use and access in these ideal mountains. This project represents a unique opportunity to develop a year round ski and sightseeing destination in the ideal mountains for climate, latitude, elevation and access.

#### The Skier Market

The ski industry is product-driven, evidenced by the development of Whistler Blackcomb and the 400% growth of skier visits in British Columbia since 1980. Despite that phenomenal growth, skier visits in British Columbia have begun to level off at approximately 6 million skier visits per year. The province's market share of world skier visits is 1.5%.

While overall Canadian skier visits have remained steady, international skier visits to Canada have dropped 50% since 2001. This has been attributed in part to a stagnant product mix that does not compete well in terms of climate, vertical drops and lift infrastructure with

other destinations that are available to international travellers.

In comparison, Colorado, which has twice the number of destination resorts but a similar population base and more difficult access, generates double the skier visits of B.C.

In Europe, tiny Switzerland draws nearly the same number of American skiers as Canada, despite larger travel distances and language and cultural difficulties. The Swiss Alps also draw more than twice the number of Chinese, Japanese, Indian and Brazilian visitors as Canada. International tourists are attracted by the famous high alpine sightseeing opportunities of the Alps, including the Matterhorn, the Jungfrau and the Aletsch Glacier. British Columbia's Premier Range has the potential to offer a comparable sightseeing experience and a superior skiing experience.

There is a tremendous market opportunity and need for an international-class alpine destination in British Columbia, particularly in response to the provincial policy of doubling tourism revenues and becoming the top skiing destination in North America.

# **Project Fundamentals**

In order to respond to that opportunity, this master plan introduces a resort concept based on the following fundamentals:

- Snow guaranteed by glaciers, elevation and climate;
- Large, impressive mountains with great scenery;
- A large skiable terrain accessed by few lifts (with dual use for skiing and sightseeing) for low density skiing at feasible cost;
- An accessible site with low infrastructure costs;
- A location that is not in a park, conservation or other area that is not permissible due to environmental or other reasons, and
- A location that is not affected by insurmountable local conflicts.

### **Local Economy and Support**

The lead consultants for this Master Plan, Oberti Resort Design and Pheidias Project Management Corp., were approached originally by the Village of Valemount to investigate the possibility of developing a glacier skiing destination as a means of economic diversification and stimulus. The Robson Valley is heavily dependent on forestry and has one of the least diversified economies in British Columbia.

Once the client group was established, the Simpcw First Nation was first consulted regarding the choice of location and potential development concepts. A good relationship has been established and discussions with Simpcw around its possible participation in the project continue to be optimistic. A large number of stakeholders have been since introduced to the project concept and numerous letters and indications of support have been received from the Village of Valemount and its citizens. A ski society has been formed to help promote and develop Valemount as a skiing destination.

#### The Concept of the Plan

A phased mountain plan including a controlled recreation area is outlined in the drawings attached to this master plan. There will be a resort village, containing up to 2,295 bed units (including non-market employee housing), on the upper bench west of the Village of Valemount, at the base of Mount Trudeau. From there a gondola will access the Twilight Glacier basin, providing access to the Twilight Glacier chair for year round skiing or the Glacier Ridge gondola for sightseeing and skiing. At buildout a gondola will access Mount Arthur Meighen and its glaciers. The resort village will be a ski in and ski out village and is designed to be a largely pedestrian area. A day skier base area has been designed for a location near the airport, from which day skiers and sightseers will access the resort village and the mountain. It will be possible to ski down to the parking area at the base near the airport, creating one of the biggest vertical drops in the world.



Resort Base Village Conceptual View



Resort Day Lodge Conceptual View

# **Environmental Management Overview**

Environmental management is a planning priority, both in terms of conservation objectives and in terms of establishing a further competitive advantage over potential rivals in Europe and North America. An initial environmental analysis has not revealed substantial roadblocks to development. There is no established Ungulate Winter Range for Mountain Caribou, an important species in the region, in the CRA.

#### **Site Analysis Overview**

The initial site analysis revealed qualities that are ideally suited for skiing, including high elevations and large vertical drops, an abundance of glaciers, predominantly north-facing slopes and a wide variety of skiable terrain. The area is renowned for its snowfall quality and abundance. Mean temperatures in Valemount are below freezing during the winter months, minimizing the threat of rainfall, but with a more moderate climate than nearby Jasper, with milder overnight lows.

The site offers these advantages:

- Potential to achieve the third largest lift-serviced non-contiguous vertical in the world – 2,260 m (7,415 ft.), after Zermatt, Switzerland and Chamonix, France;
- An abundance of north-facing slopes;
- Numerous glaciers suitable for summer skiing;
- A potential peak elevation of 3,205 m (10,515 ft);
- Valley bases that are above the natural snowfall line;
- Some of the largest average yearly snowfalls in Canada 5.36 metres (211 in) in Valemount and 14 metres (551 in) at 1,800 m (5,905 ft.) elevation;
- No current or anticipated snowmaking requirements;
- An airport in located within a few hundred meters of the base station;
- Multi-valley skiing opportunities (similar to France's Trois Vallées), and
- Ease of access and proximity to existing infrastructure.

#### **Site Constraints**

There are a number of existing recreational users in the CRA who are largely in favour of the proposal – including the local outdoor recreation society. The area's heli-ski license-holder is not opposed to the project. Accommodating current tenure-holders is important and parts of the study area have been reserved for heli-skiing. It is believed that the resort will provide an additional client base and important synergies with existing recreational-use tenure holders.

Another constraint is the regulatory environment of the Province of British Columbia, with a number of proposed ski resort projects undergoing review and approval processes lasting ten years or more. Careful attention has been given to designing a project that complies with existing thresholds and avoids multiple and unnecessarily repetitive reviews.

The physical, socio-political and environmental advantages of the site significantly outweigh the known constraints and a significant opportunity exists for British Columbia to capture a larger percentage of the world's four hundred million skier visits and emerging market skiers.

#### Conclusion

A year-round skiing area and sightseeing viewpoint near the summit of Mt. Arthur Meighen will be unparalleled in North America. It will offer the only substantial summer-skiing on the continent, the only high-elevation alpine glacier viewpoint in North America, one of the largest winter vertical drops in the world, and renown snow conditions. It will be well positioned to capture a percentage of the more than 7.5 million yearly visitors to nearby Banff and Jasper National Parks and attracting a larger share of international visitors to British Columbia.

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#### **LIST OF ABBREVIATIONS**

ASRG...... All Season Resort Guidelines ASRP ..... All Season Resort Policy ATV......All Terrain Vehicle BC ..... British Columbia BRC ...... Balanced Resort Capacity BU ..... Bed Unit CASP......Commercial Alpine Skiing Policy CCC......Comfortable Carrying Capacity ACCC ...... Adjusted Comfortable Carrying Capacity CMH ...... Canadian Mountain Holidays DEM..... Digital Elevation Model DRAA...... Design Review and Approval Authority EA Act..... Environmental Assessment Act EAO ...... Environmental Assessment Office FIS ...... Federation Internationale de Ski (International Ski Federation) FVI ..... Forest Vulnerability Index GDP......Gross Domestic Product MNRO..... Ministry of Natural Resource Operations MoTI ...... Ministry of Transportation and Infrastructure MSRM ...... Ministry of Sustainable Resource Management OCP..... Official Community Plan OGMA...... Old Growth Management Area LRMP.....Land and Resource Management Plan p/h ..... Persons per Hour RDFFG......Regional District of Fraser Fort George SAOT ..... Skiers At One Time SF ...... Single Family TSA..... Timber Supply Area

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VARDA......Valemount Area Recreation Development Association

VCF......Valemount Community Forest

VGD ......Valemount Glacier Destinations Ltd.

VSS...... Valemount Ski Society

# 1. INTRODUCTION

This Master Plan is the final development of the Formal Proposal previously approved during the Interim Agreement stage of the All Seasons Resorts Policy (ASRP) of the Province of British Columbia. It is for the creation of a year-round skiing and international-class sightseeing destination within the traditional territory of the Simpcw First Nation and centred on the eastern approaches of the Mt Sir Wilfred Laurier massif, with lift access to the viewpoints and glaciers surrounding Mount Arthur Meighen by way of Mt. Pierre Elliott Trudeau.

The project site is located west of Valemount, BC, which is near Mount Robson Provincial Park and Jasper National Park, which together with Banff and Yoho National Parks make up the UNESCO Rocky Mountains World Heritage Site. In addition to views of high alpine glaciers and the Mt. Sir Wilfred Laurier massif and adjacent peaks, there are stunning views of Mount Robson, the highest peak in the Canadian Rockies, from the project site.

The project is based on the following precepts:

- 1. A location with an exceptional climate for snow sports;
- 2. Environmental suitability;
- 3. Strong local support;
- 4. Meeting an unmet need for year-round, high quality, and high-elevation glacier skiing in North America.

The project will have a resort village of 1,997 tourist bed-units built over three phases. The village will be located on a bench west of the Village of Valemount, at an elevation of 1,300 meters (4,265 ft.). The resort village will be a ski in and ski out village and is designed to become a largely pedestrian area. A day skier base area has been designed for a location near the airport, from which day skiers and sightseers will access the resort village and the mountain.

A main lift will rise from the village to the base of Mount Pierre Elliot Trudeau. In the opening phase it is expected that the lift network will terminate at the top of Twilight Glacier (2,628 m/8,622 ft.) providing access to year round skiing. An additional gondola will provide access to Glacier Ridge for sightseeing and skiing. At build out a lift may access Mount Arthur Meighen and its glaciers at 3,205 meters (10,515 ft.) achieving a total lift-serviced non-contiguous vertical of 2,260 m (7,415 ft.), by far the largest in North America and the third largest in the world after Zermatt, Switzerland and Chamonix, France.

In total, the resort will have 18 lifts built over three phases. The planned inventory includes:

- 2 magic carpets;
- 4 gondolas;
- 6 detachable guad chairs:
- · 2 Fixed grip quad chairs, and
- 4 glacier T-Bar lifts.

There will be a total of 813 hectares of ski runs at build out and the lift network and the ski area will have an Adjusted Comfortable Carrying Capacity of 9,500 at build out. The Balanced Resort Capacity will be 11,086.

Water will be supplied from wells, and the resort will have its own state-of-the-art tertiary treatment sewage plant.

The project proponent is Valemount Glacier Destinations Ltd., a single-purpose company based in Vancouver, BC with investors from British Columbia and Ontario.

#### 1.1 PROJECT LOCATION

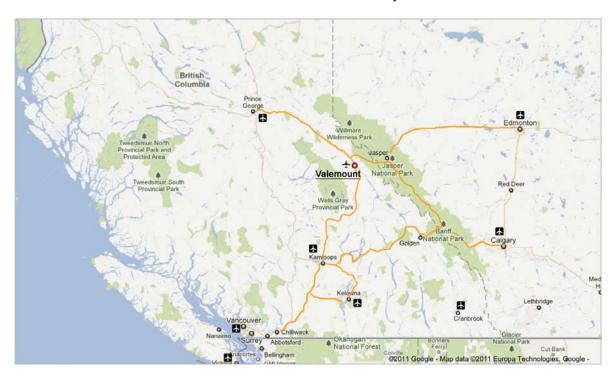
The project is located in the Premier Range immediately West of Valemount BC, which is near Jasper and Banff National Parks. Jasper, Banff and Yoho National Parks as well as Mt. Robson Provincial Park have been designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as the Rocky Mountains World Heritage Site. In addition to views of the Mt. Sir Wilfred Laurier massif and adjacent peaks and glaciers, the project site offers stunning views of Mount Robson, the highest peak in the Canadian Rockies. It is at the northern edge of the area traditionally occupied by the Simpow First Nation, in the jurisdiction of the Regional District of Fraser Fort George.

The location is approximately three hours from Kamloops airport, two-and-three-quarter hours from Prince George airport (the 3rd longest runway in Canada) along the scenic and comfortable Yellowhead highway and five-and-a-half hours from Edmonton. It is approximately seven hours from Vancouver along the Coquihalla freeway and the Yellowhead highway. Access to Valemount from Prince George, Jasper or Kamloops is more comfortable, even in winter, than comparable access to resorts such as Revelstoke or Kicking Horse, which require driving either through the Shuswap and Roger's Pass, or the Kicking Horse Canyon.

The study area is adjacent to the Valemount Airport (4,000 ft. runway) and there is ski in/ski out potential from the airport.

Valemount is on the Canadian National main line and is a flag stop on Via Rail's

transcontinental train, *The Canadian* and can also be serviced by the Rocky Mountaineer trains en route to Jasper.



**Exhibit 1: Location Map** 

The project location offers a unique geographic opportunity in the North American continent, previously unnoticed.

### 1.1.1 An Ideal Location

North America is a huge continent with mountains that range from Alaska to Mexico, but unlike the Alps, which range from East to West at a relatively contained latitude, the North American mountains run from North to South, with a great difference of latitude and climate.

The Rockies and interior mountains are the largest and most prominent range on the continent – most suitable for skiing. The continent also contains prominent western coastal ranges, most notably the Cascades, which are affected by climatic conditions generated by the Pacific Ocean.

The interior mountains of British Columbia have base elevations in the 1,000m to 1,500m range. This differs greatly with the mountains of central American states, like Colorado and Utah, which have valley bases at elevations of 2,500 m and higher.

High base elevations can create unhealthy sporting conditions for people from the coastal regions and limit the vertical drop of the skiable terrain even when the top elevation reaches 3,500 m.

Latitude and elevations greatly affect the availability of snow in winter, and the existence or survival of glaciers. Most of the ski areas in North America not only do not reach the permanent snow pack at the top of glaciers, but also are easily affected by lack of snow or even the occasional rain in winter. Only mountain ranges in the interior of the continent can achieve reliable protection from the westerly Pacific Ocean storms and their humidity and rain. However, another challenge is represented by the north-easterly winds that can bring exceedingly cold and dry conditions, and the protection from the Arctic air is of equal importance.

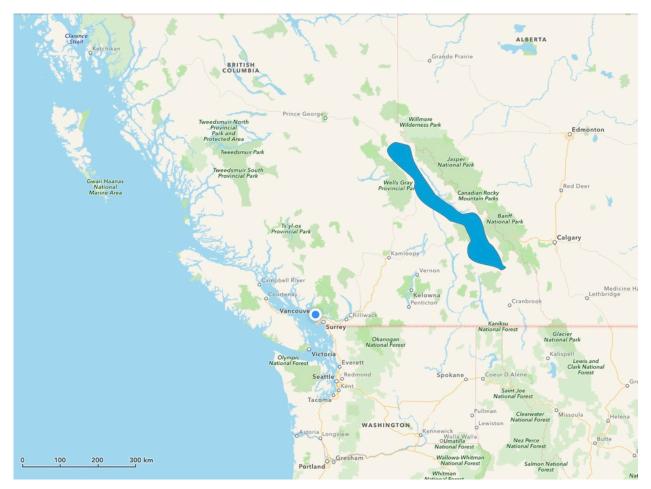
The consequence of all these factors is that a combination of ideal climatic conditions and of mountains with the right elevations, great vertical and spectacular glaciers is only found in the narrow mountain ranges on the western side of the trench between Cranbrook and Prince George in British Columbia. These mountain chains have a unique beauty and stable climate, and were where heli-skiing was born – and continue to be best and most popular heli-ski region in the world.

However, except for the opening of Kicking Horse Mountain Resort<sup>1</sup> in 2000, there are no ski resorts that take advantage of the unique characteristics of this mountain chain. Restrictions of many kinds, particularly due to conservation and environmental issues, make obtaining land use approvals exceedingly difficult.

The following illustration shows the location of this unique portion of mountains in Canada just west of the British Columbia and Alberta border.

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<sup>&</sup>lt;sup>1</sup> Currently reaching the highest point in B.C. at 2,450 meters (8,038 feet), which is about 800 meters (2,625 feet) lower than Mount Arthur Meighen.



**Exhibit 2: Ideal Mountain Ranges in North America** 

Note: The blue colour in the map above highlights the location of the ideal mountain ranges in North America, west of the trench that runs parallel to the national parks. The two available locations for mountain resorts in terms of permissible land use are Jumbo Glacier Resort west of Banff/Calgary and Valemount Glacier Destinations west of Jasper/Edmonton. This trench is also the area of B.C. mountains that is closest to Alberta, the fastest growing Province of Canada.

Environmental and conservation policies are becoming more restrictive, and will not lead to a revision of land use planning to open up other locations in the right climate and at the right elevations in the foreseeable future.<sup>2</sup>

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<sup>&</sup>lt;sup>2</sup> "Companies face significant barriers in starting or expanding ski facilities. For instance, limited private land is available or suitable for ski areas. Using public land is an alternative, but obtaining government approval is an involved and lengthy process." From *Ski Resort Industry*, December 20, 2013, by KPMG.

#### 1.2 PROJECT ORIGIN AND HISTORICAL CONTEXT

In January 2011, the Mayor and Council of the Village of Valemount, its senior staff and a group of local citizens, approached Oberto Oberti and his group of companies to investigate the creation of a year-round ski destination near Valemount. The group included Joe Nusse, a young mountaineer well known locally for various ascents to Mount Robson and other major peaks and who had recently returned from an exploration of the mountains and ski resorts of South America.

Oberti's group was approached based on its work on the Jumbo Glacier Resort project, which proposes a similar year-round skiing and sightseeing concept, as well as its vision and success in the creation of Kicking Horse Mountain Resort in addition to numerous other resort, commercial and residential projects across North America.

In the late 1980s, lastly on behalf of Nikken Canada Holdings Ltd., studies prepared under the direction of Mr. Oberti identified Mt Laurier and the Premier Range near Valemount as one of three (now two³) ideal and feasible locations for year-round skiing and high alpine glacier sightseeing in North America (Pheidias 2010, section 2.1.4). Mr. Oberti noted his prior and current interest to the representatives of the Village of Valemount but cautioned that as a designer and planner he would not proceed without a qualified client and without significant local and regional support for the project.

The subsequent months revealed significant investor and citizen interest and a qualified proponent group emerged, Valemount Glacier Destinations Ltd. (VGD). Pheidias Project Management Corp. was designated prime consultant and Oberti Resort Design was thus chosen as the project designer.

The Premier Range was previously identified as being one of only two prime locations for <u>year-round</u> skiing and sightseeing in North America suitable for resort development.

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<sup>&</sup>lt;sup>3</sup> Why so few locations in the large North American continent? The right mountain elevations (base above 1,200 meters, top at 3,000 meters or above), large glaciers, comfortable climate, sun exposure, ideal snow conditions and access are only available in the fascia of land roughly bounded by 50 and 53 degrees latitude and 116 to 118 degrees longitude, as discovered by heli-skiers and by planning research conducted by Pheidias and others. Parkland dedications, conservation and environmental issues restrict available terrain for skiing and sightseeing by lift to only two mountain ranges in this region. They are the Jumbo Mountain area in British Columbia's Purcell Mountains and the Premier Range near Valemount. The third location identified in the 1990 study is near Mt Waddington; its approaches have since been designated as conservation areas (Homathko River - Tatlayoko Protected Area) making resort development extremely difficult.

A prominent group of Valemount citizens also formed a non-profit society, the Valemount Ski Society (VSS), to help promote and develop Valemount as a skiing destination.

The citizens of Valemount were initially interested in developing a year-round skiing concept centred on Albreda Glacier, located approximately 45 km south of Valemount. An exploratory meeting and discussions with the Simpcw First Nation, followed by discussions with other stakeholders and a preliminary investigation determined that support for lift-accessed skiing on Albreda Glacier was not unanimous and despite the beautiful views of the glacier from the Yellowhead Highway (BC Hwy 5) the location's ultimate potential and desirability is limited by the relative isolation and lack of connecting geographic features of the Albreda massif.

Following meetings with the Mayor and Council and citizens' groups, year-round skiing and international-class sightseeing in the Premier Range, particularly on the Mt. Arthur Meighen massif, was proposed as a preferable alternative and is the focus of this Master Plan

The project has received exceptional and almost unanimous public support, including the local government, local citizenry and a large number of stakeholders.



**Exhibit 3: Glaciers on Lower Mount Arthur Meighen in late August** 

## 1.2.1 A Product of Today's Economy

The tourism and of the ski industry in North America has evolved in recent years. The design of this project is influenced by the economic reality of today and the foreseeable future.

It is noteworthy that the great success of Intrawest in North America came to an end at approximately the same time as the economic crisis of 2008. The original owners' timing was exceptional, selling in 2007, before the economic model they had implemented with great success began to stall. The Intrawest model consisted in paying for the cost of recreational infrastructure with sales of real estate at a base village, and then creating an on-going real estate play based on the notion that acquiring properties in recreational resorts was an investment rather than purchasing a vacation home for long term use.

The 1990s saw the creation of new markets of affluent purchasers buying recreational property for investment rather than for their own use, and the appetite for resort units seemed to be unlimited. People purchased real estate in the expectation of reselling it for profit after a few years. The result was overproduction in certain markets and a lack of purchasers not only in terms of real estate speculators, once confidence collapsed, but also of real users, fearful of the loss of values.

Real estate sales, however, were an important contributor to the viability of many ski areas developed near urban centres and depended primarily on weekend skiers. In the model that was typical of North American ski areas, skiers were primarily weekend commuters, and the uncertain revenues of ski areas due to the lack of clientele during the week and to the vagaries of climatic conditions was supported by real estate development and sales. This model has hidden the fact that the proximity to major urban centres and the focus of weekend skiers creates the need for a large infrastructure and workforce that produces profits only two days per week and during Christmas and Easter holidays, a model that is bound to fail when the real estate sales are not able to compensate for losses in operations.

It is necessary, therefore, to re-think certain aspects of the development of the ski industry and of mountain resort planning in order to move beyond the notion of building ski hills with villages primarily for real estate speculation. In the new economy the realities of the ski industry and of the real ski market must be the prime consideration. It is necessary to plan for a more sustainable model based on the ongoing revenue of the infrastructure, warm beds generated by long-haul hotel visitors,

and real estate sales primarily planned for real users and residents – such as occurs in part in Jasper, Lake Louise and Banff in the National Parks, despite the very stringent park restrictions, and at the most successful mountain destinations. Typically these destinations are remote enough to have a longer term clientele than weekend visitors.

The solution calls for the creation of true mountain destinations rather than ski "hills", with significant user attractions and intrinsic value for a type of experience that is not available elsewhere. It is a market that looks for an experiential attraction rather than pure sport and enables a cash flow business that can operate in perpetuity – such as the Jungfrau and other premier destinations in Switzerland and elsewhere in the Alps – whose business models don't depend on weekenders.

The Premier Range with the right plan can offer the type of mountain destination that is needed, with year round skiing, sightseeing worthy of a life-time trip, and a resort base with accommodation units for people who want to stay overnight, for their enjoyment.

The essence of this plan must be the opening of an entire mountain with a major lift, located where there is abundant natural snow from top to bottom. This approach is economical in terms of infrastructure and operations and results in the best and greatest access to the natural landscape and skiable terrain. This also provides direct and easy access to the best scenery – permitting destination sightseeing that creates a double use of the lift infrastructure, attracting the many tourists who do not ski and are an important component of the huge market of the National Parks nearby, and of the world.

### 1.2.2 Prior Studies and Alternative Resort Proposals In Valemount

The Valemount area has had considerable interest for tourism related projects for more than a quarter of a century. Not only was it part of the studies that generated the Jumbo Glacier Resort project proposal, but it was also studied for a number of less ambitious proposals.

Most notable was the Canoe Mountain project, which achieved a Master Development Agreement from the Province but did not proceed to a rezoning application with the regional district and has since been abandoned. It was a project that conceptually had some merit, trying to create a viewpoint and a ski facility with a large vertical drop. Its weakness was that the viewpoint was not substantially different from other attractions, including the Jasper tram, and the overall concept

was not sufficiently unique or stunning that it would be able to attract an international clientele to a world-class experience.

Similarly, a large part of the skiable terrain was affected by significant wind exposure, resulting in exposed rocks and frequent softening and hardening of snow, resulting in less-than-ideal ski conditions. Providing access to quality powder snow over large vertical drops is critical to attract international visitors to the interior of B.C., as has been demonstrated and verified by the heli-ski industry.

Studies focussing on lower elevation mountains immediately adjacent to Valemount (Mount Trudeau) were conducted by Jack Johnson, Brent Harley and Associates and Ecosign Mountain Planners, some of the best known consultants in the ski industry. These studies were focussed primarily on skiing without a major sightseeing component. They addressed ways of creating a ski hill for a local and regional clientele, and it was felt that the capital cost that would be generated would not be sustainable for the small population of Valemount and of the region.

The project proposal in this master plan endeavours to absorb all the dreams and good activities of the past and to channel them into a productive effort that will generate a truly unique international destination with a convincing feasibility.



**Exhibit 4: Study Area Photographs** 

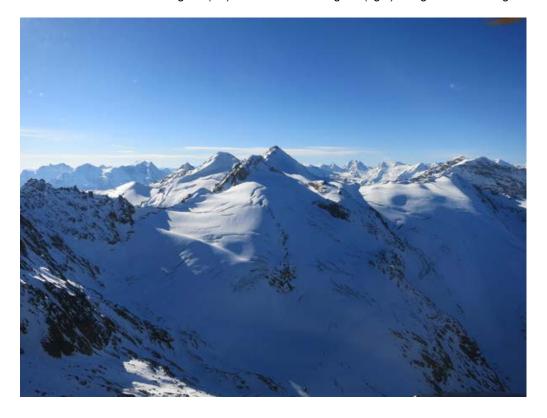




View of the Mount Lester Pearson massif from within the project study area



Views of Lower Mt. Arthur Meighen (left) and Mt. Arthur Meighen (right). Images taken in August.



## 2. VISION, GOALS AND OBJECTIVES

## 2.1 VISION STATEMENT

To create a year-round glacier sightseeing and snow sports destination that is geographically unmatched in North America, is respectful of its natural and social setting and attracts international sightseers, alpine sport participants and athletes seeking a lifetime experience.

#### 2.2 GOALS AND OBJECTIVES

To accomplish this vision, which entails providing lift access to some of the high alpine glaciers of the Premier Range, the following goals and objectives are proposed.

Goal: Create a unique North American sightseeing destination.

### Objectives:

 Provide access to a significant high-elevation alpine viewpoint for sightseeing, augmenting the nearby and largely valley-based National Parks experiences;

- Provide sightseeing access to the summit of large glaciers significantly improving on the experiences currently available in the National Parks and elsewhere in North America;<sup>4</sup>
- Ensure mountain access is comfortable and safe for sightseers on a year-round basis.

-

<sup>&</sup>lt;sup>4</sup> Brewster has for many years provided popular tours by means of purpose-built busses to the toe (bottom) of the Athabasca Glacier, one of the glaciers comprising the massive Columbia Icefields in Jasper National Park. The view and experience of the bottom of a glacier, while dramatic and interesting, does not compare with the awe-inspiring experience of viewing the top of a large glacier, such as Switzerland's famous Jungfrau or, as envisioned, the glaciers of Valemount's Sir Wilfred Laurier range.

## Goal: Establish a unique summer snow sports destination.

## Objectives:

- Provide access to a high alpine glacier with at least 400m vertical for public summer skiing;
- Provide access to a high alpine glacier with 700m vertical for FIS<sup>5</sup> homologated summer race training and public skiing;
- Provide access to a large, relatively flat glacier for summer cross-country skiing and Nordic race training;
- Provide a mountaintop day lodge for all public users;
- Provide mountaintop facilities for athletes and mountaineers;

### Goal: Be the leading winter snow sports destination in North America.

## Objectives:

- Select a location with reliable and high quality snow conditions where artificial snow-making is not required and will not be required in the foreseeable future;
- Provide a multi valley skiing experience in the tradition of the European Alps.
- Achieve the largest vertical drop in North America;
- Provide the longest in-bounds ski run in North America.

# Goal: Create a resort that is in harmony with the local environment, traditions and people.

#### Objectives:

- Ensure that the resort design and facilities meet or exceed all environmental objectives and do not denigrate the integrity of the land;
- Design the resort to reflect local traditions and architecture, including First Nations' interests and traditions;
- Seek local and First Nations participation in the resort design, development and administration.
- Seek the highest and best use of the land in accordance with government policy and the natural limits of the landscape.

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<sup>&</sup>lt;sup>5</sup> F.I.S. – the Federation Internationale de Ski (International Ski Federation) is the governing body for alpine ski racing and sets rules and regulations for the sport, including the homologation of ski race and training courses.

## Goal: Create a resort base village that is compact, accommodating and visually attractive

## Objectives:

- Prepare a functional master plan that controls growth and establishes compact, pedestrian oriented development nodes;
- Establish enforceable design guidelines in accordance with the best traditions of the Canadian Rockies.



Skiing the Dry Light Powder on Twilight Glacier

## 3. PLANNING PRINCIPLES & SCOPE

## 3.1 GUIDING PRINCIPLES

The scope of the project is dictated by a number of factors, including the project's location, climate, geography, public support, First Nations' interests, environmental considerations, market potential and economic fundamentals, which are further discussed in subsequent sections of this document. The following principles guide the resort concept:

- The ski area and lift system must reach the glaciers, and allow for year round sightseeing and skiing;
- The ski area must be large enough to achieve one of the largest vertical drops in the world and some of the longest ski runs in the world;
- The ski area shall offer low density skiing and a wide variety of slopes;
- While the ski area will need to be large, the lift system shall be designed with a proportionally small number of lifts and a proportionally small resort base;
- The resort base will be kept small to minimize its environmental impact and remain below the thresholds of the BC Environmental Assessment Act review process (a condition of this plan); and
- The resort base can be small because the Village of Valemount can provide an adjacent bed base, both for tourists and employees.

## 3.2 FUNDAMENTALS OF PROVINCIAL POLICY AND OPPORTUNITIES FOR MOUNTAIN TOURISM IN BRITISH COLUMBIA

A positive legacy of the Barrett Government of the early 1970s was the rebirth of Whistler with a village plan on Crown land at the base of both Whistler and Blackcomb mountains. A new provincial policy tying the sale of Crown land to the development of lift infrastructure and the creation of a mountain resort municipality for the new village was implemented.

Subsequent governments reinforced this bipartisan policy – initially defined as the Commercial Alpine Skiing Policy (CASP) and now known as the All Seasons Resort Policy (ASRP). The creation of the position of Mountain Resort Coordinator (later of the Mountain Resorts Branch), the production of tourism research papers and many initiatives to facilitate the development and expansion of "ski hills", continued the efforts in order to create and to implement policies facilitating the development of ski areas. These policies include the following key principles:

- Balanced capacity the amount of base development is determined by the recreational capacity of the terrain;
- Provincial control of recreational assets day lodges, lifts, runs, parking lots and facilities required to operate the ski area remain in the control of the Province via licensing;
- Controlled phased development enforced through a Master Development Agreement;
- Perform and reward recreational infrastructure built prior to or in concurrence with residential development.

All governments could see the potential of tourism and that it could become a major sustainable industry for British Columbia. Geography and latitude meant that skiing could become the major driver of the industry. Only skiing can attract millions of visitors per year in a similar manner to the best known National Parks, but with a significantly smaller footprint and managed with sustainability in mind.

It became apparent that the growth of tourism generated by the development of Whistler and Blackcomb, the main drivers of a 400% growth of skier days in the last thirty years, did not need to be limited to a single example in the Province, and that doubling the tourism revenues of the Province could be a feasible target in the not too distant future.

However, the growth of Whistler, driven primarily by the multi-billion dollar investment in the village that created a recreational destination by itself, despite a difficult climate, has not been matched by most of the other ski areas of the Province. The notion of the 'ski hill' as

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the driving force of skiing needs to be revised.

Colorado has twice the skier visits of B.C., and it is important to know the strengths of Colorado resorts, as well as their weaknesses. The strengths and the weaknesses of the Colorado ski areas are rooted in geography. The strength is in the climate, which offers dry snow and sunshine, the weakness is the combination of latitude and of elevations: the valley bases are higher than the top of Whistler Blackcomb and the mountains look more like large hills, with limited vertical drop, than the impressive mountains of B.C. They do not have any glaciers and offer limited year round attractions. B.C. on the contrary can offer a similar climate in its interior to that of Colorado, with dry powder snow and large numbers of sunshine days, but it can offer also year round skiing on glaciers, huge vertical drops and spectacular mountain settings that can combine sightseeing destinations with skiing.

Sightseeing is what turned Banff and Jasper National Parks into international destinations. This is also what distinguishes the famous mountain destinations of the Alps from the notion of 'ski hills' that is at the heart of the ski industry in North America.

Skiing is a supply driven industry (Ecosign, 1998) and has the potential of growing even in a world recession, as demonstrated by recent trends, but the product that is offered in B.C. must be able to attract an international and long-haul clientele. Some leading North American experts have failed to recognize that climate and sightseeing are the key to the future of the ski industry, where the quality of product rather than the size of the investment will respond to the market.

B.C. needs ski areas that can guarantee a "white Christmas" and do not depend on snowmaking – for reasons of quality as well as sustainability and economy. In order to double tourism revenues in a sustainable manner, as proposed by recent provincial governments (Ministry of Tourism Jobs and Innovation, 2011), access must be provided to the higher elevation mountains and glaciers of the Province's interior to guarantee both the length of season in natural conditions and to offer ski areas that can operate year round and compete with the best of Colorado and Europe. This is also one of the best opportunities for sustainable job creation in the interior of the province, a major Provincial objective.

## 3.3 SIGHTSEEING AND MOUNTAIN TOURISM DESTINATIONS – NOT "SKI HILLS"

New ski areas should provide access to spectacular mountaintops in order to be prime sightseeing destinations that combine sightseeing with skiing. Providing electric lift access to the top of spectacular mountains for a memorable experience is a particularly sustainable form of tourism, especially in the context of a carefully planned and managed project as mandated by the All Seasons Resort Policy. It is also a form of tourism that generates large visitor numbers and can make ski areas economically feasible in terms of operations while providing important and sustained economic benefits to nearby communities.

The commercial success of providing access to iconic sightseeing destinations has been proven for over a century in the Alps and in the Canadian Rockies and has proven resilient to market trends and fashions.

Providing access to sightseeing destinations of intrinsic value (as opposed to designing facilities focussed solely on the sport of skiing) ensures the feasibility of a mountain resort project even in a down cycle, when real estate investment and speculation contracts.

The commercial success of accessing mountains for sightseeing first, and for sport second, has been proven for over a century in many locations of the Alps including the Matterhorn and the Jungfrau. For example, the Jungfraubahn mountain railway constructed in 1903 provides access to the Jungfrau at 3,454 m (11.332 ft) for sightseeing and views of the spectacular Aletsch Glacier. It initially drew visitors from across the continent (England, Russia) at the beginning of the 20<sup>th</sup> century, and now draws visitors from around the world (U.S.A., Japan, China, India). The single lift generates over 670,000 visits per year and more than \$100,000,000 in revenue per year,<sup>6</sup> with a profit of approximately \$20 million per year.<sup>7</sup>

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<sup>&</sup>lt;sup>6</sup> http://www.jungfrau.ch/nc/en/company/media/releases/detail/archive/2011/02/article/jungfraubahn-gruppe-steigert-verkehrsertrag-656/

<sup>&</sup>lt;sup>7</sup> http://www.jungfrau.ch/nc/en/company/investment/reports/detail/archive/2010/05/article/geschaeftsbericht-2009-466/

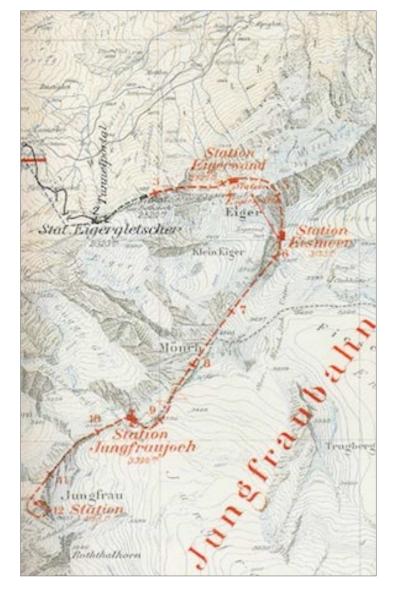


Exhibit 5: 1899 Plan for the Jungfraubahn Lift

1899 Map showing plans for the route of the Jungfraubahn and a gondola lift on the top of the Eiger.

The importance of spectacular sightseeing, and ease of access to it, is also exemplified by Canada's national parks system. The *Vancouver Sun* declared the Rocky Mountains as the "Crown Jewel of Canada's National Parks" noting that visitors spend significantly more money in Banff, Lake Louise and Jasper than they

<sup>&</sup>lt;sup>8</sup>http://www.vancouversun.com/news/alberta/Rocky+Mountains+crown+jewel+Canadian+national+parks/5763 <u>871/story.html</u> accessed November 24, 2011

do at Parks Canada sites in the rest of the country:

According to the study, released Thursday, visitors to the province's national parks and historic sites spent close to \$1.5 billion in 2009. That means that more than half of the economic impact of Canada's park system is enjoyed by Alberta.

Compare that to neighbouring British Columbia. The province boasts 1,000-year-old cedars and coastal rainforests as well as rugged peaks, but tourists spent only \$345 million in B.C's national parks.

That doesn't surprise Bruce Okabe, chief executive of Travel Alberta.

He said most travellers typically associate Alberta as the place in Canada with mountains and glaciers, even though B.C. has them, too.

"The Canadian Rockies are an iconic brand. Pretty well anywhere in this world, people know exactly where they are and what they are," Okabe said.

Alberta's tourism economy is fuelled by places like Waterton Lakes National Park and Lake Louise — and the fact that many of the parks are close to each other is a bonus for the industry, said Okabe.

"Once people arrive, they usually go to Banff first. It's not that much farther to go to Lake Louise and one of the classic drives in North America is the Icefields Parkway. And then it's not that far to Jasper."

All told, tourists are pouring more than \$2.5 billion into the Canadian economy by visiting national parks, Environment Minister Peter Kent said.

The Sulphur Mountain Gondola in Banff, which generates more than 670,000 visits per year, and the Jasper Park Tram, capable of more than 200,000 visits per year, both with a limited viewpoint, prove the viability of sightseeing lifts and the advantage that can be generated when lifts can be offered for combined use for sightseeing as well as for skiing.

The trend to visit the best mountains of Canada is continuing, and access to the glaciers from Valemount, which are an easy distance from Mt. Robson Provincial Park and Jasper National Park, will benefit from this trend.

#### 3.4 TYPE AND SIZE OF PROJECT PROPOSAL

The project will be a *Destination Mountain Resort* (ASRG) with a bed-base and facilities that will cater especially to destination visitors. However, because of the design principles and vision behind the project, as well as its relative remoteness for destination visitors, its proximity to existing services in Valemount, the vast geography of the area, year-round skiing, low-density skiing and emphasis on year-round destination sightseeing, it can also be classified as an "*Out-of-Category*" project, in that it does not fall neatly into the resort categories and concepts outlined in the All Seasons Resort Guidelines.

The intent of the project is to offer access to high alpine glaciers for sightseeing and a large skiable terrain for low density year round skiing with a minimum of lifts relative to the size of the terrain. This is achieved by designing a lift system that prioritizes high mountain access, so that a huge vertical and skiable terrain can be achieved with fewer lifts than a "pod" approach to mountain access. This also creates low density skiing, offering an experience similar to that of helicopter skiing, at a reasonable cost. The exceptional mountain scenery and the views and experience of the large glaciers will allow the resort to achieve a dual use of its lifts, with sightseeing from the mountain top being an important component of the product mix.

While the licensed ski area will be large, the development impact will be kept to a minimum. The resort at the base will be compact and proportionately small, partly due to design, market and environmental considerations, but also because of its proximity to Jasper and the Village of Valemount, which can provide an existing additional base for tourists and employees. It can be similar to the successful relationship that Kicking Horse Mountain Resort has with the Town of Golden, with the advantage that a much more significant mountain range and glaciers can be accessed from Valemount.

The project is designed to fall below the reviewable thresholds of the Environmental Assessment Act in every respect (i.e. footprint, number of units, service requirements).

The general concept at the basis of this project is for a ski area that will be serviced by a major gondola line that will be built in several segments and a number of chairlifts built over three phases, with the potential for optional lifts whose construction will be decided over time, depending on market response.

The project will open with a series of gondolas to Glacier Ridge departing from the resort village site on the bench west of Valemount, for sightseeing and year round skiing via a chairlift to Twilight Glacier. In addition to the gondolas there will be a chairlift from the resort village site (named "The Sawmill") on the face of Mount Trudeau. There will also be a glacier

ski lift for summer use on Twilight Glacier and a small fixed-grip lift west of the resort village to make it possible to ski out from the Twilight Glacier Basin and return to the resort village site. A day lodge will be constructed at the resort village site and a mountain top restaurant will be located at the top of Glacier Ridge.

Initially, skiers and sightseers will use accommodation in the Village of Valemount and Jasper. It is expected that this opening phase for day skiers will be similar to that of Kicking Horse Mountain Resort when it opened in the year 2000. In the years following, a hotel and vacation chalets will be built, completing the first phase with approximately 800 beds, comprising a hotel of 100 rooms and 100 mountain chalets. The following two phases will depend on market response in terms of timing, with a second phase reaching approximately 1,400 bed units.

The project is designed to reach an overnight accommodation bed base of 1,997 market bed units at the resort village site, mostly in the form of hotel and mountain chalets type of accommodation, with a resort village core made of condo-hotels. There will also be 298 non-market bed units for employee housing for a total of 2,295 bed units. The Village of Valemount has an existing tourism bed capability of approximately 1,000 beds, in addition to the resident population, but is expected to augment its tourism capability substantially.

The project will have three main sources of beds for overnight accommodation:

- The resort village on the bench at foot of Mount Trudeau;
- The Village of Valemount, and
- The Municipality of Jasper.

The project will be accessed from McLennan Road and Crooked Creek Road which connect the airport with Highway 5. McLennan Road continues beyond the airport to what will become the base for day-skiers at McLennan River. A bridge will be built to span the creek connecting to a new forestry road built by the Valemount Community Forest in the summer of 2015. A shuttle bus will provide service between Valemount and the resort village.

In the second phase the lift system will be expanded, and a new lift will connect a day-skier parking area and day lodge at the McLennan River near the Valemount Airport with the resort village site. This will also make it possible to ski down to the valley departure point and to the parking area there. The resort village is expected to become a ski in and ski out resort, with mainly pedestrian movement at the village.

## 4. SITE INVENTORY AND ANALYSIS

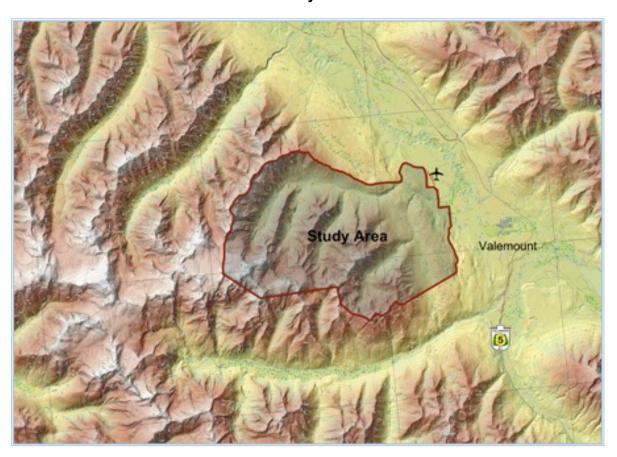
Spectacular viewpoints and access to significant mountains and glaciers are key success factors for a project that can become a world destination and raise awareness of British Columbia's abundant mountains and glaciers. To meet the project's objectives, the following site objectives were identified:

- Skiing guaranteed by glaciers, elevation and climate;
- Large, impressive mountains with great scenery;
- A very large skiable terrain accessed by relatively few lifts (with dual use for skiing and sightseeing) for low density skiing at feasible cost;
- An accessible site with low infrastructure costs;
- A location that is not in a park, conservation or other area that is not permissible due to environmental, policy, land use, tenure or other reasons;
- A location that is compatible with First Nations interests, and
- A location that is not affected by insurmountable local conflicts.

Locations that correspond to the above noted criteria are rare. For this reason we believe that the attributes of the Premier Range, which meet those objectives, make it possible to respond to the call by the Village of Valemount with a marketable and viable concept that will be successful with an international clientele.

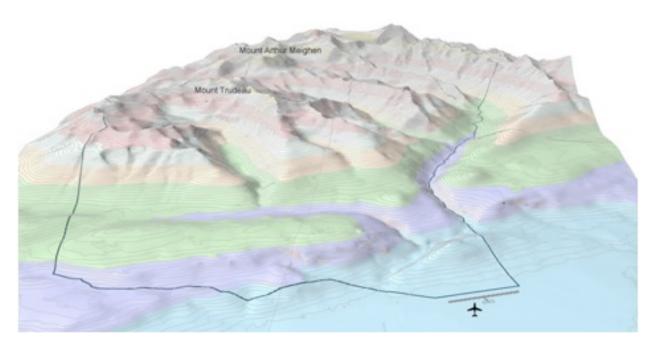
## 4.1 STUDY AREA OVERVIEW

Site information and data was collected via a number of digital sources, discussions with local experts and guides, Village of Valemount staff, as well as numerous site visits. The site and the region are very well known and there has been valuable feedback following the Expression of Interest and the Formal Proposal. No "show stoppers" were identified and issues to be studied have been carefully listed. Environmental, engineering and geographic constraints have been studied in depth by specialist consultants during the preparation of this Master Plan.

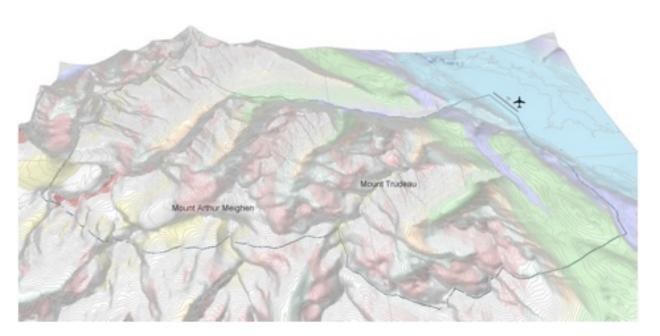


**Exhibit 6: Study Area Overview** 

**Exhibit 7: Study Area Views** 



Study Area looking West



Study Area looking North

## 4.2 ACCESS & SUPPORTING INFRASTRUCTURE

The study area is located adjacent to the Village of Valemount and its airport. The proposed resort base location can be accessed presently via an existing forestry road. A new road, loosely following an older forestry road alignment will depart near the location of the airport for improved access with a shorter distance from the airport and from the Village of Valemount. The site's proximity to Valemount will reduce startup costs, and the village's existing bed-base, labour force, services and tourism infrastructure will augment the resort's facilities and will provide added flexibility in the planning process.

The Village of Valemount is approximately three hours from Kamloops airport, two hours and three quarters from Prince George airport (the 3rd longest runway in Canada) along the scenic Yellowhead highway and five-and-a-half hours from Edmonton International Airport. It is approximately seven hours from Vancouver along the Coquihalla freeway and the Yellowhead highway. Of significance for drivers from British Columbia's Lower Mainland and Okanagan regions, highway access is comfortable and relatively linear, unlike access to the Kootenays or Alberta Rockies, which require crossing the sometimes treacherous and twisting Shuswap Lake, Rogers Pass, and Kicking Horse Canyon segments of the Trans-Canada highway. The resort village site at approximately 1,300 meters elevation will be reached from the a base near the Valemount airport with a road of approximately 4.5 kilometres.

The area can also be accessed via railway. Valemount is a stop on the CN transcontinental railway and is serviced by "The Canadian" and the "Rocky Mountaineer" trains.

### 4.2.1 Valemount Airport

The Valemount Airport features a paved 1,200 m (3,937 ft.) runway (14-32) classified as Code 2B non-instrument. Airport facilities consist of a small wheelchair accessible terminal building and two hangars.

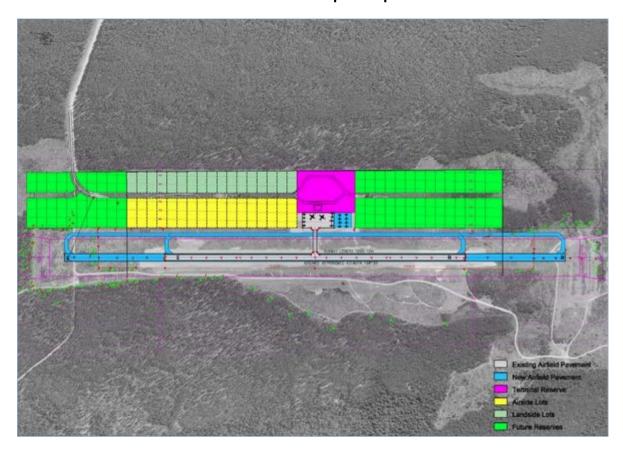
Current air traffic at Valemount is comprised of small fixed-wing general aviation aircraft and charters operated by local resort companies. Helicopter services also operate from the airport. The largest charter aircraft to use the airport are the Kingair 300, Pilatus PC12 and Cessna Citation. Emergency services occasionally use the airport as well.

Airport expansion and improvements are anticipated and the Village of Valemount commissioned a study (Urban Systems, PDK Airport Planning Inc., 2006) to explore expansion options and costs.



**Exhibit 8: Valemount Airport** 

View of Mt. Trudeau from the Valemount Airport



**Exhibit 9: Valemount Airport Expansion Plan** 

Source: Valemount Airport Planning Study (Urban Systems, PDK Airport Planning Inc., 2006)

## 4.2.2 Hystad Creek Run-of-River Hydro

A 5.7 MW run-of-river hydroelectric generating station was constructed in 2001 by Brookfield Renewable Power on Hystad Creek, which is situated within the Study Area, in the proximity of the VGD resort, and drains into the McLennan River. Energy produced at the facility is transmitted to BC Hydro over a 25 kV distribution line. The facility is EcoLogo certified by the Environmental Choice Program and generates approximately 20 Gwh of electricity per year.

There will be no impact on the Hystad Creek run-of-river facilities or access road by the project. Public access to the facility will be prohibited and a gate and signage will be placed at the access point off of the Westridge forestry road.

A connection with this facility, which could provide all the needed electricity, would be an ideal option for the project. Alternative options are also being studied.

## 4.3 SNOWFALL AND CLIMATE ANALYSIS

Snowfall and quality of snow is rated consistently as the most important factor for ski area success and skier visit generation (Hudson 2000, Vanat 2011, Falk 2011). It is an essential planning element for an international-class destination. Snow quality and reliability generally increase with latitude and elevation in the Western half of North America, two elements that are present in the study area.

Although Valemount at 850 meters elevation receives an adequate amount of snow, and is normally above the rain line at its latitude in winter, the resort village elevation at 1,300 metres (4,265 ft.) chosen for the project is ideal for guaranteed snow throughout the winter

season and the glaciers and high elevations of the Premier Range receive year-round snow and are ideally situated for summer skiing.

The Valemount area is renowned for its snow quality and abundant snowfall.

The Cariboos and the Valemount area have been known for decades to heli-skiers and snowcat skiers for exceptional snow quality. More recently, Valemount has also become a

Mecca for snowmobiling due to its abundant snow and beautiful scenery.

While there are no weather stations within the study area, there is information from the region. Valemount's average annual snowfall is 536 cm (211 in), amongst the highest Canada, and significantly higher than Whistler, Lake Louise, Jasper and Fernie. CMH's Cariboo Lodge operators report an average annual snowfall of 14 metres (551 in)<sup>9</sup> at 1,800 m (5,905 ft.) elevation, which is in the lower portions of the planned skiable terrain. The average snowpack has been reported by CMH and Cariboo Snowcat Skiing and Tours to be in the range of 100 cm at lower elevations and 250 cm – 300 cm at higher elevations.

While Valemount is subject to occasional warming events (typically once per winter according to CMH), it receives little rainfall during the winter months. Rainfall in winter is a growing impediment at many of British Columbia's existing destination resorts, which are located at low elevations, particularly Whistler Blackcomb, Revelstoke and Fernie. Rainfall occurs on approximately 50% of all winter days at Whistler Blackcomb and on approximately 25-30% of winter days at Fernie.

The proposed resort location can guarantee abundant snow and "white" Christmases to its visitors and it also has a more temperate climate than the Rocky Mountains. Average winter temperatures are roughly 45% milder than Lake Louise or Jasper. Local residents have reported that in winter it is typically 10°C colder in Jasper than in Valemount, while mid-

<sup>&</sup>lt;sup>9</sup> http://www.canadianmountainholidays.com/heli-skiing/lodges/cariboos

season thaws are virtually unheard of at the resort base elevations.



Exhibit 10: Rain at Whistler Blackcomb

February 2015 flooding at Glacier Express chair on Blackcomb Mountain due to unusually heavy rainfall and clogged drains.

Discussions with local pilots suggest that the lift locations are not exposed to frequent and substantial winds. The glaciers do have the potential of creating katabatic (downslope) winds, especially in summer. However, discussions with lift manufacturers suggest that these kinds of winds rarely impact lift operations, and are not expected to do so at Valemount. There is only one non-surface lift that may be impacted (Twilight Glacier Chair), and the glacier in question is modestly sized.

Data from further afield includes the Ministry of Transportation and Infrastructure's weather stations at Chappel Creek and Robson Roadside. The Chappel Creek station is located at an elevation of 786m on the east side of Highway 5 approximately 60 kilometres south of Valemount. The Robson Roadside is located at an elevation of 944m on the north side of Hwy 16 in Red Pass, East of the Overlander Rest Area, which is approximately 50 kilometres north-east of Valemount.

In 2015 (January 1<sup>st</sup> to August 31<sup>st</sup>) the Chappel Creek station reported an average wind speed of 4.26 kilometres/hour and snowpack measurements were 64.51 cm on January 1<sup>st</sup>, 71.81 cm on February 1<sup>st</sup>, and 55.51 cm on March 1<sup>st</sup>. The Robson Roadside location

reported snowpack measurements of 18.55 cm on January 1<sup>st</sup>, 50.98 cm on February 1<sup>st</sup>, and 41.58 cm on March 1<sup>st</sup>. The Robson Roadside station does not have a wind speed gauge.

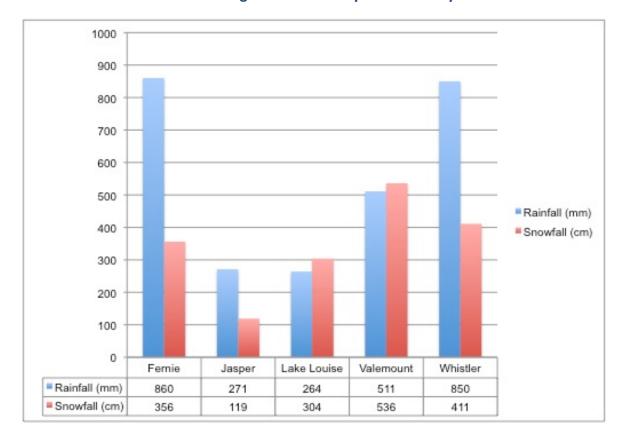


Table 1: Average Annual Precipitation Comparison

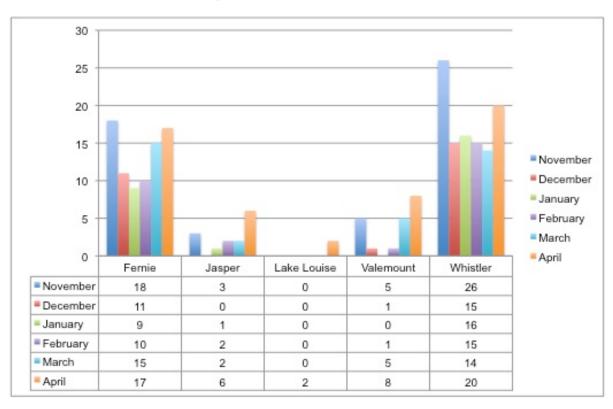
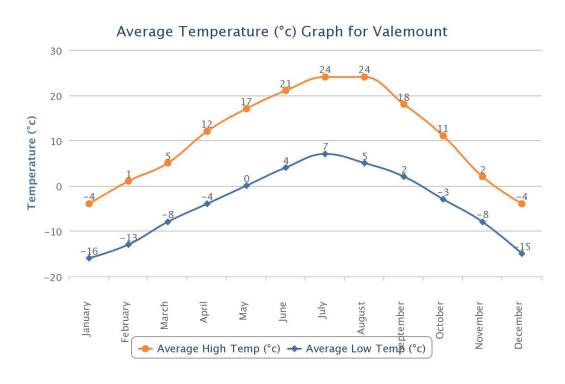


Table 2: Days With More Than 0.2 mm of Rainfall



Table 3: Average Daily Temperatures in Winter

Table 4: Average Annual Temperatures in Valemount<sup>10</sup>



 $<sup>^{10}\</sup> http://www.worldweatheronline.com/Valemount-weather-averages/British-Columbia/CA.aspx$ 

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#### 4.4 ELEVATION ANALYSIS

The CRA area contains an ideal range of elevations for skiing. Its base areas are located above the natural snow line and range from 935 m (3,068 ft.) at the Valemount airport base station to 1,300m (4,265 ft.) at the resort base village, guaranteeing both snow coverage and comfortable overnight stays for guests who are not accustomed to high elevations. The ultimate mountain summits reached by the project are greater than 3,000m (9,842 ft.) resulting in significant vertical drops, permitting summer skiing and an alpine experience that can compete with the best in the world. Mt. Arthur Meighen at 3,205m (10,515 ft.) will be the highest (or one of the two highest) lift-accessed points in B.C.<sup>11</sup> by a large margin. The next-highest is Kicking Horse Mountain Resort at 2,450m (8,033 ft). Even in the first phase, the project will reach an elevation of 2,530m (8,301 ft.), immediately placing it as the highest in B.C.

Valemount's elevations compete with the best in the world. Its numbers are similar to France's Trois Vallées, region but at a more favourable latitude and a more favourable climate.

**Table 5: Elevation Statistics** 

Location	Metres	Feet
Airport Base	935	3,068
Resort Village Base Area	1,300	4,265
Twilight Glacier	2,628	8,622
Lower Mt. Arthur Meighen	2,838	9,311
Mt. Arthur Meighen	3,205	10,515

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<sup>&</sup>lt;sup>11</sup> Pending construction of the Jumbo Glacier Resort project. Jumbo Glacier reaches an elevation of 3,419 m. (11,217 ft.).

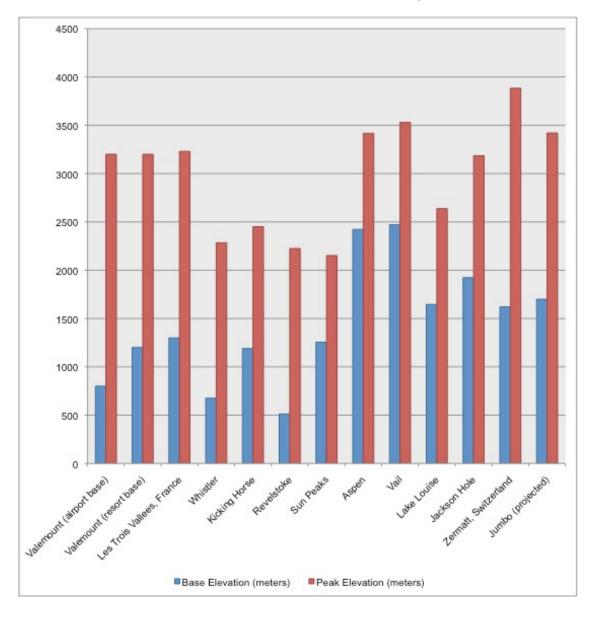


Table 6: Base and Peak Elevation Comparison

**Table 7: Vertical Drop Statistics** 

Phase 1	Metres	Feet
Vertical Drop from Twilight Glacier to Resort Village Base	1,370	4,495

Phase 2	Metres	Feet
Vertical Drop from Twilight Glacier to Airport Base	1,595	5,233

Phase 3 (Build-out)	Metres	Feet
Vertical Drop from Mt. Arthur Meighen to Airport Base	2,260	7,415

Table 8: Worldwide Vertical Drop Comparison

Resort	Metres	Feet
Chamonix, Aiguille du Midi, France	2,807	9,209
Zermatt, Switzerland	2,279	7,477
Valemount	2,260	7,415
Courmayeur, Punta Helbronner, Italy12	2,092	6,864
Monte Rosa, Italy	2,048	6,719
Davos, Switzerland	2,034	6,673
Chamonix, Les Grand Montets, France	2,023	6,637
Les Trois Vallées, France	1,929	6,299

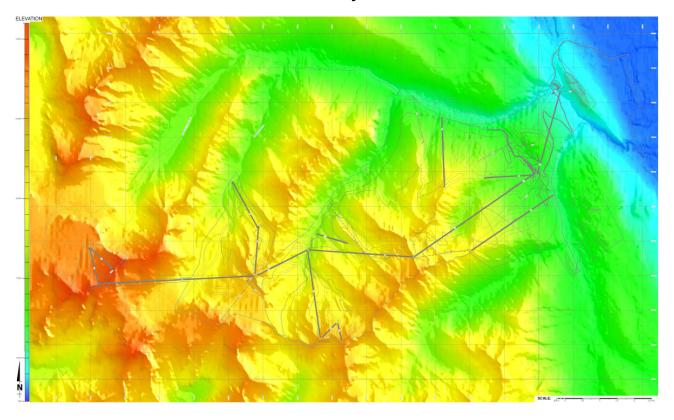
Table 9: North American Vertical Drop Comparison

Valemount	2,260	7,415
Jumbo Glacier Resort (proposed)	1,715	5,627
Revelstoke Mountain Resort	1,713	5,620
Whistler Blackcomb	1,609	5,280
Aspen/Snowmass	1,343	4,406
Jackson Hole	1,262	4,139
Kicking Horse Mountain Resort	1,260	4,133
Telluride	1,171	3,845
Vail	1,053	3,450

<sup>&</sup>lt;sup>12</sup> The entire vertical is off-piste unpatrolled skiing.

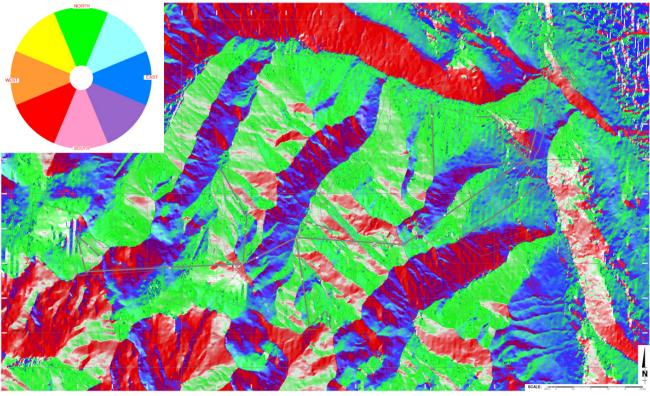
Lake Louise	991	3,251
Marmot Basin	915	3,000
Sun Peaks Resort	882	2,893
Big White	777	2,549

**Exhibit 11: Study Area Elevations** 



## 4.5 SLOPE ASPECT ANALYSIS

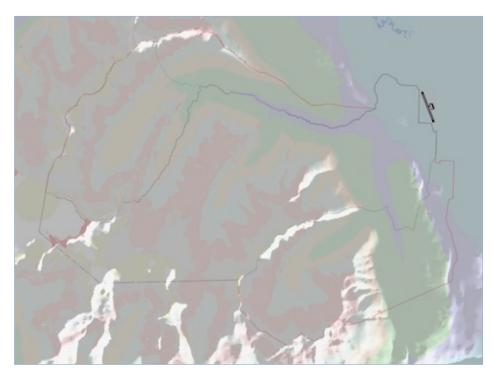
Exhibit 12: Slope Aspects



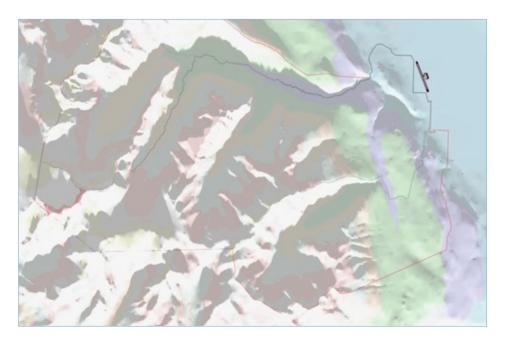
Ideally suited for skiing and snow quality, almost the entire skiable terrain is situated on the more gently sloping North-facing slopes (green colour).

# 4.6 SOLAR ANALYSIS

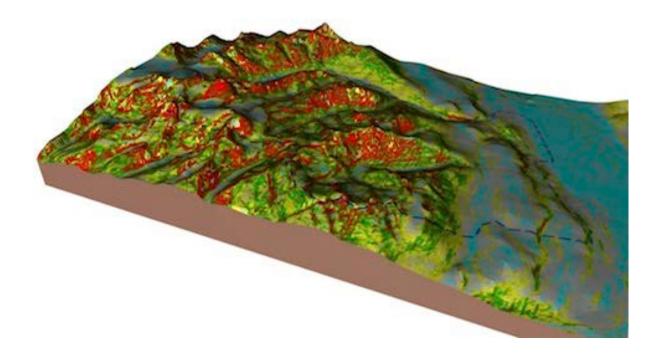
Exhibit 13: Solar Analysis, December 21



December 21 @ 9:00 a.m.

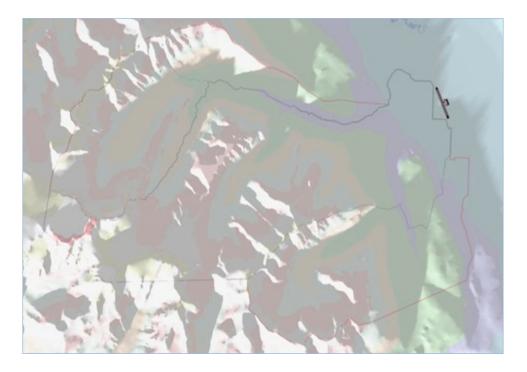


December 21 @ 12:00 p.m.





December 21 @ 12:00 p.m.

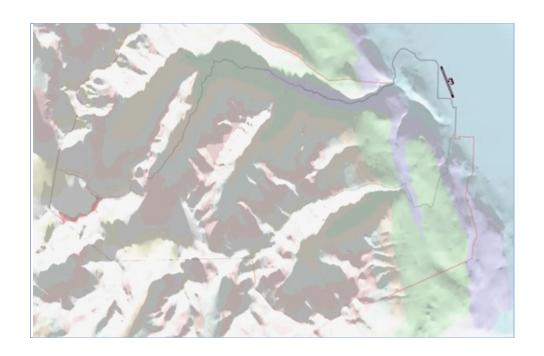


December 21 @ 3:00 p.m.



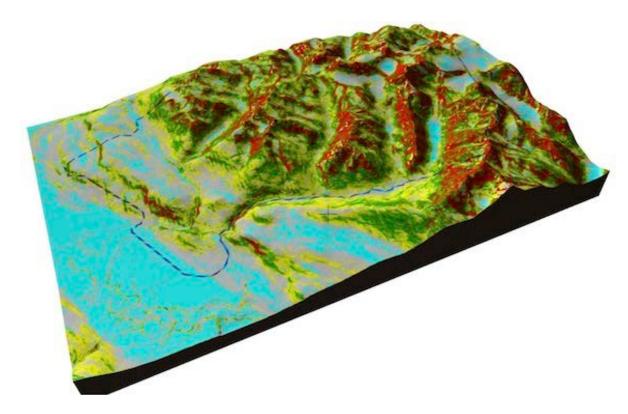
Exhibit 14: Solar Analysis, March 21

March 21 @ 9:00 a.m.

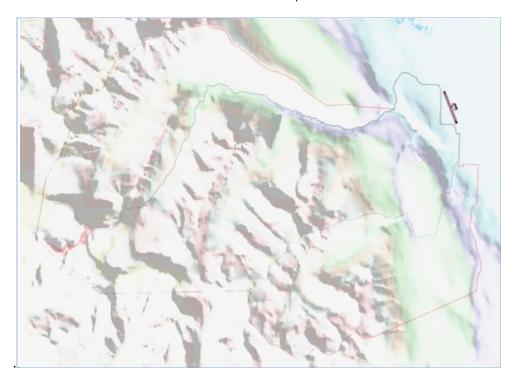




March 21 @ 12:00 p.m.



March 21 @ 12:00 p.m



March 21 @ 3:00 p.m.

## 4.7 FALL LINE ANALYSIS

RIDGE LINE
FALL LINE
DRAINAGE

Mount Stanley Bulderin

Mount and Glader

Mount Stanley Bulderin

Mount and Glader

Mount Stanley Bulderin

Mount and Glader

Mount Stanley Bulderin

Mount Stanley Bulderin

Mount Stanley Bulderin

Mount Stanley Bulderin

Mount Stanley Bulderin

Mount Stanley Bulderin

Mount Stanley Bulderin

Mount Stanley Bulderin

## **Exhibit 15: Fall Line Analysis**

Note: See Appendix 1 for larger drawings

## 4.8 LAND USE AND TENURE HOLDERS

## 4.8.1 Notation for Ski Area Development

A notation of interest for a prior ski development proposal on Mt. Trudeau has been in place since 1995. While the notation does not indicate a land use decision of any kind, it recognizes ski area development as an interest.

This proposal is an extension of the Mt. Trudeau proposal that generated the Notation of Interest and has been conceived as a better and more appropriate response to market requirements for a remote destination resort that must attract long-haul visitors in order to prosper.

#### **Exhibit 16: Mount Trudeau Notation**



October 23, 2008

Mr. Doug Fleming, Administrator Village of Valemount PO Box 168 Valemount BC V0E 2Z0

Dear Doug,

Re: Trudeau Mountain

You have asked for clarification regarding the potential for ski resort development at Trudeau Mountain, namely the purpose of the notation of interest, overlapping tenures and the Commercial Alpine Ski Policy (CASP).

I would like to begin with the policy itself. The Commercial Alpine Ski Policy is a very comprehensive policy that has been developed to encourage and deal with the complex nature of ski resort development. The current policy has been in place for over 28 years and is still considered the benchmark by other jurisdictions both nationally and internationally. The Ministry supports and advocates sustainable resort development but can not prejudge proposed developments until due process has been completed. Most resort applications will take a minimum of 2 to 3 years to complete depending on the nature and extent of the issues prevalent. First Nations rights and title claims, existing tenures, environmental, social, economic, terrain and resource, local government and water resource issues to mention a few must be addressed before a final land use decision can be rendered.

A notation of interest which recognizes the ski resort development for Trudeau Mountain has been in place since 1995 and continues at this time. The notation of interest does not preclude compatible uses within the area but recognizes ski resort development as the priority use. The referral process is used to consider applications which do not conflict with proposed ski resort development.

The cat ski tenure which was approved at Trudeau Mountain recognizes the possibility of the higher and better use of the area for ski resort purposes. As such the cat ski tenure will not prevent acceptance and processing of a ski resort application. I should also point out that other tenures such as heli-skiing, timber harvesting, trapping, guide outfitting, mineral, water, etc may exist over the area and would also have to be addressed during the application process.

I will send you our internet link via email so you can access the CASP policy, Guidelines and Best Management Practices. If you have any further questions please do not hesitate to contact me.

Sincerely

Egon Weger

Manager, Major Projects

Ministry of Tourism, Culture and the Arts

Resort Development Branch

Mailing Address: 510 175 2<sup>nd</sup> Ave Kamloops, BC V2C 5W1 Phone: (250) 371-3952 Fax: (250) 371-3942 Location: 510 175 2<sup>nd</sup> Ave Kamkoops, BC V2C 5W1

www.gov.bc.ca/tsa

## 4.8.2 Traditional Use and Archaeological Sites

The aboriginal use and relevance of the area has been discussed with First Nations since the beginning of the studies for the project. In terms of existing information from provincial sources, according to the Archaeology Branch of the Ministry of Natural Resource Operations, there are no known archaeological sites within the CRA area. There is no data on areas of archaeological potential (areas that have been assessed for the likelihood of having previously unrecorded archaeological sites) within the CRA.

This does not mean that there cannot be unrecorded sites within the area and the proponent is working together with Simpcw on traditional use and archaeological studies to make relevant reviews and determinations. These studies are part of a Land Resource Use Study included in Appendix 14 and shows extensive use of the project area by the Simpcw First Nation. It is a study that also sees that the rights and title of the Simpcw First Nation are recognized and protected.

Archaeological sites (both recorded and unrecorded) are protected under the *Heritage Conservation Act* and must not be altered or damaged without a site alteration permit from the Archaeology Branch. If an archaeological site is encountered during development, activities in the immediate vicinity will be halted and the Archaeology Branch contacted.

## 4.8.3 Existing Recreational Use

The study area includes existing and proposed heli-skiing, cat skiing and snowmobiling operations. It is intended that the project will work in cooperation with these activities, fostering their market development with a resort base and increased visitation. Part of the study area is being set aside for heli-skiing and for cat skiing, as outlined in the master plan drawings. The lift serviced skiing and sightseeing will lead to the glaciers surrounding Mount Arthur Meighen. The focus of the study area and of the project is to lead skiers and sightseers to the enjoyment of the glaciers, offering a unique mountain experience.

#### 4.8.3.1 Snowmobiling

Snowmobiling is a growing pursuit in the region and while it is not permitted in the majority of the study area (to minimize conflicts with helicopter and snowcat skiers) there are a number of commercial snowmobiling trails in the

lower fringes of the study area. One such trail, the "Westridge family loop", <sup>13</sup> utilizes the current forestry road access, which is not intended to be used for future access to the resort site, but might also be used as a secondary access road in an emergency. Some trails are maintained and groomed by the Valemount Area Recreation Development Association (VARDA).

**Table 10: Valemount Snowmobiling Statistics** 

Season	2006	/2007	2007	7/2008	2008/2009		2009/2010	
Snowmobiling Area	Dollars 2007	Users 2007	Dollars 2008	Users 2008	Dollars 2009	Users 2009	Dollars 2010	Users 2010
Allan Creek	85,155	5,662	98,970	6,800	72,390	5,052	100,295	7,163
Commercial Users		15		7		9		0
Clemina Creek	75,375	4,794	100,155	6,868	70,445	4,845	86,250	5,954
Commercial Users		231		346		95		0
Chappell Creek	15,150	1,010	21,265	1,469	15,135	1,036	20,510	1,456
Tota	175,680	11,712	220,390	15,490	157,970	11,037	207,055	14,573

Source: Village of Valemount

## 4.8.3.2 Snowcat-Skiing

Cariboo Snowcat Skiing and Tours Ltd. currently operates in the study area on the northern slopes of the McLennan River valley. The terrain has been marked on the preliminary project plans as being reserved for cat-skiing operations and is not included in the Controlled Recreation Area (CRA) of the resort. There has been past interest in expanding cat skiing operations to Mt. Trudeau but it is the consultant group's understanding that ski area development has been given planning preference for the area. While the snowcat skiing operator has expressed his support for a ski resort project in general, it is understood that he is concerned about and does not support the project's intrusion on his license area. Further discussions will be held to compare notes and explore avenues of cooperation and mutual benefit, as well as ways to minimize impacts. The master plan includes a cooperative solution with an area set aside for snowcat skiing in the initial project phases, under a cooperation agreement to be finalized.

## 4.8.3.3 Heli-Skiing

The study area is largely located in the north-east corner of Canadian

<sup>&</sup>lt;sup>13</sup> http://www.valemountrecdevelopment.com/westridgefamilyloop.htm

Mountain Holiday's (CMH) 1,402.08 square kilometre (140,208 hectares) heliski tenure. CMH operates two lodges in the general vicinity of the project. CMH Valemount Lodge, located off of highway 5 just south of the Village of Valemount, offers accommodations for exclusive groups of up to 10 people for 7-day long excursions with a base price of \$198,000. CMH Cariboo Lodge, located in the Canoe Valley to the south of the study area, also offers 7-day long trips with a base cost ranging from \$5,570 per person for heliassisted ski touring to \$13,080 for powder intro.<sup>14</sup>

In addition to winter activities, CMH also holds a license for summer activities in its Cariboo tenure, however, it currently does not operate in the summer.

Following a review of regional planning documents and discussions with locals, it is apparent that the Westridge area (the southern drainages of Mount Trudeau) is heavily utilized by CMH, and the area has been largely removed from the original CRA concept. Discussions are being held with CMH as the project progresses through the approval process and a spirit of cooperation is prevailing.

The project is being designed so that it will not be visible to the heli-skiers in the CMH territory and will not change the sense of vastness and solitude enjoyed by the unique clientele of CMH. It is also proposed that the resort may provide a new and additional base for heli-ski operations, taking off directly from the resort. This should offer the advantage of introducing the option of heli-skiing for a single day, even by people who had not planned or tried this experience before, and it would allow heli-skiers vacationing with family and friends who do not heli-ski to be comfortable at the same ski resort. The Master Plan shows a location for a high quality heli-ski day lodge available to CMH and its guests (shown as building A10). This resort destination will have mutual benefits for the heli-ski operations and for the resort. See also Section 5.5.7.14 of this Master Plan.

#### 4.8.3.4 Recreation Sites and Trails

In addition to the snowcat and heli-ski licences overlapping the study area, the following public recreation tenures are within or in close proximity to the study area:

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<sup>&</sup>lt;sup>14</sup> http://www.canadianmountainholidays.com/~/media/cmh/pdfs/ski/2015-ski-dates-prices.pdf accessed Feb, 03 2015.

- REC16031-Trudeau Trail (under Partnership agreement with YORA);
- REC1456-Westridge Family Loop Snowmobile Trail (under Partnership Agreement with VARDA);
- REC31931-Westridge Swamp Trail (snowmobile access to alpine area; under Partnership Agreement with VARDA);
- REC6899-Westridge/YORA Cabin (accessed by REC31952 Westridge Trail, under Partnership Agreement with YORA).

The Trudeau Trail will be maintained for public use and enhanced in cooperation with YORA.

The resort will not impact the existing snowmobile trails as the Westridge forestry road will not be used for access to the resort in winter. A parking and staging area for snowmobiles is included as part of this master plan and shown in the accompanying drawings.

Jackman Flats

Jackman Flats

Westridge

Westridge

Floods Lafe

Souther

Floods Lafe

Souther

Floods Contact

Confect

**Exhibit 17: Crown Land Recreation Conflicts (Robson LRMP)** 

Source: Robson Valley LRMP (MNRO, 1999)

#### 4.8.4 Weather Station

There is a weather station (MN0695) located near the Westridge snowmobile trail. The resort will not impact the weather station.

#### 4.8.5 Water Licenses

There is an active water license for power-general and storage for power generation on Hystad Creek (file 7001533 - Brookfield Power / Valemount Hydro) (Associated Land Act files 7407880 & 7407820) and an active water license application for power-general (file 7001799) on the McLennan River (also see Land Act application conflict, file 7408541). No public access will be permitted to the Brookfield Power generation facility or the head pond and there will be limited recreation trails or infrastructure in the vicinity. A gate and signage will be placed at the entrance to the facility from the Westridge forestry road.

In addition, there are approximately eight active water users (domestic/irrigation) that are in or near the Eastern Boundary of the CRA and points of diversion for the eight users are downslope of the CRA.

Water for the resort will be from wells and it will have no impact on the existing surface water licences or downslope users. Riparian zones have been carefully mapped and are excluded from development. A preliminary hydrogeological evaluation of potential impacts on stream flows from groundwater extraction has been included in Appendix 15.

Wastewater will be subject to tertiary treatment and dispersed in a carefully located disposal field for bio-filtration.

#### 4.9 FORESTRY ISSUES

#### 4.9.1 Valemount Community Forest

The CRA is located within Community Forest K2T held by the Valemount Community Forest Company Ltd. (VCF). A twenty-five year community forest agreement came into effect on April 1<sup>st</sup>, 2012 giving the Village of Valemount exclusive rights to harvest timber in a 70,182 ha area, as well as the opportunity to manage forest resources such as timber and plant products, recreation, wildlife, water and scenic viewscapes to meet local needs, in accordance with the Province's forestry legislation and regulations.

The Village has stated that its long-term goal for economic well-being includes a blended economy of forestry and tourism. <sup>15</sup> Valemount Glacier Destinations will work with the Village of Valemount and the VCF to ensure that forestry values thrive alongside tourism in the region. There is good cooperation between the VCF and the VGD company, and an MOU between the companies that will outline how both tenures will coexist. In order to mitigate the effects of the development, VGD will support continued operations by the VCF within the CRA. A memorandum of understanding is being discussed between the proponent and the VCF.

#### 4.9.2 Woodlot

The northern boundary of the CRA includes part of woodlot licence W0276 within the CRA. The CRA has been modified to minimize overlap with the woodlot. W0276 is located immediately west of the Valemount airport. The woodlot licensee is Neal Michael (Mike) Widell, and discussions are underway with Mr. Widell and FLNRO to secure a right of way for the access road through the woodlot. It is the proponent's desire to accommodate Mr. Widell and an offer of land within the CRA has been made notwithstanding an understanding that the woodlot license does not preclude a right of way for an access road.

#### 4.9.3 BCTS Cut Blocks and Silviculture

Additional discussions may be held with authorities having jurisdiction over any impacts on existing cut blocks and plantations within the CRA. Existing plantation will be managed for aesthetics, forest health, fire and danger tree safety in accordance to the objectives of the master plan.

#### 4.9.4 Old Growth Management Areas (OGMAs)

A number of Old Growth Management Areas (OGMAs) occur in the proposed CRA (see drawing P18). There are two (2) Non-Legal (not created by order) and three (3) Legal (created by order) OGMAs. OGMAs are land designations that are intended to promote biodiversity and limit the impact of the forestry-harvest industry on Old Growth values. The OGMAs within the proposed CRA are identified as having a low biodiversity emphasis (Nesbit, Thibeault, & Borgstrom, 2006, pg. xvi). A low biodiversity emphasis is used for areas where other social and economic demands are the primary management objectives.

<sup>&</sup>lt;sup>15</sup> http://www2.news.gov.bc.ca/news\_releases\_2005-2009/2007FOR0165-001416.htm

According to the *Order to Establish the Kiwa-Tete and Canoe Landscape Unit Objectives* (Ministry of Agriculture and Lands, 2006), the OGMAs in the CRA can be impacted, so long as they continue to meet old growth objectives of biodiversity. If those stated objectives cannot be met, then a suitable replacement OGMA can be established by appropriate authorities.

Recreation values and, specifically, avoiding conflict with recreational users are amongst the criterion for selecting OGMA placements, however OGMAs with the highest biodiversity values are selected as primary consideration for Legal status. Non-Legal OGMAs are generally less well-defined by species and age-class boundaries within a forest stand and, as such, can be modified or moved by professional discretion as opposed to Provincial Order. Despite the constraints OGMAs can potentially place on ski resort developments (limiting options for forest removal, ski run and road creation), they are considered primarily a forest-harvest industry guideline and can be removed from Provincial Forest Inventory if non-harvest social-economic values are deemed high enough to warrant the landscape modification. Generally, OGMAs are moved to another suitable location (like-for-like) when an irreconcilable conflict occurs.

Planning objectives for resort development will meet the following criteria when incursions into OGMAs are not avoidable:

<u>Legal OGMAs</u> will be treated as landscape unit objectives to remain intact by order. Incursions into Legal OGMAs will include only road and utility infrastructure that cannot possibly be routed around Legal OGMAs. The potentially-negative effects of such incursions include loss of connectivity, landscape disturbance with ripple effects (such as destabilizing soils outside of the immediate incursion area), increase in sunlight causing a higher wildfire risk than would occur in a continuous forest canopy, introduction of invasive plants (thistles, knapweeds etc...) due to soil disturbance and accidental seed-import, as well as other affects not listed.

All foreseeable negative effects caused by proposed incursions into Legal OGMAs will be mitigated, as outlined in the Environment Management Plans, by a combination of professional consultation and footprint minimization. Additionally, total areas of unavoidable incursions will be calculated and displacement measures will be proposed to local Forest Harvest Tenure and Forest Health officials with the goal of recommending expansion of the OGMA or creation of a suitable replacement landscape unit area (like-for-like) elsewhere within the CRA or Robson Valley TSA.

Should a replacement option be pursued, a consultation process with affected stakeholders (i.e. timber licensees, First Nations) will take place.

Ski-run developments will not occur within Legal OGMAs except in the form of low-width "ski-outs", or resource roads groomed for winter use by skiers to connect between ski runs and/or ski PODs and/or glading (spacing) conducted under strict Prescription signed by a Registered Professional Forester (with suitable scope of practice) to ensure old-growth biodiversity values remain intact. Glading practices will only remove juvenile, immature, deciduous, or dead forest growth deemed by RPF opinion to be not of OGMA value.

**Non-Legal OGMAs** will be avoided (and treated with the same regard as Legal OGMAs); however, where resort layout deems necessary, ski runs will be developed to full width and OGMA area displacement will be a primary consideration.

Areas in Non-Legal OGMAs that are displaced by ski run and/or other infrastructure incursions will be moved to other suitable forested areas, preferably within the CRA. If a suitable area(s) within the CRA is not deemed acceptable by professional opinion (RPF), the Non-Legal OGMA will be either considered for displacement to another suitable location within the Robson Valley TSA, or removed from Provincial Forest Inventory with recommendation from Mountain Resorts Branch to Forest District officials.

Refer also to drawings P18 OGMA Inventory Map and P19 Proposed OGMA Replacements included in Appendix 1.

## 4.9.5 Visual Quality Objectives (VQO)

In British Columbia, there has been a long running discussion on the application of Forestry Visual Quality Objectives (VQO) to ski resorts. Visual impacts of forestry operations are not the same as the visual impacts of ski runs, and it is not stated policy to tie VQOs developed for forestry operations to ski areas. There can be important marketing values related to the appearance of ski runs or trails. The opposite is true of cut blocks. Nevertheless, the majority of ski runs at the resort lie beyond visual range of inhabited areas or major thoroughfares, largely due to the topography and the bench which separates the proposed resort base area from the Robson Valley. In addition, care has been taken to situate gladed ski runs in locations where they can help lessen the resort's visual impact on the landscape.

## 4.9.6 Forestry Research Sites

The CRA has been adjusted to avoid overlapping the research sites and care has been taken to avoid conflict with these sites. According to FLNRO, research site 1 is located near Valemount Airport shown in drawing P14. It is experimental project EP0976.02.06.08 where at least \$50,000 has been invested in a long-term study on genetically improved interior Douglas-fir trees. A 100 metre wide uncut buffer must be established around the test site to protect the trees from damage or destruction. No development or recreational activities may occur within the test site and buffer area.

Research site 2 is located off the Westridge Forest Service Road outside of the CRA. It is experimental project EP0657.06, part of a long-term province-wide lodgepole pine provenance trial. A 100 metre wide uncut buffer must be established around the research site to protect the trees from damage or destruction. No development or recreational activities may occur within the test site and buffer area.

## 4.9.7 Long-term Growth and Yield Plots

The CRA overlaps with three long-term growth and yield plots. Their locations are shown as GY site 1, GY site 2 and GY site 3 on Drawing P14. Each plot must be protected by a 100 metre uncut buffer.

In the field the permanent sample plot can be identified by a pair of 3" X 5" annotated aluminium plaques on the tie tree (a reference tree adjacent to a road etc.) as well as on the plot reference tree near the sample plot centre. These plaques are nailed to the tree with 4 aluminium nails. In most instances there will be red annotated (growth & yield) flagging banding the reference and tie tree and marking the access tie line. The sample trees are tagged in most cases with circular blue plastic numbered tags which are nailed to the trees at breast height (1.3 m) with aluminium nails.

#### 4.10 GEOTECHNICAL ANALYSIS

The project site is located on the western side of the Robson Valley, which is a part of the Southern Rocky Mountain Trench. The trench separates the Rocky Mountains to the east from the Columbia Mountains to the west. The northernmost sub-range of the Columbia Mountains are the Cariboo Mountains. These include the Premier Range, which contain the highest peaks of the range and within which the project site is situated.

The geology of the Premier Range is complex. Rocks range in age from more than two billion

year old reactivated portions of the Canadian Shield, to relatively young, +/- 350 million year old granite/diorite intrusions. A number of flat lying thrust sheets repeat or truncate various portions of the overall stratigraphic succession. The thrust sheets are folded by a complex series of upright and overturned folds that trend generally NW-SE.<sup>16</sup> The entire area has been metamorphosed and the study area consists largely of Precambrian and Proterozoic schists.

Preliminary geotechnical reports, including a preliminary geotechnical investigation for the day lodge site have been prepared and attached as Appendix 9. Additionally, a field visit report for the access road has been prepared by a Geotechnical Engineer and is included as Appendix 13.

There is no slide or debris flow risk for the resort base site (see Appendix 4 and 11). Prior to construction, geotechnical engineers in consultation with structural engineers will undertake soil analysis (see Appendix 9) to determine optimum foundations design for the proposed buildings, and in cooperation with the civil engineers will make the necessary recommendations for the detailed design of the drainage system.

#### 4.11 AVALANCHE HAZARDS MAPPING

There is no avalanche exposure at the resort village site. Avalanche exposure in the ski area will be controlled with the best practices and technology known in the industry. Avalanche mapping for the ski area has been completed and the report is included as Appendix 4.

#### 4.12 SUMMARY OF SITE OPPORTUNITIES AND DEVELOPMENT POTENTIAL

#### 4.12.1 Site Opportunities Summary

- Easy access including existing and adjacent airport, accessible regional and international airports; situated near existing intercontinental passenger train line;
- Accessible mountain peaks and glaciers suitable for year-round skiing and sightseeing with stunning views and scenery: Mount Pierre Elliot Trudeau 2,650 m (8,694 ft), Twilight Glacier 2,700 m (9,000 ft), Mount Arthur Meighen 3,205 m (10,515 ft) and Mount Lester Pearson 3,086 m (10,125 ft);
- Potential for one of the longest and most impressive vertical drop numbers in the world of approximately 2,260 m (7,415 ft), substantially outclassing anything

<sup>&</sup>lt;sup>16</sup> Information from "A Note on the Geology of the Premier Range, Kiwa Basin Area" web page: http://www.colwest.ca/premiers/premierrangegeology.html Accessed on October 30, 2012.

in North America;

- Existing land use notation;
- Potential for one of the longest continuous ski trails in the world;
- World-renowned snow conditions with abundant snowfall. No snowmaking required;
- Abundance of North-facing slopes;
- Winter temperatures that are ideal for skiing and are milder than in the Rocky Mountains of Jasper and Banff National Parks,
- Possibility of achieving the longest season, with the most reliable and largest snowfall of any ski area in North America;
- Significant summer skiing potentially one of only two summer-long glacier skiing areas in North America<sup>17</sup>;
- Key regional concern is the protection of the mountain caribou; there is no established Ungulate Winter Range in the study area;
- No avalanche hazards in the resort village area;
- Large, suitable land base for development at ideal elevations (1,300 m.) to ensure an ideal "wintery" mountain experience during the winter months.

## **4.12.2 Site Constraints Summary**

- Significant distances and challenging topography to be traversed by ski lift;
- Existing OGMAs, wetlands and wildlife corridor impact potential development areas;
- Numerous stream crossings throughout the project area;
- The large, mostly high alpine ski area is subject to many avalanche paths which will require careful management;
- High alpine areas are subject to rockfall hazards, which will require careful engineering of mountain infrastructure;
- The project will have an impact on the Valemount Community Forest which will be managed via a memorandum of understanding;
- The study area is within part of Canadian Mountain Helicopter's (CMH) heli-ski
  tenure as well as a Cariboo Cat Skiing tenure, in addition to snowmobile trails.
   Provincial policy regarding the use of Crown land supports lift serviced ski
  resort development and tenure overlap is permitted and encouraged to

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<sup>&</sup>lt;sup>17</sup> Pending the development status of the Jumbo Glacier Resort proposal.

promote the highest and best use of the land in the public interest. However, the planning preference is to develop a mutually beneficial plan, and the Master Plan is designed to achieve cooperative solutions.

## 4.12.3 Site Development Potential

The site analysis revealed qualities that are ideally suited for skiing, including high elevations and large vertical drops, an abundance of glaciers, predominantly north-facing slopes and a wide variety of skiable terrain. The area is renowned for its snowfall quality and abundance and the climate is ideal for a ski resort. As noted earlier, the Premier Range was previously identified by the planning team as being one of the ideal locations for a ski resort in North America.

Access to the alpine terrain has been studied extensively by the project team, with numerous iterations of the plan to access the best skiable terrain as well as the best sightseeing viewpoints. The project is unique in that it accommodates the needs of skiers and sightseers, while offering a superior product for both.

The bench at the base of Mount Trudeau is a natural location for development. It is well protected from avalanche and rockfall hazards, is relatively easily accessible and is located in close proximity to an existing airport. The village is designed to be as compact as possible, limiting its footprint on the environment. The village location was adjusted and redesigned on multiple occasions during the planning process as environmental information was collected from the field and every effort has been made to protect wetlands and riparian areas.

The site responds to the fundamentals of this project concept:

- Snow guaranteed by glaciers, elevation and climate;
- Large, impressive mountains with great scenery;
- A large skiable terrain accessed by few lifts (with dual use for skiing and sightseeing) for low density skiing at feasible cost;
- An accessible site with low infrastructure costs:
- A location that is not in a park, conservation or other area that is not permissible due to environmental or other reasons, and
- A location that is not affected by insurmountable local conflicts.

# 5. MOUNTAIN DEVELOPMENT PLAN

#### 5.1 INTRODUCTION

Ski area planning for ski hills on modestly sized mountains and for large mountains is not the same, and originates from different history, different needs and different objectives.

Planning for large mountain access originated in the Alps, initially as engineering projects of funiculars and railways, and later with daring aerial trams, to access mountain tops. When planning for access to mountain tops in the Alps, the carrying capacity of the future ski runs was not evaluated and was not a concern, because the mountain size dwarfed the number of people, and the installations were very successful for a very long time (the Gornergrat railway is reputed to be one of the most successful and profitable mountain access system in the world, starting in 1910), serving a multiplicity of uses. A variety of groomed ski runs were developed over time, in most places. In some places also the proportion of skiers and sightseeing public changed over time.

Specialized planning for ski hills predominantly on smaller mountains instead prevailed in North America. The United States Forest Services guidelines and the All Seasons Resort Guidelines of B.C. are the North American standards, and they are designed to monitor ski hill applications on the basis of a long tradition of similar applications, where the maximum practical density of users is a prime economic objective. The concept is founded on the evaluation of ski trails and ski pods and typical ski hill skier distribution.

The design of ski areas based on access to large mountains, with access to the top by means of lifts, is different, and it is geared to generate successful land profitable businesses via proportionately modest amount of lift infrastructure to the largest possible mountain terrain. This is typically achieved by single lifts providing access directly to mountain peaks. This provides access to a large skiable terrain – combined with sightseeing. A bonus of large mountains is that in the right latitude and climate they often feature large glaciers, skiable year round, and additionally creating sightseeing destinations.

In this project we expect a skier density that will be markedly lower than at most ski areas in North America, for several reasons, but primarily because the skiers per day delivered by the lift system will be dispersed over a very large skiable territory, partly on groomed runs and also outside groomed runs. In the Premier Range there is an abundance of natural snow from top to bottom, and even in the lower portions the treed sections are to a great extent already skiable as prior glading has taken place either through the efforts of the forestry industry or as a result of forest fires. The low density skiing will be another reason why

people will choose this destination, and it will provide a skiing experience that will be more similar to the exclusivity of helicopter skiing than that of resort skiing.

The essence of this plan is the opening of an entire mountain with a major lift system, located where there is abundant natural snow from top to bottom. This approach is economical in terms of infrastructure and operations and results in the best and highest use of the natural landscape. A huge skiable terrain can be accessed with the installation of just one lift system, and there is no cost of installing, operating and maintaining expensive and energy-intensive snowmaking equipment. It also provides direct and easy access to the best scenery – permitting destination sightseeing that creates a double use of the lift infrastructure, attracting the many tourists who do not ski, an important component of the huge market of the National Parks nearby.

# 5.2 CONTROLLED RECREATION AREA (CRA) & PROVINCIAL MAP RESERVE

The size of the study area and of the planned uses in terms of acreage are outlined as follows:

Table 11: Plan Area Calculations

Plan Component	Hectares	Acres
Study Area	16,629	41,092
Controlled Recreation Area Studied in Master Plan (Provincial Map Reserve Designation)	8,004	19,778
Final Controlled Recreation Area	4,997	12,348
Marked Ski Trails/Runs Area	898	2,219
Resort Base Development Area	157	389

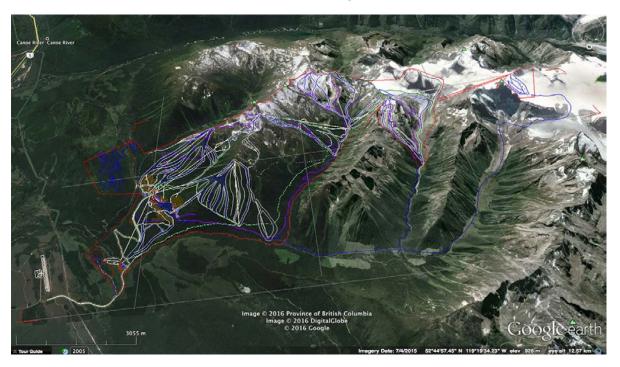
The CRA has been reduced from 8,004 ha to 4,997 ha in the final stages of the provincial master plan review process. The Master Plan and its associated studies, including hazard assessments and environmental impact studies was prepared for the 8,004 ha CRA. In recognition of this work and future potential expansion considerations, the areas removed from the 8,004 ha CRA may be protected from uses that are not compatible with resort operations via a Section 17 Land Act Reserve designation. As discussed, as part of the Master Development Agreement decision, Mountain Resorts Branch will recommend the establishment of Section 17 Land Act Reserve (Designated Use Area):

- A Section 17 Land Act Reserve is established over the area of outside and immediately adjacent of the Controlled Recreation Area in the name of the Mountain Resorts Branch, FLNRO where the Reserve is for All Seasons Resort Development/resort expansion Master Planning purposes.
- Establishment of the Reserve would be in the name of Mountain Resorts Branch, and would prevent acceptance and approval of any Land Act application inconsistent with the stated purpose.
- Allows Mountain Resort Branch to review any tenure applications made in the area of Phase 3 and issue tenures consistent with the purpose, All Seasons Resort

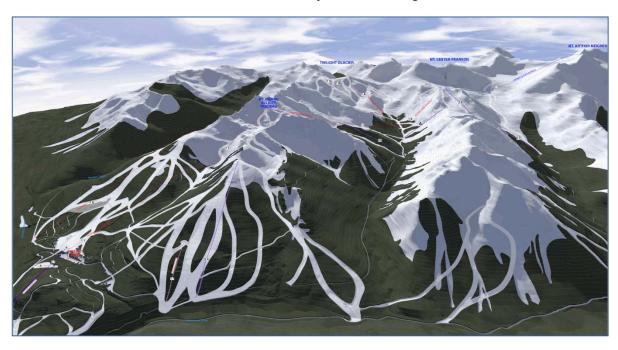
Development/resort expansion planning.

• Term would be for 10 years, renewable.

Exhibit 18: CRA - Google Earth View



**Exhibit 19: Project Rendering** 



#### 5.3 SKI AREA LIFTS

#### 5.3.1 Overview

The main lifts will rise in sections from the base of Mount Trudeau to Mount Arthur Meighen and the McLennan Glacier. In the opening phase it is expected that the gondola system will terminate at the Glacier Ridge viewpoint and a quad chair lift will provide access to one of the peaks at the top of Twilight Glacier (2,628 m/ 8,622 ft), allowing for year-round skiing on the glacier and an initial lift serviced winter vertical drop of approximately 1,370 meters (4,495 ft.) to the resort base. This would be the third largest vertical drop in North America. The ski out to the airport base will eventually bring the vertical drop to 1,595 m (5,233 ft.).

In subsequent phases, a lower capacity lift designed for higher elevations will reach a terminal on a saddle of Mount Arthur Meighen, at 3,025 meters (9,925 ft.), raising the vertical drop to 2,090 meters (6,857 ft.), the highest in North America by a wide margin and providing access to significant summer skiing terrain, including terrain suitable for F.I.S. homologated training, as well as exceptional viewpoints. With optional lifts, the vertical drop may reach as high as 2,260 meters (7,415), one of the highest in the world.

A guided descent from the McLennan Glacier to the valley base will be comparable to some of the iconic descents in the Alps – such as the descent from L'Aiguille du Midi to Chamonix. Chamonix features the biggest lift serviced vertical in the world of 2,807 meters (9,209 ft).

Several minor lifts, to be built in phases and according to skier visit numbers, will facilitate summer skiing and enjoyment of the best ski pods in winter, augmenting the immense skiable terrain provided by the spine of the main gondola. The plan is also designed to minimize intrusion into the heli-ski territory, to offer a resort base also for the heli-skiers and to be complementary with cat-skiing operations if possible. There will be self-sustaining mountain restaurants and day lodges that will offer the necessary services and comforts to tourists.

#### 5.3.2 Ski Lifts

The lift design philosophy for the project is based on the concept of providing access to the summits of large mountains in order to deliver with as few lifts as possible a huge, low density skiable terrain and to combine it with sightseeing.

This approach has been practiced for over a century in the European Alps, although

there is some precedent for it also in North America, specifically in the design of Kicking Horse Mountain Resort and the planned Jumbo Glacier Resort in British Columbia, as well as Jackson Hole Mountain Resort in Wyoming and Snowbird in Utah.

A bonus of large mountains, such as those of the Premier Range, is that in the right latitude and climate they also have large glaciers, that are skiable year round and are amazing sightseeing destinations.

In this project, we expect a skier density that will be lower than at most ski areas in North America, for several reasons, but primarily because the few thousand skiers per day delivered by the lift system will be dispersed over a very large skiable territory, partly on groomed runs and to a large extent outside marked groomed runs, typically in high quality and abundant natural powder snow.

At build-out, the resort will have 18 lifts built over three phases. The planned inventory will include:

- 2 magic carpets;
- 5 gondolas;
- 6 detachable quad chairs;
- 2 Fixed grip quad chairs, and
- 4 glacier T-Bar lifts.

Magic Carpet "A" is expected to service a ski school area and Magic Carpet "B" will service a tubing area.

The summer skiing area will be accessed via the principal gondolas and a quad chair. Summer ski lifts will include 4 glacier T-bars.

Gondola 1.1 and lift 1.8 may be utilized for summer mountain biking.

A number of optional lifts and lift alignments have also been identified on the Master Plan drawings. Three of the optional lifts are to facilitate summer skiing, one is to provide access to a new sightseeing viewpoint, three are to facilitate ski-in, ski-out access, and four are to expand the skiable terrain. The optional inventory includes:

- 4 detachable quad chairs;
- 4 fixed grip quad chairs;
- 1 T-bar;

- 1 pulse lift, and
- 2 aerial trams.

Table 12: Phase One Ski Lifts

Lift	Туре	Bottom Elevation (m)	Top Elevation (m)	Vertical (m)	Rope Length (m)	Hourly Capacity (people/hour)
1.1 Valemount Glacier Gondola	Gondola	1,283	2,415	1,132	4,355	1,800
1.2 Twilight Basin Gondola	Gondola	1,770	2,415	645	3,022	1,800
1.3 (removed)		0	0	0	0	0
1.4 Twilight Glacier Chair	D-4	1,770	2,530	760	2,595	2,000
1.5 T-bar	T-bar	2,315	2,520	205	573	800
1.6 T-bar	T-bar	2,315	2,530	215	594	800
1.7 Powder Express	D-4	1,247	2,135	888	2,038	1,800
1.8 Village Chair	FG-4	1,304	1,620	316	1,387	1,800
1.9 Glacier Ridge Gondola	Gondola	1,770	2,490	720	1,669	1,800
1.10 Twilight Return	FG-4	1,730	1,910	180	921	1,200
A Beginner Carpet	conveyor	1,278	1,283	5	48	600
B Tubing Carpet	conveyor	1,285	1,300	15	181	600

Table 13: Phase Two Ski Lifts

Lift	Туре	Bottom Elevation (m)	Top Elevation (m)	Vertical (m)	Rope Length (m)	Hourly Capacity (people/hour)
2.1 Village Connector	Gondola	940	1,283	343	2,504	2,400
2.2 (removed)		0	0	0	0	
2.3 People Mover	D-4	955	970	15	295	1,000
2.4 The Sawmill	D-4	1,200	2,095	895	2,884	2,000
2.5 Glacier Connector		0	0	0	0	
2.6 Glacier Ridge Upper Bowl Quad	D-4	2,110	2,490	380	1,392	1,800
2.7 Glacier Ridge Lower Bowl Quad	D-4	1,625	2,110	485	1,476	1,800

Table 14: Phase Three Ski Lifts

Lift <sup>18</sup>	Туре	Bottom Elevation (m)	Top Elevation (m)	Vertical (m)	Rope Length (m)	Hourly Capacity (people/hour)
3.1 Premier Glacier Express	Gondola	2,490	3,010	520	4,471	1,600
3.2 (removed)		0	0	0	0	
3.3 T-bar	T-bar	2,760	3,010	250	1,050	800
3.4 T-bar	T-bar	2,760	3,050	290	793	800

<sup>&</sup>lt;sup>18</sup> The former lift 3.6 has been made optional.

#### 5.4 SKI RUNS/TRAILS

## 5.4.1 Skier Skill Class Distribution and Density

Low skier densities make for un-crowded, awe-inspiring powder skiing experiences and encourage return trips and great visitor satisfaction. The ski run design density is set at low industry ranges in recognition of the project's destination resort status, its relatively remote location, the vast skiable terrain, and the unique geography of the CRA which includes large glaciers, bowls, as well as very long ski runs. Low density, big mountain powder skiing will be an important marketing consideration for the project.

The implication of designing for low-density on large mountains is that the capacity of the ski runs, which is calculated by multiplying the area of the ski run by the skier class density, will be lower than most other resorts in North America.

**Table 15: Skier Densities** 

Skill Class	ASRG Recommended Density (per ha) <sup>19</sup>	Average ASRG Recommended Density (per ha)	VGD Project Design Density
Beginner	35 – 75 /ha	55 /ha	35 /ha
Low Intermediate	20 - 60 /ha	40 /ha	25 /ha
Intermediate	15 – 30 /ha	22.5 /ha	18 /ha
Advanced	10 – 20 /ha	15 /ha	10 /ha
Expert	5 – 10 /ha	7.5 /ha	7 /ha

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<sup>&</sup>lt;sup>19</sup> Note: ASRG Beginner and Novice categories have been combined.

Table 16: Average Skier Skill Classes in British Columbia

Skill Class	Average
Beginner/Novice	2-15%
Low Intermediate	18-22%
Intermediate	33-37%
Advanced	18-22%
Expert	8-12%

#### 5.4.2 Ski Runs - Winter

The Master Plan has been developed via software and mapping analysis, discussions with local ski mountaineers and guides, numerous helicopter exploratory trips, and a ski reconnaissance from Twilight Glacier.

The study area holds a massive potential for skiing, predominantly on favourable north or north-eastern facing slopes, and entirely within the natural snowline, eliminating the need for snowmaking. The high elevations combined with large glaciers accessed in the third phase offer a large and varied summer skiing terrain.

The planning focus has been to identify areas of connectivity and a wide range of low intermediate/intermediate terrain which appeal to the largest segments of skiers. A secondary focus has been to identify long, "classic" descents in the tradition of the European Alps, a feature that will make the resort unique in the North American skiing landscape.

The mountains and vast terrain offer almost limitless opportunities for extreme skiing within the CRA.

Table 17: Phase One Ski Runs

Run #	Area (Ha)	Avg Width (m)	Length (m)	Max Slope %	Vertical (m)	Category	Capacity
Lift # 1.1 Valen	nount Glacie	er Gondola					
A1	23	30	7,735	43	1,142	beginner	812
A2	13	60	2,161	60	729	intermediate	233
A3	2	30	802	45	205	intermediate	43
A4	3	30	849	8	57	beginner	89
A6	1	30	198	4	7	beginner	21
O1	19	60	3,107	46	752	intermediate	336
O2	4	40	965	67	277	intermediate	69
O3	1	40	251	17	59	intermediate	18
O4	1	40	241	21	40	intermediate	17
D1	24.6	90	2,733	64	786.2	low intermediate	615
D4	4.0	55	730	55	218.0	intermediate	72
D5	6.6	55	1,196	50	329.7	low intermediate	164
D6	11.5	55	2,089	49	535.7	low intermediate	287
D8 (gladed)	54.6		1,533	56	459.8	advanced	546
D14	5.3	8	6,659	32	812.3	beginner	186
D16 (gladed)	9.0		792	52	214.5	advanced	90

Run #	Area (Ha)	Avg Width (m)	Length (m)	Max Slope %	Vertical (m)	Category	Capacity
Lift # 1.4 Twilig	ht Glacier E	xpress			_		
E1	18.1	50	3,623	54	733	intermediate	326
E2	6.6	50	1,329	79	472	advanced	66
E3	6.5	50	1,298	48	467	advanced	65
E5	6.7	50	1,349	77	447	intermediate	121
E6	1.6	50	325	71	151	advanced	16
E7	8.6	60	1,430	59	402	intermediate	154
E12	4.0	8	4,965	31	832	beginner	139
E14 (gladed)	11.7		906	46	277	advanced	117
E15 (off piste)	4.3		706	64	203	expert	30
Lift # 1.5 Glaci	er T-bar						
E8	7.9	60	1,322	65	387	intermediate	143
E9	2.9	60	487	43	163.9	intermediate	53
E10	2.1	60	351	24	62.1	low intermediate	53
Lift # 1.7 Powd	er Express						
B1	6.8	60	1,137	69	407	intermediate	123
B2	7.3	60	1,212	66	379	intermediate	131
B5	11.2	60	1,873	53	725	intermediate	202
B6	8.3	60	1,388	64	542	intermediate	150
B7	7.4	60	1,238	47	378	intermediate	134
B8	9.2	60	1,533	41	469	intermediate	166
B9 (gladed)	13.1		414	46	148	advanced	131
B10 (gladed)	0.8		135	54	57	advanced	8
B11 (gladed)	10.9		856	65	308	advanced	109
B12 (gladed)	9.2		850	64	324	advanced	92
B13 (gladed)	13.1		955	51	375	advanced	131
G2	12.6	60	2,098	61	831	intermediate	227

Run #	Area (Ha)	Avg Width (m)	Length (m)	Max Slope %	Vertical (m)	Category	Capacity
G3	5	60	825	56	314	intermediate	89
G4	12.5	50	2,495	58	873	intermediate	225
G5 (gladed)	49.3		2,070	51	800	expert	345
G6 (gladed)	41.0		1,809	66	742	advanced	410
G7 (gladed)	4.3		653	51	250	advanced	43
G8	2.4	10	2,412	43	370	beginner	84
Lift # 1.9 Glad	ier Ridge G	ondola					
F1	2.5	9	2,771	77	717.9	beginner	87
F2	4.3	60	709	77	281.3	advanced	43
F3	7.8	50	1,567	73	532.0	intermediate	141
F5	2.7	60	450	44	180.6	intermediate	49
F6	2.1	8	2,638	42	463.5	beginner	74
<b>Lift # 1.10</b> Twi	light Return						
A5	7	8	8,984	43	1,178	beginner	252
Magic Carpet	# A Ski Sch	nool					
1	0.2	20	79	18	11	beginner	6
2	0.2	20	79	18	11	beginner	5
Total Phase 1	529		92,118		23,159		8,508
Phase 1 top 6	elevation (r	n)	2,53	0			
Phase 1 botto	om elevatio	on (m)	1,16	5			
Phase 1 Vertical Rise (m)			1,36	5			

Table 18: Phase One Skill Class Distribution

Industry **Skier Capacity Averages** Beginner 1,820 21.39% 2-15% Low Intermediate 1,119 13.16% 18-22% Intermediate 37.87% 3,222 33-37% Advanced 21.95% 18-22% 1,867 Expert 480 5.64% 8-12% Total 8,508 100.00%

Exhibit 20: Phase 1 Ski Runs and Lifts

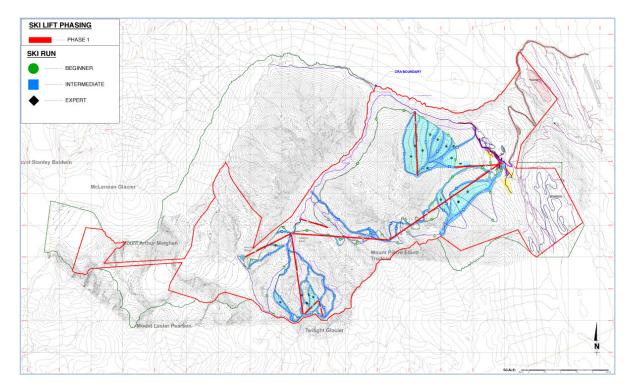


Table 19: Phase Two Ski Runs

Run #	Area (Ha)	Avg Width (m)	Length (m)	Max Slope %	Vertical (m)	Category	Capacity
Lift # 2.1 Villag	e Connec	tor					
H1	14.2	50	2,833	41	372	low intermediate	354
H2	5.2	20	2,583	31	297	beginner	181
H3	6.1	60	1,019	29	213	low intermediate	153
H4	1.3	30	420	19	74	low intermediate	32
H5	0.9	20	427	28	74	low intermediate	21
H6	5.2	20	2,589	25	299	beginner	181
H7	0.5	16	324	36	62	beginner	18
H8	1.2	16	751	47	96	beginner	42
Lift # 2.4 The Sa	awmill						
D2	19.7	60	3,286	61	899.4	low intermediate	493
D3	8.7	60	1,449	55	416.7	intermediate	156
D7	6.5	25	2,606	77	633.0	intermediate	117
D9	7.1	40	1,767	28	328.3	low intermediate	177
(Terrain Park) D10	51.9		2,015	46	627.1	advanced	519
D11	5.5	50	1,101	63	397.7	intermediate	99
D12	0.6	8	697	23	106.8	beginner	20
D15	1.7	8	2,117	27	318.2	beginner	59
D17 (gladed)	19.0		893	54	308.0	expert	133
A7	2	35	690	20	92	beginner	85

Run #	Area (Ha)	Avg Width (m)	Length (m)	Max Slope %	Vertical (m)	Category	Capacity
Lift # 2.6							
J1	10.8	60	1,805	64	378	intermediate	195
J2	8.9	60	1,477	66	351	intermediate	160
(off-piste) J3	21.0		1,426	48	335	advanced	210
Lift # 2.7							
L1	9.0	58	1,547	61	472	low intermediate	224
L2	6.2	50	1,234	58	353	advanced	62
L3	8.6	60	1,427	59	413	intermediate	154
L4	17.9	50	3,587	23	450	beginner	628
L5	25.8	50	5,166	34	736	beginner	904
L6	0.5	15	350	10	25	beginner	18
L7	1.4	50	274	19	57	beginner	48
L8 (off-piste)	15.7		968	62	314	expert	110
Total Phase 2	283		46,828				5,553
Phase 2 Top E	levation (	m)	2,530				
Phase 2 Bottom Elevation (m)			940				

Table 20: Phase Two Skill Class Distribution

1,590

	Skier Capacity		Industry Averages
Beginner	2,184	39.33%	2-15%
Low Intermediate	1,454	26.18%	18-22%
Intermediate	881	15.87%	33-37%
Advanced	791	14.25%	18-22%
Expert	243	4.37%	8-12%
Total	5,553	100.00%	

Phase 2 Vertical Rise (m)

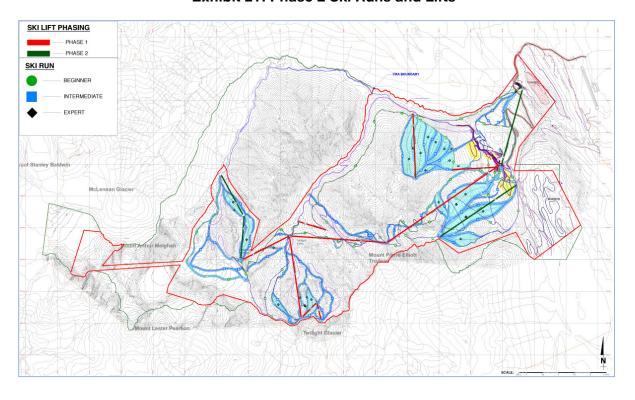


Exhibit 21: Phase 2 Ski Runs and Lifts

Table 21: Phase Three Ski Runs

Run #	Area (Ha)	Avg Width (m)	Length (m)	Max Slope %	Vertical (m)	Category	Capacity
Lift # 3.3							
M1	7.0	60	1,165	54	243	intermediate	127
M2	7.7	60	1,276	49	247	intermediate	138
M3	3.0	60	500	31	67	beginner	105
Lift # 3.4							
N1	3.9	60	649	47	240	low intermediate	97
N2	4.1	60	691	48	248	intermediate	75
N3	5.5	60	919	52	265	low intermediate	138
Total Phase 3	31		5,212			_	680

Phase 3 top elevation (m) 3,025
Phase 3 bottom elevation (m) 935
Phase 3 vertical rise (m) 2,090

Table 22: Phase Three Skill Class Distribution

	<b>Skier Capacity</b>		Industry Averages
Beginner	105	15.44%	2-15%
Low Intermediate	235	34.60%	18-22%
Intermediate	340	49.95%	33-37%
Advanced	-	0.00%	18-22%
Expert	-	0.00%	8-12%
Total	680	100.00%	

Table 23: Total Capacity and Skill Class Distribution after Phase 3 (at Buildout)<sup>20</sup>

	Skier Capacity		Industry Averages
Beginner	4,108	27.87%	2-15%
Low Intermediate	2,808	19.05%	18-22%
Intermediate	4,443	30.14%	33-37%
Advanced	2,658	18.04%	18-22%
Expert	723	4.90%	8-12%
Total	14,741	100.00%	

<sup>&</sup>lt;sup>20</sup> NOTE: a significant amount of advanced/expert terrain is unmarked, including dozens of chutes. Because of the rugged nature of the high alpine topography, and the fact that it is obvious from the terrain that expert runs are plentiful, the ski run planning process has been to focus on identifying and laying out intermediate and beginner ski runs, which are essential for the project to appeal to the wider skiing public.

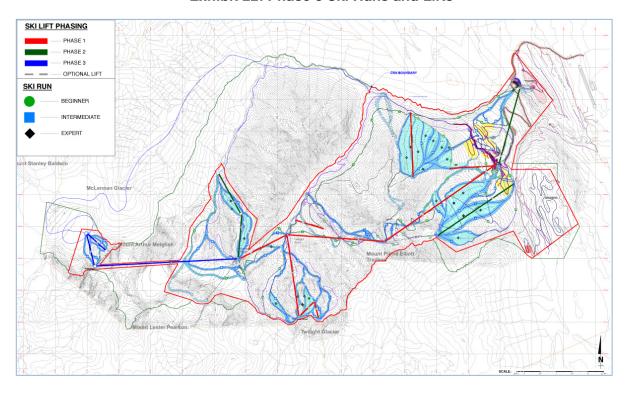


Exhibit 22: Phase 3 Ski Runs and Lifts

## 5.4.3 Downhill Capacity

At build-out, not including optional lifts, downhill capacity of the ski runs and trails will be **14,741** skiers and snowboarders at one time (SAOT).

#### 5.4.4 Terrain Distribution

Terrain distribution has been selected in response to the geography and to meet the needs of a destination market clientele. A preponderance of highly scenic low-intermediate/intermediate ski trails have been selected for each phase in order to respond to the needs of emerging market skiers, including from China, India, Singapore, Mexico and Brazil, as well as more established markets desirous of destinations that can meet the needs of families with a wide range of skiing interest and abilities. The scenery, along with the length and breadth of easily accessible terrain will make the terrain of the Premier Range a unique attraction in North America.

A large amount of expert terrain, including a significant amount of 'sidecountry' is not marked as trails or accounted for in the terrain distribution analysis. This terrain will make the resort and the Village of Valemount a 'must visit' destination for snowsports enthusiasts.

## 5.4.5 Gladed Skiing

Gladed skiing, or tree skiing, has become increasingly popular in recent years. Gladed skiing is especially attractive in areas where there is high snowfall, such as in the Premier Range. Powder snow is retained for longer periods because the trees provide shade and shelter. Glades also offer a sense of solitude, beauty and very low density skiing.

Glades can be created artificially by selective logging and tree-limbing. Tree spacing is typically 2 to 5 meters, and the lower branches of trees are limbed to a height of 2.5 to 3 meters above the maximum snow depth.

Areas to be gladed have been selected on the basis of forest cover, slope suitability and visual impact. Glading in the vicinity of lift 1.7 was chosen in part to minimize the visual impact of ski runs as viewed from the Robson Valley.

Due to the high elevations of the Premier Range, as well as previous forestry harvesting and wildfire damage, there is also a large amount of naturally gladed terrain throughout the CRA in the transition areas between the un-forested high

alpine and the forested areas at lower elevations.

## 5.4.6 Lift-Assisted Backcountry Skiing & Guided Descent of McLennan Glacier

The large and varied terrain within the CRA offers vast areas for easy backcountry or "sidecountry" access. Sidecountry generally refers to skiing that is off-trail or off-piste (in the European tradition) that can be accessed from existing ski lifts and requires a person to hike, climb or skin short to moderate distances to access unmarked terrain. Sidecountry skiing is often an initial step taken by people who eventually become backcountry enthusiasts.

A guided-only ski-touring descent of McLennan Glacier may become available in phase three once lift 3.1 (Premier Glacier Express) is installed. This descent exits the CRA at 2,600m elevation and re-enters at 1,225m elevation. The descent will be comparable to the famous Vallee Blanche Mer de Glace route on Mont Blanc in France.

## 5.5 MOUNTAIN CAPACITY

#### 5.5.1 Vertical Demand

Each skier ability level places different demands on the ski area's lift and trail system. The demand for daily vertical meters skied increases as the skier proficiency increases. Due to the very high vertical rise, very long intermediate-level runs, abundant uphill capacity and high-speed lifts, vertical demand at the resort is expected to exceed North American high-demand ranges.

Table 24: ASRG Vertical Demand Averages

Skill Class	Vertical Demand Low	Vertical Demand Average	Vertical Demand High
Beginner	500 m	750 m	1,000 m
Low Intermediate	1,000 m	2,750 m	3,500 m
Intermediate	3,500 m	4,250 m	5,000 m
Advanced	5,000 m	6,250 m	7,500 m
Expert	7,500 m	8,750 m	10,000 m

Table 25: VGD Vertical Demand Benchmarks

Skill Class	Vertical Demand
Beginner	1,000 m
Low Intermediate	3,500 m
Intermediate	7,000 m
Expert	10.000 m
Expert/Sidecountry	7,000 m

## 5.5.2 Weighted Vertical Demand

Because each ski lift can provide access to terrain that is suitable to different skill classes with differing vertical demand expectations, *weighted* vertical demand is an estimation of the number of vertical meters per day that may be generated by each lift based on the terrain category that is accessed from each lift.

Table 26: Phase One Weighted Vertical Demand

Lift #	Туре	Category	Capacity	% Use	Vertical Demand	Weighted Demand
1.1	Gondola	beginner	1,193	33%	1000	330
		low intermediate	1,067	30%	3500	1,033
		intermediate	717	20%	7000	1,389
		advanced	636	18%	10000	1,760
		expert		0%	7000	-
			3,613	100%		4,513
1.7	D-Quad	beginner	-	0.00%	1000	-
		low intermediate	-	0.00%	3500	-
		intermediate	1,530	54.65%	7000	3,825
		advanced	924	33.01%	10000	3,301
		expert	345	12.34%	7000	864
			2,799	100.00%		7,990
1.4	D-Quad	beginner	139	12.19%	1000	122
		low intermediate	_	0.00%	3500	_
		intermediate	602	52.78%	7000	3,695
		advanced	265	23.20%	10000	2,320
		expert	135	11.82%	7000	828
			1,140	100.00%		6,965
1 5	T-Bar	boginnor		0.000/	1000	
1.5	1-Bar	beginner	-	0.00%		740
		low intermediate	53	21.23%	3500	743
		intermediate	195	78.77%	7000	5,514
		advanced	-	0.00%	10000	-
		expert	-	0.00%	7000	
			248	100.00%		6,257

Lift #	Туре	Category	Capacity	% Use	Vertical Demand	Weighted Demand
1.9	gondola	beginner	161	40.97%	1000	410
		low intermediate	-	0.00%	3500	-
		intermediate	190	48.21%	7000	3,375
		advanced	43	10.82%	10000	1,082
		expert	-	0.00%	7000	_
			393	100.00%		4,867
4.40	E Oward	la a simula s	050	100.000/	1000	1 000
1.10	F-Quad	beginner low intermediate	252	100.00%	1000	1,000
			-	0.00%	3500	-
		intermediate	-	0.00%	7000	-
		advanced	-	0.00%	10000	-
		expert	-	0.00%	7000	
			252	100.00%		1,000
Α	Carpet	beginner	11	100.00%	1000	1000
		low intermediate	-	0.00%	4000	0
		intermediate	-	0.00%	7000	0
		advanced	-	0.00%	10000	0
		expert	-	0.00%	7000	0
			11	100.00%		1000
В	Carpet	beginner	64	100.00%	1000	1000
	•	low intermediate	_	0.00%	4000	0
		intermediate	_	0.00%	7000	0
		advanced	_	0.00%	10000	0
		expert	_	0.00%	7000	0
			64	100.00%		1000

Table 27: Phase Two Weighted Vertical Demand

Lift #	Туре	Category	Capacity	% Use	Vertical Demand	Weighted Demand
2.1	D-Quad	beginner	422	43%	1000	430
		low intermediate	560	57%	3500	1,995
		intermediate	-	0%	7000	-
		advanced	-	0%	10000	-
		expert	-	0%	7000	-
			982	100%		2,425
2.4	D-Quad	beginner	163	9%	1000	88
2.4	D-Quad	low intermediate	670	36%	3500	1,261
		intermediate	373	20%	7000	1,405
		advanced	519	28%	10000	2,794
		expert	133	7%	7000	501
		ехреп	1,858	100%	7000	6,049
			1,030	100 /6		0,049
2.6	D-Quad	beginner	-	0%	1000	-
		low intermediate	-	0%	3500	-
		intermediate	354	63%	7000	4,393
		advanced	210	37%	10000	3,725
		expert	-	0%	7000	_
			565	100%		8,117
0.7	D. Oward	la a simu a v	1 500	740/	1000	744
2.7	D-Quad	beginner	1,598	74%	1000	744
		low intermediate	224	10%	3500	366
		intermediate	154	7%	7000	502
		advanced	62	3%	10000	287
		expert	110	5%	7000	357
			2,148	100%		2,257

Table 28: Phase Three Weighted Vertical Demand

Lift #	Туре	Category	Capacity	% Use	Vertical Demand	Weighted Demand
3.3	T-bar	beginner	105	28%	1000	284
		low intermediate	-	0%	3500	-
		intermediate	265	72%	7000	5,013
		advanced	-	0%	10000	-
		expert	-	0%	7000	-
			370	100%		5,297
3.4	T-bar	beginner	_	0%	1000	-
		low intermediate	235	76%	3500	2,657
		intermediate	75	24%	7000	1,685
		advanced	-	0%	10000	-
		expert	-	0%	7000	_
			310	100%		4,343

## **5.5.3 Comfortable Carrying Capacity**

Comfortable Carrying Capacity (CCC) is the total daily capacity of the skiing facilities in accordance with the technical, physical and experiential or social constraints of the project site.

According to the ASRG, CCC is calculated for each ski lift as follows:

$$\textit{CCC} = \frac{(\textit{Vertical Rise})(\textit{Design Capacity})(\textit{Hours of Oper.})(\textit{Loading Eff.})}{\textit{Weighted Vertical Demand of the Ski Runs}}$$

Table 29: Phase One Comfortable Carrying Capacity

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	Loading Efficiency	Hrs/ day	Weighted Vertical Demand	CCC
1.1	gondola	1132	1,800	7	8.0	4,513	2,528
1.2	gondola	645	0	7			
1.4	D-Quad	760	2,000	7	0.9	6,965	1,375
1.5	T-Bar	205	800	6	0.8	6,257	126
1.6	T-Bar	215	800	6	8.0	-	-
1.7	D-Quad	888	1,800	7.5	0.9	7,990	1,350
1.8	F-Quad	316	1,800	7		-	
1.9	gondola	720	1,800	7	0.8	4,867	1,491
1.10	F-Quad	180	1,200	7.5	0.7	1,000	1,134
Α	Magic Carpet	5	800	6	0.7	1,000	17
В	Magic Carpet	15	800	8	0.7	1,000	67

8,088

Table 30: Phase Two Comfortable Carrying Capacity

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	Loading Efficiency	Hrs/ day	Weighted Vertical Demand	CCC
2.1	D-Quad	343	2,400	6.0	0.9	2,425	1,833
2.3	People Mover	15	1,000	6.0	-	-	-
2.4	D-Quad	895	2,000	6.0	0.9	6,049	1,598
2.6	D-Quad	380	1,800	6.0	0.9	8,117	455
2.7	D-Quad	485	1,800	6.0	0.9	2,257	2,089

5,975

Table 31: Phase Three Comfortable Carrying Capacity

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	Loading Efficiency	Hrs/ day	Weighted Vertical Demand	CCC
3.1	Gondola	520	1,600	0.8	5	-	-
3.3	T-bar	250	800	0.8	5	5,297	136
3.4	T-bar	290	800	0.8	5	4,343	192

328

Cumulative CCC after Phase Three (at build-out): <u>14,392</u>

## 5.5.4 Adjusted Comfortable Carrying Capacity

Comfortable Carrying Capacity (CCC) is the total daily capacity of the skiing facilities in accordance with the technical, physical and experiential or social constraints of the project site.

According to the ASRG, CCC is calculated for each ski lift as follows:

```
\textit{CCC} = \frac{(\textit{Vertical Rise})(\textit{Design Capacity})(\textit{Hours of Oper.})(\textit{Loading Eff.})}{\textit{Weighted Vertical Demand of the Ski Runs}}
```

These calculations are shown in the preceding section. However, in order to better reflect the operational realities of a ski area, we've added an additional to this formula.

The added variable is <u>circulation ratio</u>. This refers to the percentage of skiers that are likely to ski the trails/runs that are attributed to that lift – as opposed to sightseers or skiers that are transiting to another part of the mountain. This variable is particularly relevant in a mountain-centric lift system design in large mountain ranges. Lifts are selected and positioned to provide access to mountaintops to provide optimal sightseeing opportunities and optimal skiing opportunities at the same time.

The adjusted CCC formula, therefore, is as follows:

$$\textit{CCC} = \frac{(\textit{Vertical})(\textit{Design Cap.})(\textit{Hrs. of Oper.})(\textit{Loading Eff.})(\textit{Circ. Ratio})}{\textit{Weighted Vertical Demand of the Ski Runs}}$$

Table 32: Phase One Adjusted Comfortable Carrying Capacity

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	Hrs/ day	Load eff.	Circ. Ratio	Weighted Vertical Demand	ACCC
1.1	gondola	1132	1,800	7	0.8	0.5	4,513	1,264
1.2	gondola	645	1,800	7				
1.4	D-Quad	760	2,000	7	0.9	0.9	6,965	1,237
1.5	T-Bar	205	800	6	0.8	0.5	6,257	63
1.6	T-Bar	215	800	6	8.0	-	-	-
1.7	D-Quad	888	1,800	7.5	0.9	0.8	7,990	1,080
1.8	F-Quad	316	1,800	7				
1.9	gondola	720	1,800	7	0.8	0.5	4,867	746
1.10	F-Quad	180	1,200	7.5	0.7	1.0	1,000	1,134
A	Magic Carpet	5	600	6	0.7	1.0	1,000	13
В	Magic Carpet	15	600	8	0.7	1.0	1,000	50

5,587

Table 33: Phase Two Adjusted Comfortable Carrying Capacity

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	Hrs/ day	Load eff.	Circ. Ratio	Weighted Vertical Demand	ACCC
2.1	D-Quad	343	2,400	6.0	0.9	0.1	2,425	92
2.3	People Mover	15	1,000	6.0				
2.4	D-Quad	895	2,000	6.0	0.9	0.9	6,049	1,438
2.6	D-Quad	380	1,800	6.0	0.9	0.7	8,117	296
2.7	D-Quad	485	1,800	6.0	0.9	0.9	2,257	1,776

3,601

Table 34: Phase Three Adjusted Comfortable Carrying Capacity

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	Hrs/ day	Load eff.	Circ. Ratio	Weighted Vertical Demand	ACCC
3.1	Gondola	520	1,600.0	5.0	0.8	1.0	-	-
3.3	T-bar	250	800.0	4.5	0.8	1.0	5,297	129
3.4	T-bar	290	800.0	4.5	0.8	1.0	4,343	183

312

Cumulative Adjusted CCC after Phase Three (at build-out): 9,500

## 5.5.5 Sightseeing Capacity -- Winter

Sightseeing capacity is determined by the mountaintop facilities that are specific to sightseers. In addition to on-mountain restaurants and facilities for skiers, facilities specific to sightseers will include:

- Approximately 50 indoor restaurant seats dedicated to sightseers at Glacier Ridge (150 in summer).
- An 150 person viewing platform at Glacier Ridge overlooking Pushalong Glacier in front of Lower Arthur Meighen and the glaciers flowing from Lester Pearson and Upper Arthur Meighen (top of lift).
- A 100 person viewing platform and concessions near the summit of the McLennan Glacier.

Total on-mountain winter sightseeing capacity at-one-time will be 300 people. Given a one hour turnaround per sightseer at each viewing platform and a two hour turnaround at the restaurant, the daily sightseer capacity will be **1,650** people at build-out.

#### 5.5.6 Mountain Balance Assessment

Table 35: Mountain Balance Assessment (Winter)

Phase	Uphill Capacity (CCC)	Downhill Capacity (SAOT)
Phase 1	8,088	8,508
Phase 2	5,975	5,553
Phase 3	328	680
Total	14,392	14,741

Utilizing traditional CCC calculations methods results in a balanced mountain capacity. When we apply our more accurate adjusted CCC calculations we see that there is a large excess of downhill capacity. This is by design in order to improve the visitor experience – ensuring that there is low density skiing and plenty of powder snow throughout the ski day.

Table 36: Adjusted Mountain Balance Assessment (Winter)

Phase	Uphill Capacity (ACCC)	Downhill Capacity (SAOT)
Phase 1	5,587	8,508
Phase 2	3,601	5,553
Phase 3	312	680
Total	9,500	14,741

The balance can be adjusted if necessary by reducing or increasing the number of marked runs and trails, of which there is ample opportunity, or by adjusting the capacity of the lifts by either reducing or increasing the number of chairs/cabins, or changing the technology to a different speed option. The capacity of the lifts as designed can easily be upgraded if necessary.

## 5.5.7 Staging

Initial alpine area staging will be via gondola 1.1 situated at the heart of the resort village base and providing access to the top of Mount Trudeau. Lift 1.8 will provide a second staging area providing access to the predominantly intermediate skiing on the northern face of Mount Trudeau (also known as the "right hump") via lift 1.7 (Powder Express).

In the second phase, the majority of day parking will located near the Valemount Airport. This new base area will eliminate most daily car travel to the resort base area.

The airport base will be connected to the resort village base by a new lift (2.1). Access to the alpine will continue via gondola 1.1 and lift 1.8 and another new lift, 2.4 (The Sawmill), which will provide additional staging capacity. Lift 2.4 will provide direct access from the village to terrain on the southern face of Mount Trudeau. Including ski school facilities, the staging capacity from the resort village at buildout will be 6,200 people/hr.

#### 5.5.8 Other Winter Activities

#### 5.5.8.1 Ice Skating, Hockey, Curling and other Ice Sports

Ice-skating will be a prominent feature in the resort village. An outdoor skating

area will be located within the resort village area.

A regulation size open-air ice rink will provide skating enjoyment to resort guests and staff. Pick-up hockey games in the unique outdoor and alpine setting will also provide an authentic "Canadian" element to the resort.

Regulation-sized outdoor hockey rinks are relatively common in the European Alps. In fact, a number of professional and semi-professional hockey teams in Switzerland, Italy, France, Slovenia and Austria hail from mountain resort villages and towns.

The rink, properly designed and managed, could host youth and adult hockey tournaments (together with the Valemount arena), major junior hockey team practices, retreats, and/or training camps, and even open-air curling tournaments in the manner of the Horu Tournament in Zermatt, Switzerland.<sup>21</sup> The beautiful setting, ideal climate for outdoor ice, and the resort's amenities will make it a unique proposition.

## 5.5.8.2 Snow Tubing

A six to eight lane 200 meter-long snow tubing area will be located near the resort village area.

## 5.5.8.3 Backcountry Touring, Climbing and Mountaineering Schools

The geography and history of the Premier Range and nearby Mount Robson, combined with resort facilities that provide convenient access towards the heart of the Premier Range, make the project site ideally suited for a high-calibre alpine and mountaineering school. Both winter and summer capacity for backcountry touring, climbing and mountaineering may be in the range of 50 people per day. Associated services and amenities, equipment rentals services and alpine facilities, including the possibility of a "via ferrata" and alpine refuges will be investigated in conjunction with an eventual operator.

## 5.5.8.4 Nordic Skiing

Nordic or cross-country skiing currently exists in the region in Jackman Flats Provincial Park, located approximately 13 km north of the Village of Valemount. Trails are maintained by the Yellowhead Outdoor Recreation

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<sup>&</sup>lt;sup>21</sup> http://www.cczermatt.ch

Association (YORA). A second trail system exists at Camp Creek, approximately 11 km south of the Village of Valemount.

Winter cross-country ski trails in the south-eastern corner of the CRA are shown in the Master Plan drawings.

#### 5.5.8.5 Snowshoeing

A trail system, along with possible guiding and interpretive services as well as equipment rentals, will be developed.

## 5.5.8.6 Swimming Pool and Spa Services

A publicly accessible swimming pool and associated spa services will be located in the heart of the resort village area either independently, as part of a "founder's" club, or as part of a major resort hotel. The pool is expected to be an amenity for both resort guests and the residents of the Village of Valemount.

## 5.5.8.7 Mountain-Top Evening Dining

A mountain-top restaurant located at the summit of Glacier Ridge will operate year round and is expected to continue to operate into the evening hours after sporting and sightseeing activities on the mountains close (similar to the Eagle's Eye Restaurant at Kicking Horse Mountain Resort). Nightly capacity will be 300 people over two sittings.

## 5.5.8.8 Tree-Top Walking Adventures and Ziplines

Tree-top adventures and ziplines have grown in sophistication and popularity throughout North America and Europe in recent years. A year-round forest adventure area capable of accommodating approximately 30 people at one time is identified in the Master Plan drawings.

#### 5.5.8.9 Snowmobiling

Due to its accessible mountain ranges and excellent snow conditions, the Valemount area is a well-known and popular snowmobiling destination. Many local trails are maintained and monitored by the Valemount and Area Recreation Development Association (VARDA). Possibilities for snowmobile staging facilities, guiding, and education opportunities have been explored in

conjunction with VARDA, and a potential staging area for access to the Westridge trail is indicated in the Master Plan drawings.

#### 5.5.8.10 Snow-Cat Skiing and Tours

Cariboo Snowcat Skiing is the local guided sightseeing and cat-skiing operator. Part of their license area is within the study area and a portion of the CRA has been set aside for snow-cat operations through the initial phases of development. Snow-cat skiing staging facilities are envisioned at the resort base area and a possible lodge will be discussed with the operator at the master plan stage. Current capacity is 14 people per day, which may be expanded to 28 people per day at build-out.

## 5.5.8.11 Dog Sledding

Cold Fire Creek Dogsledding is the local dogsled tour operator. Its kennels are located near Tete-Jaune Cache and the company offers a number of tours in the region. Its "60-Minute Musher" tour is particularly well suited for a mountain resort clientele. A proposed dog kennel location is shown in the Master Plan as well as dogsled trails leading to the beautiful upper McLennan river valley. These trails will be shared with horse sleighs and will be adjacent to a Nordic skiing trail.

## 5.5.8.12 Guide Outfitting

Vince Lorenz recently purchased the guide outfitting tenure from Niemeyer Outfitting. The tenure includes a 1,400 square mile area bordered by Mt Robson Provincial Park, Jasper National Park and the Willmore Wilderness Area. A guide outfitting cabin may potentially be located within the CRA.

#### 5.5.8.13 Horse Sleigh Rides

The local guide outfitter or another local operator may provide horse sleigh rides for resort visitors. A proposed stable and sleigh ride trail is shown in the master plan.

#### **5.5.8.14** Heli-skiing

Canadian Mountain Holidays is the local heli-ski operator and the project CRA encroaches on the northern portion of their 1,402.08 square kilometre (140,208 hectare) license area. CMH is not opposed to the resort plan and it

is expected that future discussions will lead to further cooperation and possible heli-ski staging facilities or a lodge in the resort base area.

CMH currently maintains lodges near the Village of Valemount and in the Canoe Valley, south of the study area. CMH Valemount Lodge is located off of highway 5 just south of the Vilalge of Valemount, and offers accommodations for exclusive groups of up to 10 people for 7-day long excursions with a base price of \$198,000. CMH Cariboo Lodge, located in the Canoe Valley to the south of the study area, also offers 7-day long trips with a base cost ranging from \$5,570 per person for heli-assisted ski touring to \$13,080 for powder intro.<sup>22</sup>

The project is being designed with the expectation that it will also be used as a heli-ski base of operations, with a site for a high quality lodge available to CMH and its guests (shown as building A6 in the Master Plan), and this resort destination will have mutual benefits for both heli-ski operations and the resort.

The heli-ski operation is well positioned to benefit from the resort and will benefit from increased business brought about by resort visitors. This is a pattern which has been observed in locations such as Revelstoke and Whistler, where the resort operator also operates the heli-ski company and the heli-ski companies are able to offer a more flexible product mix to attract a larger number of clients. For instance, both Selkirk-Tangiers heli-ski (Revelstoke) and Whistler Heli-skiing offer popular day trips in addition to multi-day trips. Packages that include both resort skiing and heli-skiing are also popular amongst visitors who are looking for a varied experience or who may not be able to afford a week-long heli-skiing adventure.

It is planned that resort visitors will be able to access heli-skiing and helicopter-sightseeing services directly from a day lodge located in the heart of the resort base.

The resort's alpine-oriented summer visitors will also provide a ready market for summer heli-operations, a market which is currently not large enough to sustain operations.

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<sup>&</sup>lt;sup>22</sup> http://www.canadianmountainholidays.com/~/media/cmh/pdfs/ski/2015-ski-dates-prices.pdf accessed Feb, 03 2015.

## 5.6 **SNOWMAKING**

Due to the abundant natural snowfall, elevations and latitude, snowmaking will not be required initially at the resort, resulting in a reduced environmental impact and substantial energy savings and operational cost benefits. However, given the potential impact of climate change, the infrastructure requirements for a future snowmaking system have been investigated for the lower elevations (between the village and the airport base) and snowmaking considerations will be revaluated with each master plan update.

# 5.7 SUMMER ACTIVITIES

# 5.7.1 Summer Skiing

**Table 37: Summer Skiing Runs** 

Run #	Area (Ha)	Avg Width (m)	Length	Max Slope	Vertical (m)	Category	Capacity
Lift # 1.5					_		
S1	2.88	60	573	30	179	Intermediate	58
S2	2.32	60	377	23	72	Beginner	81
Lift # 3.3							
M1	6.78	60	1,165	41	243	Intermediate	136
M2	7.29	60	1,276	35	247	Intermediate	146
M3	2.33	60	500	25	67	Beginner	82
Lift # 3.4							
N1	3.62	60	649	37	240	Low Intermediate	90
N2	3.83	60	691	40	248	Intermediate	77
N3	5.15	60	919	37	265	Low intermediate	129
	44.78		7,476				1,109

Table 38: Weighted Vertical Demand - Summer Skiing

Lift #	Туре	Category	Capacity	% Use	Vertical Demand	Weighted Demand
1.5	T-Bar	beginner	-	0.00%	1000	-
		low intermediate	53	21.23%	3500	743
		intermediate	195	78.77%	7000	5,514
		advanced	-	0.00%	10000	-
		expert	-	0.00%	7000	_
			248	100.00%		6,257
3.3	T-bar	beginner	105	28%	1000	284
		low intermediate	-	0%	3500	-
		intermediate	265	72%	7000	5,013
		advanced	-	0%	10000	-
		expert	-	0%	7000	_
			370	100%		5,297

			310	100%		4.343
		expert	-	0%	7000	-
		advanced	-	0%	10000	-
		intermediate	75	24%	7000	1,685
		low intermediate	235	76%	3500	2,657
3.4	T-bar	beginner	-	0%	1000	-

Table 39: Adjusted Comfortable Carrying Capacity – Summer

Lift #	Туре	Vertical (m)	Capacity (ppl/hr)	hours/ day	Load eff.	Circ. Ratio	Vert. Multi plier	Weighted Vertical Demand	ACCC
1.5	T-Bar	205	800	6.0	8.0	0.5	1.0	6,257	63
3.3	T-bar	250	0.008	4.5	8.0	1.0	1.0	4,343	158
3.4	T-bar	290	0.008	4.5	0.8	1.0	1.0	1,908	416

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#### 5.7.2 Summer Sightseeing

The view of the glaciers from an alpine summit will be unique in North America and is expected to be a major and distinctive attraction for the resort. Sightseeing capacity will be approximately **1,650** people per day at build-out. Additional capacity in outdoor restaurant and viewing spaces will be based on demand in the proximity of the top lift stations and in the locations designated in the Master Plan.

## 5.7.3 Downhill Mountain Biking

Unlike competing resorts, summer skiing and sightseeing will be the primary attraction during the summer months. However, the popularity of lift-serviced downhill mountain biking has grown dramatically in recent years and some downhill mountain trails are envisioned, utilizing the construction access routes and some of the ski runs. In the initial stages mountain bike trails will be accessed from lift 1.1 and lift 1.8 in the resort base area.

Downhill trails are expected to follow the route of ski runs and pony trails, requiring

only small improvements for summer use. Improvements will be according to the environmental management plans to be submitted prior to ski area opening. Downhill mountain biking capacity is expected to be approximately 700 riders per day at build-out, and it will be spread out on a number of ski runs.

## 5.7.4 Cross-Country Mountain Biking

The existing forestry roads and a dedicated trail network within the CRA offer ample opportunity for cross-country mountain biking trails that may also eventually connect with trails in the valley. The Village of Valemount has an established network of cross-country trails and hosted the B.C. Mountain Bike Provincials in 2009. YORA has been working to create a bike skills park and a 40 kilometres groomed multi-use trail suitable for mountain biking. Established trails include<sup>23</sup>:

- Andreas' Upper and Lower Loop
- Swift Creek Loop
- Selwyn Trail
- Pack Saddle Creek Loop
- Starratt Wildlife Sanctuary
- Kinney Lake
- BC High School Provincial Mountain Bike Race Course

#### 5.7.5 Ancillary Activities that Occur in Both Summer and Winter

As noted previously, a number of activities and facilities will offer supplemental attractions on a year-round basis.

- Swimming Pool and Spa Services (150 people per day)
- Mountain-Top Evening Dining (300 people per day)
- Tree-Top Walking Adventures and Ziplines (100 people per day)
- Geocaching

#### 5.7.6 Adventures in the Robson Valley and Vicinity

A booking and staging centre at the resort day lodge will offer access to a number of regional activities. Daily bookings at build-out can be estimated to be 350/day.

<sup>&</sup>lt;sup>23</sup> http://www.visitvalemount.ca/summer/MountainBiking1.html

## 5.7.6.1 Horseback Riding

A number of equestrian activities and ranches are available in the Robson Valley. These include guided riding, horseback assisted hiking, ranch visits and a yearly rodeo. Horseback assisted hiking and rides can be offered directly from the resort base.

#### **5.7.6.2** Rafting

Stellar Descents and Mount Robson Whitewater Rafting offer day trips or multi-day trips in the Fraser and other rivers near the Village of Valemount. Rafting excursions can be booked and organized from the resort base.

#### **5.7.6.3 Canoeing**

Canoeing excursions in the region include:

- Cranberry Marsh
- McLennan River
- Kinbasket Lake
- Moose Lake
- Yellowhead Lake
- Cedarside Regional Park

Excursions and outfitting/canoe rentals may be offered from the resort base.

#### **5.7.6.4** Fishing

Numerous lake and river fishing opportunities exist in the vicinity of the Village of Valemount. Excursions, licensing, rentals and guided fishingcan be organized directly from the resort base. Bustin' Trout currently offers guided fishing from the Village of Valemount.

#### 5.7.6.5 **ATVing**

The Valemount area is a well-known destination for ATVers due to its ease of access and spectacular mountain scenery. Numerous trails, including within the CRA, are maintained by VARDA and staging, excursions, rentals and guided tours can be organized from the resort base.

#### 5.7.6.6 Guide Outfitting

Vince Lorenz outfitting services over a large 1,400 square mile area bordered by Mt Robson Provincial Park, Jasper National Park and the Willmore Wilderness Area. A guide outfitting cabin may potentially be located within the CRA.

## 5.7.7 Interpretive Tours, Bird Watching and Salmon Viewing

Interpretive talks and tours of the local environment and ethnobiology will be available from the resort base and may be combined with existing bird watching and salmon viewing tours from the Village of Valemount. Numerous opportunities to view spawning Chinook Salmon exist in the Village of Valemount area in July and August. The spawning grounds at Swift Creek in the Village of Valemount are part of the second longest Chinook salmon runs in North America. Salmon that arrive at Swift Creek have travelled more than 1,200 km over 10 weeks through the Fraser River.

#### 5.7.8 Golf Course

An 18-hole golf course with a daily capacity of approximately 300 people (due in part to the extended summer daylight hours in the Robson Valley) has been previously discussed and might be constructed near build-out of the VGD project, perhaps by an independent developer. However, this golf course will require a design to be done in the future, in cooperation with a specialist golf designer, and will be a future application and part of a separate approval process. The current Master Plan does not include a golf course.

# 6. RESORT BASE DEVELOPMENT PLAN

#### 6.1 RESORT VILLAGE AREA CONCEPT

The ski area and its village were chosen because of considerations regarding climate, elevations and access.

The climate is the renowned dry B.C. interior climate of the mountain range west of the Columbia River and Fraser River trench. It is a unique area of the North American continent that has the same climate as that of the best mountains of Colorado, but starting from more suitable elevations. The trench elevations range from 800 to 1,300 meters versus elevations of more than 2,500 meters of Colorado. Because of latitude the temperatures in winter and summer are similar to those of Colorado at its higher elevations.

The resort village will be located in an area accessed by the current Westridge forestry road, on the bench to the West of the Village of Valemount, at an elevation of approximately 1,300 m (4,265 ft.). It is an area with ideal climate that is situated above the natural snow line. The village is at a higher elevation than the mid-stations elevations at Whistler and higher than the base of Kicking Horse Mountain Resort, currently the highest destination resort village in B.C. The current forestry road, which accesses the site from the south, will remain as an emergency service road. A new road (roughly following an existing forestry road alignment) will access the site from the vicinity of the Valemount Airport. The Valemount Community Forest reconstructed a major portion of this road along the proposed new alignment in July 2015. This road will be constructed to MoTI standards and improved over time and will give long term access to the resort site. Additional access for day skiers and visitors will be provided from a lift departing from the valley base in the proximity of the McLennan River.

The elevation and the location at the base of excellent skiable terrain allows a design for ski in and ski out on natural snow that will make the resort uniquely desirable for winter vacations.

The entrance to the village will be marked by a gateway arch flanked by a First Nations' interpretive centre on one side and a ski school building on the other.

Beyond the gateway arch visitors will have a view of a gondola crossing over the road and of the buildings beyond, including the resort's main day lodge, located on the left or uphill side of the road. A parking area is located opposite the day lodge.

Continuing along the main road past the day lodge, the core of the resort village can be entered into from a side street on the uphill side of the main road. This street is a dead-end street that leads up to a mainly pedestrian area and is intended for guests with overnight

accommodation only and will have very limited traffic. The street is oriented in a southern direction, flanked by three-storey buildings on the uphill side and by two-storey buildings on the downslope side.

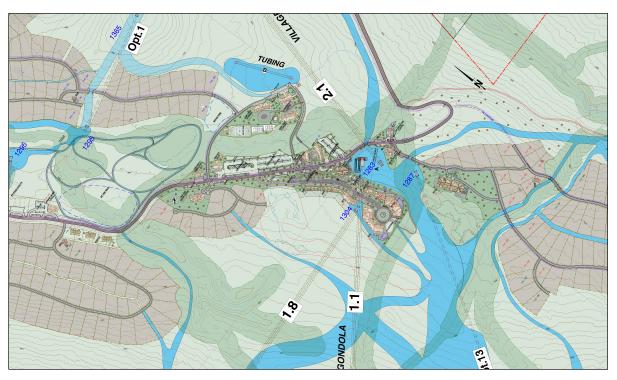
It is intended that the street will be classified as a strata road 50' wide, with no setbacks for buildings but the developer wants to keep the door open to a potential subdivision application with a dedicated road. Section 8.1.4 clarifies the application process. The terminus of the street will open to a plaza featuring a round-about and a public gathering area. The plaza will also be accessed directly from the ski slopes and is flanked by the major hotel of the resort village. A gently sloped trail intended for pedestrians and bicycles will lead away from the plaza back towards the day lodge and the main road. The trail will be 12 feet wide and will be capable of providing a secondary access route for emergency vehicles.

The pedestrian area in the resort village core will be flanked by a covered walkway along the buildings on the western or uphill side of the street, and by commercial premises on the eastern or downslope side. All parking in the resort village core will be underground and there will be no need for guests to use a car after their arrival at the resort.

In addition to overnight accommodations, the buildings within the resort village core may also house developer and guest relations offices, a convenience food store and additional services and food and beverage premises.

Vehicle traffic to the resort village base from the second phase is expected to decrease because it is planned that day skiers will access the mountain from a parking area and lift at the valley base. The ultimate objective is to have a pedestrian and ski in and ski out resort where the vehicular traffic will be primarily for access to overnight accommodation, for arriving and departing guests.

The resort will have a mountain architecture character reminiscent of the National Parks architecture, emphasizing the use of natural materials, particularly wood and stone.



**Exhibit 23: Resort Base Village Conceptual Overview** 







**Exhibit 25: Resort Base Village Plaza Concept** 

**Exhibit 26: Resort Base Village Plaza Concept Evening View** 







**Exhibit 27: Resort Base Village View Concept** 

**Exhibit 28: Resort Base Village Pedestrian View Concept** 





**Exhibit 29: Resort Base Village Day Lodge Concept** 



**Exhibit 30: Five Star Hotel Concept Rendering** 







**Exhibit 32: Village Service Building Concept** 

Following the opening phase, where a stand-alone day lodge will service a day skiing and sightseeing operation, it is expected that the construction of the first destination hotel and condotels and the Founders' single family vacation homes will provide the initial overnight accommodation.

A First Nations' Interpretive Centre and a variety of other activities, including a convention centre and a wedding chapel, complement the design in order to create an all seasons tourism destination with activities ranging from culture to sports. The phasing plan indicates the planned growth of the resort.

The resort village will not be visible from the main valley floor and will be designed to be self-sufficient in terms of municipal and commercial services. Water will be supplied from wells, and the resort will have its own state of the art sewage treatment plant. It will be designed to allow for an initial development of up to approximately 2,000 tourist beds for overnight accommodation of the skiers and other visitors who will prefer to stay in a mountain setting, which will be designed for ski in and ski out, rather than in the Village of Valemount.

Services will be provided through a public utility company. The VGD company is discussing

with the Simpcw Resources Limited Liability Partnership and with experienced public utility companies the provision of services, and a multiparty agreement is expected to be imminent. Piped propane or piped natural gas at the resort are being considered as a heating source, as well as geothermal energy for the single family vacation homes.

Regarding power, one possibility is that the utility company will also offer electrical power, and will generate power locally or in conjunction with service to the Village of Valemount. In this case it may be possible to have liquefied natural gas transported by truck from Edmonton to Valemount, and an LNG power plant built at the resort site or at the valley departure base.

In the second phase of the project an additional day lodge and information centre will be located near the crossing of McLennan River, at the main valley lift departure point, west of the airport, together with a parking area to accommodate day visitors from Jasper, Prince George and north-western Alberta, as well as residents of the Robson Valley. This lower departure base will be serviced by a lift connecting at the resort village with the gondolas leading to the glaciers and to the ski area. The resort village at this stage of development will become a mainly pedestrian, ski in and ski out resort serving overnight guests. It will be possible to ski all the way down to the lower base and the parking lot. In fact, when the airport will be expanded, it will be possible to ski down within a short shuttle distance from the airport.

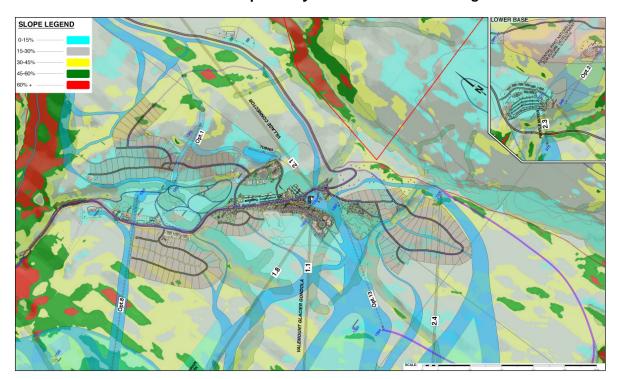
The parking area and day lodge may be developed in tandem with a future airport expansion program and expanded flight operations as outlined in a study commissioned by the Village of Valemount (Urban Systems, PDK Airport Planning Inc., 2006).

Part of the destination resort concept being developed is that of offering an enhanced resort experience in order to extend the stay of tourists in the Valemount region. The vision of a comprehensive mountain resort includes the development of additional opportunities and activities to attract visitors during peak seasons without overwhelming the site capacities, while giving equal attention to summer and off-season uses.

In winter, additional attractions include activities such as heli-skiing, cat skiing, Nordic skiing, snowmobiling, snowshoeing, snow tubing, convention facilities and weddings, as well as attractions such as mountain top dining and dog sled rides.

Considerations for success of summer operations include, in addition to the unique attraction of summer skiing: aesthetic experiences based on the unique vistas, development of scenic hiking trails utilizing the ski runs and pony trails of the ski area, special mountain bike trails, the creation of space for summer mountain events and comprehensive services

at the mountain top restaurant.



**Exhibit 33: Slope Analysis of Resort Base Village** 

# 6.2 BALANCED RESORT CAPACITY

The idea behind Balanced Resort Capacity (BRC) is to arrive at a balance between the amount of development and infrastructure, the number and people capacity of the activities that are available at the resort on a seasonal basis, and the environmental and physical capacities of the site.

According to the *All Season Resort Guidelines* (ASRG), "the definition of the Balanced Resort Capacity (BRC) is the optimum number of visitors that can utilize a resort's facilities per day in such a way that their recreational expectations are being met while the integrity of the site's physical and sociological environment is maintained on a year-round basis."

"Optimum" in this case means maximum number of visitors. While this is not the design approach for VGD (which seeks to minimize skier and sightseer density and maximize the mountain experience) the resort is designed to be in balance.

The bulk of the visitor capacity results from the ski trail and ski lift component of the resort as indicated by the Comfortable Carrying Capacity (CCC)<sup>24</sup>. This is augmented by a number of other facilities and attractions that are listed and tabulated as suggested by the ASRG, below.

The VGD bed base size is determined by a number of factors that are largely independent of the recreational capacity of the mountain, including anticipated visitor volumes, the existence of a nearby and readily expandable bed base in the Village of Valemount, and the existing bed base in Jasper.

<sup>&</sup>lt;sup>24</sup> We are using our adjusted CCC figures to determine Balanced Resort Capacity.

Table 40: Balanced Resort Capacity

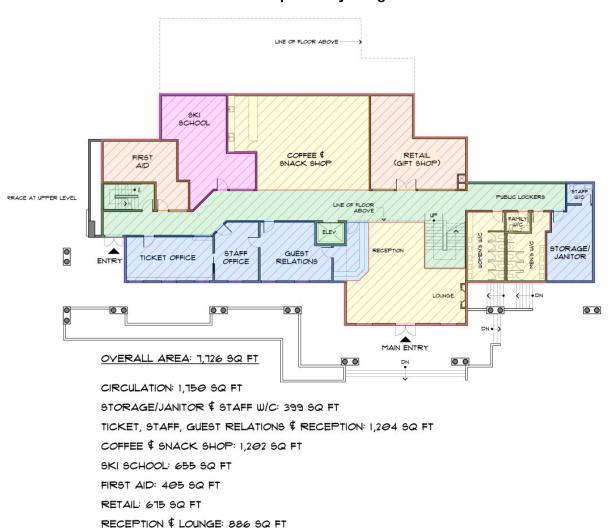
Summer		Winter	
Lift Serviced Skiing	637	Lift Serviced Skiing	9,500
Sightseeing	1,650	Nordic Skiing	100
Mountain Biking	1,200	Heli-Skiing	12
Tree-top Walking and Zip- line	100	Snowshoeing	40
Swimming Pool/Spa	150	Tree-top Walking and Zip-line	20
Tennis	25	Swimming Pool/Spa	100
Adventures in Valemount and Vicinity	350	Ice Skating	100
Mountaineering School	50	Tubing	150
Mountaintop Restaurants	1,800	Sleigh Rides	25
Resort Dining	900	Backcountry/Mountaineering School	30
Weddings	400		
	7,262		10,078
Additional guest ratio	1.1		1.1
	7,988		11,086

**BRC** = 11,086

# 6.3 SPACE USE REQUIREMENTS

According to the ASRG, "The space use requirements are a function of the BRC of the mountain resort. In addition, the number of non-participating guests must be taken into account... It must be noted the numbers are not absolute, but are intended to describe the approximate range of additional guests that must be taken into account while designing facilities at the resort. The applied ratio should be a function of the project specific goals."

The project design team is relying on anticipated visitor number projections (approximately 140,000 winter skier visits at the opening), extensive interviews with resort operators, and the experience and designs of the day lodges at Kicking Horse Mountain Resort and Crystal Mountain Resort to make determinations as to appropriate space use requirements for the first phase facilities. The opening phase facilities include a day lodge for which a preliminary design has been prepared. The building contains ticketing, ski school, retail, restaurant, administration and first aid facilities. Conceptual views of the opening phase day lodge floorplates including allocated square footage figures are included in the following figures:



**Exhibit 34: Conceptual Day Lodge Main Floor** 

WASHROOMS: 550 SQ FT



**Exhibit 35: Conceptual Day Lodge Second Floor** 

OVERALL AREA: 1,162 SQ FT

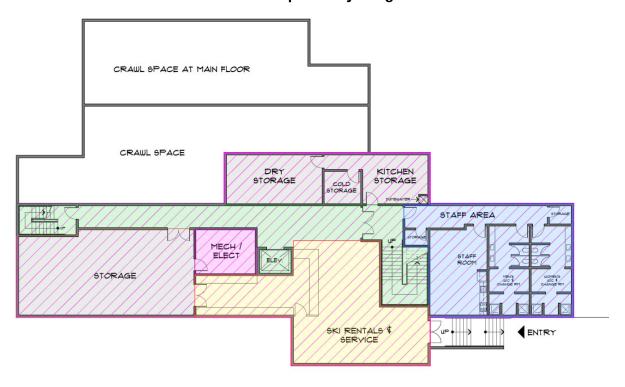
CIRCULATION: 803 SQ FT STREET ENTRY: 131 SQ FT

STORAGE/JANITOR \$ STAFF W/C: 399 SQ FT

STORAGE: 273 SQ FT KITCHEN: 725 SQ FT CAFETERIA: 505 SQ FT

RESTAURANT/CAFE: 3,481 SQ FT

LOUNGE: 889 SQ FT WASHROOMS: 550 SQ FT



**Exhibit 36: Conceptual Day Lodge Basement** 

OVERALL AREA: 6,009 SQ FT

CIRCULATION: 1,191 9Q FT STAFF AREA: 1,305 9Q FT STORAGE: 1,146 9Q FT

DRY, COLD \$ KITCHEN STORAGE: 802 SQ FT

MECH/ELECT: 213 SQ FT

SKI RENTALS \$ SERVICE: 1,347 SQ FT

The volumetric design of the resort village affords a significant amount of flexibility for potential retail space, as well as convention and other public spaces. The use of this space will be determined on a market basis in concordance with the pace of development and other unpredictable dynamics, such as the growth and development of retail space within the Village of Valemount – which will be a key determinant of the retail space use requirements within the resort village.

The aim is to avoid a formulaic approach that can result in developments that struggle to maintain commercial occupancy given the particularities of location and seasonality. One example is the retail space in the Creekside Village at Whistler, which responds to the

estimates presented in the ASRG guidelines, but is a commercial failure as it is overshadowed by nearby Whistler Village and fails to maintain year-round occupancy of much of its retail spaces.

With regards to mountain operations, the design of the resort, as shown in this Master Plan includes phased buildings such as the ski school building and the day lodge at the day skier resort base in phase 2 that will respond to the growth needs of the resort in accordance to its market acceptance and the pace of development.

#### 6.4 OVERNIGHT ACCOMMODATION

Overnight accommodation is measured in bed-units (BU) and the number of bed-units a resort can achieve is usually determined by a multiplier established by the ASRG's bed unit calculation model and the resort's BRC. The resort, however, has many characteristics of an out-of-category resort destination type and will request fewer tourist bed units (1,997) than it may otherwise qualify for. This is due to a number of reasons, including:

- 1. It is located immediately adjacent to the existing Village of Valemount, which has an existing bed-base, hotel accommodation and ample room for expansion. The resort bed base will not compete directly with the Village of Valemount for growth it will be small, compact, and designed to appeal to a different tourist demographic;
- 2. Market demand and real estate absorption rates for a relatively remote, high-end destination must be based on realistic metrics;
- 3. Visitor demographics are expected to mirror the nearby National Parks, where large numbers of international and long-haul visitors cycle through a small bed base and are "consumers" of beautiful vistas and memorable experiences as opposed to second home owners or real estate speculators. This results in frequent cycling of "warm" beds and continuous cash flow from operations;
- 4. At the same time, the available real estate must be very high end, but also of good value (large lots in an unparalleled, unique location) for buyers looking for intrinsic value wishing to purchase something special for their personal use over the long-term. A limited bed base also creates scarcity;
- 5. Minimizing the impact on the environment. The design has been optimized to generate a successful project with a minimal development footprint and impact.

#### 6.4.1 Bed Unit Calculation Model

The ASRG provides a bed unit calculation model that assigns point values based on the specific existing and proposed attributes of the resort in terms of its Balanced Resort Capacity (BRC). The total points determine the appropriate ratio of bed units to BRC. The model proposes a reasonable way to maximize the number of bed units for a given development. This model is not appropriate for the project, which has many out-of-category qualities that are not considered in the model and where the intent is not to maximize the development, but to develop in proportion to the anticipated market. The information below is presented for information purposes only.

Table 41: ASRG Bed Unit Determination Model

Criteria	Determination	Points at Build-out
Terrain	Close to ideal slope ratio	3
Skier Density	18.2 skiers/ha	4
Travel Time	Greater than 3 hours	6
Access	Highly Reliable	1
Population within 250 km	< 30,000	1
Unique Attraction	Glacier sightseeing	3
All Season Facilities	Excellent if you factor in sightseeing	4
Length of Ski Season	> 150 days	4
Type of Snow	Dry over 90% of winter season	4
Hours of Sunshine/Year	N/A	1
Express Lifts	More than 50%	2
Employee Housing	Proximity to Village of Valemount – 20% provided on-mountain	2
First Nations Participation	Extensive IMBA	4
Total		39

Given the planned infrastructure and resort attributes, according to the chart provided in the ASRG, the resort could hypothetically qualify for up to 125% of its BRC, corresponding to 13,274 units. This is not what is planned. Instead, the resort is designed to be as compact as possible and it is expected that development in the Village of Valemount will accelerate considerably once construction of the resort begins.

The ASRG (II.5.11) indicates the following:

The amount of accommodation, in terms of the number of BU's established at any mountain resort must take into account the following: All existing, proposed and potential development within the surrounding region...

There are currently 886 hotel bed units in the Village of Valemount, not including single family homes, AirBNB, traditional bed and breakfasts, etc. A conservative 30% increase over 20 years will bring the number to 1,152. Jasper currently has 4,918 hotel bed units. This also does not include bed and breakfasts, other accommodations. No future growth is predicted for Jasper.<sup>25</sup> If you add another 20% for non-hotel tourist accommodations, the total number of bed units including VGD's is 9,284. Furthermore, 15% of visitors are expected to be day visitors from Prince George and smaller communities such as Clearwater and Hinton. This is equivalent to approximately 750 bed units for a total of 10,034 accessible tourist bed units, which is sufficient to service VGD's skiing and sightseeing visitors at buildout. Employee housing is not included in these figures.

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<sup>&</sup>lt;sup>25</sup> It is difficult to project future growth rates for Jasper because of the National Parks restrictions on development.

# 6.4.2 Bed Unit Inventory

Table 42: Phase One Bed Unit Inventory

Bldg. No.	Building Name / Use	Designation	Bldgs	Suites	Bed Units Per Suite*	Total Bed Units
A1-A2	Service Buildings	Service	2	-	-	-
A3	Daylodge	Daylodge	1	-	-	-
A4	Accommodation	Condotel	1	42	3	126
A5	Hotel	Hotel	1	30	2	60
A6	Hotel	Hotel	1	100	2	200
A7	Accommodation	Condotel	1	23	3	69
A8	Ski Club	Others	1	-	-	-
A9	Admin. & Central Booking	Others	1	-	-	-
A10	Heli-Ski Daylodge	Daylodge	1	-	-	-
A11	Genset Bldg	Service	1	-	-	-
A12	Nordic Skiing Lodge	Daylodge	1	-	-	-
A13-A23	Accommodation	Single Family Chalet	11	1	6	66
A24	Accommodation	Bed & Breakfast	1	1	6	6
A25-A52	Accommodation	Single Family Chalet	28	1	6	168
A53-A67	Accommodation	Single Family Chalet	15	1	6	90
A68	Accommodation	Bed & Breakfast	1	1	6	6
	Total Phase 1 Market Bed Units		68			791

 <b>Employee Housing</b>	Condo	1	35	2	70
Total Phase 1 Non- Market Bed Units		1			70
Total Phase 1 Bed Units		69			861

Table 43: Phase Two Bed Unit Inventory

	Building Name / Use	Designation	Bldgs	Suites	Bed Units Per Suite*	Total Bed Units
B1	Accommodation	Condotel	1	20	3	60
B2	Accommodation	Condotel	1	17	3	51
B3	Ski Club	Others	1	-	-	-
B4	Intrerpretive Centre	Others	1	-	-	-
B5	Convention Centre	Convention Centre	1	-	-	-
B6	Fire Hall/ Ambulance Station	Others	1	-	-	-
B7-B12	Accommodation	Duplex	6	2	4	48
B13-B65	Accommodation	Single Family Chalet	53	1	6	318
B66	Accommodation	Bed & Breakfast	1	1	6	6
B67-B88	Accommodation	Single Family Chalet	22	1	6	132
	Total Phase 2 Market Bed Units		88			615
	Employee Housing	Condo	1	35	2	70
	Total Phase 2 Non- Market Bed Units		1			70
	Total Phase 2 Bed Units		89			685

Table 44: Phase Three Bed Unit Inventory

Bldg. No.	Building Name / Use	Designation	Bldgs	Suites	Bed Units Per Suite*	Total Bed Units
C1	Service Buildings	Service	1	-	-	-
C2	Accommodation	Condotel	1	25	3	75
C3	Info Centre	Others	1	-	-	-
C4	Chapel	Place of Worship	1	-	-	-
C5	Other	Others	1	-	-	-
C6-C90	Accommodation	Single Family Chalet	85	1	6	510
C91	Accommodation	Bed & Breakfast	1	1	6	6
	Total Phase 3 Market Bed Units		91			591
	Employee Housing	Condo	1	31	2	62
	Employee Housing	Townhomes	1	24	4	96
	Total Phase 3 Non- Market Bed Units		2			158
	Total Phase 3 Bed Units		93			749

Table 45: Total Bed Unit Inventory

Buildings	Number of Buildings	Total Bed Units
Bed & Breakfast	4	24
Condotel / Condominium	5	381
Duplex	6	48
Hotel	2	260
Single Family Chalet	214	1,284
Daylodge	3	-
Other units	13	-
Total Phase 1+2+3 Market Bed Units	247	1,997
Total Phase 1+2+3 Non-Market Bed Units	4	298
Total Phase 1+2+3 Bed Units	251	2,295

# 6.4.3 Employee Housing

The Valemount Glacier Destination project is in an uniquely favourable position because it can access glaciers near the 3,000 meters (9,800 feet) elevation above sea level, have a secluded ski in and ski out alpine resort, and yet be within easy commuting distance from the Village of Valemount, with an existing infrastructure, population base and work force.

It is expected that even in the first phase some expertise will be necessary from the outside world and that there will be employees coming into the Village. There is ample housing availability in the Village, and the Village has ample room for expansion, thus keeping in balance the demand and the availability of land for housing, especially in the long term. The Village with its zoning powers and large boundary can maintain affordability, as the availability and cost of the land is the single most significant factor in the cost of housing.

However, units for employees that are required to be on the mountain all the time will be provided at the resort site and on the mountain as necessary, and over time the developer will be providing accommodation directly for a portion of employees because this is a good and even necessary employment strategy.

The plan is to provide **298** beds (15% of the tourist bed-base, which is within the ASRG recommendation of 10-20%), including family housing, to become part of a rental pool for employees' accommodation. These are not part of bed unit counts for the purposes of the *Environmental Assessment Act* threshold calculations because they are non-commercial.

Approximately 70 apartment units (140 bed units) will be built in the resort core village and the remainder, including 24 townhouses, will be built at the future departure point of the airport gondola base.

Table 46: Employee Housing Bed Unit Inventory

Phase	<b>Building Type</b>	Total Bed Units
1	Condominium	70
2	Condominium	70
3	Condominium	62
3	Townhomes	96
Total Phase 1+2+3		298

# 7. PHASING PLAN

### 7.1 PHASE ONE

Conceptually, the project is designed to be developed in three major phases.

In the first phase, the lift system will reach Twilight Glacier, at elevation 2,530 meters (8,301 feet), allowing for year-round skiing and for a vertical drop of 1,370 meters (4,495 feet) to the resort village base. Sightseeing from Twilight Glacier, and especially from nearby Glacier Ridge will be impressive, more impressive than any mountain viewpoint in the National Parks, with an incredible view of Mount Robson, the highest peak in the Canadian Rockies.



Mount Robson

On opening day, there will be very limited development of the base area, with only a day lodge, a generator building, and a service building being constructed. Construction of the village will begin once operations have commenced and the first phase will be built out in subsequent years, reaching a total of 69 buildings and 681 bed units on completion.

Table 47: Phase One Base Area and On-Mountain Components

Base Area				Mountain		
Bldg. No.	Designation	Bldgs	Bed Units	Lifts	Ski Runs (Ha)	CCC
A1-A2	Service	2	-	Magic Carpet A		
A3	Daylodge	1	-	Magic Carpet B		
A4	Condotel	1	126	1.1 Valemount Glacier Gondola		
A5	Hotel	1	60	1.2 Twilight Basin Gondola		
A6	Hotel	1	200	1.4 Twilight Glacier D-Quad		
A7	Condotel	1	69	1.5 T-Bar		
A8	Others	1	-	1.6 T-Bar		
A9	Others	1	-	1.7 Powder Express D-Quad		
A10	Daylodge	1	-	1.8 Village Chair F- Quad		
A11	Service	1	-	1.9 Glacier Ridge Gondola 1.10 Twilight Return F-Quad		
A12	Daylodge	1	-			
A13-A23	Single Family Chalet	11	66			
A24	Bed & Breakfast	1	6			
A25-A52	Single Family Chalet	28	168			
A53-A67	Single Family Chalet	15	90			
A68	Bed & Breakfast	1	6			
	Employee Housing	1	70			
<b>Total Phas</b>	e 1	69	861	11 Lifts	529 Ha	5,587

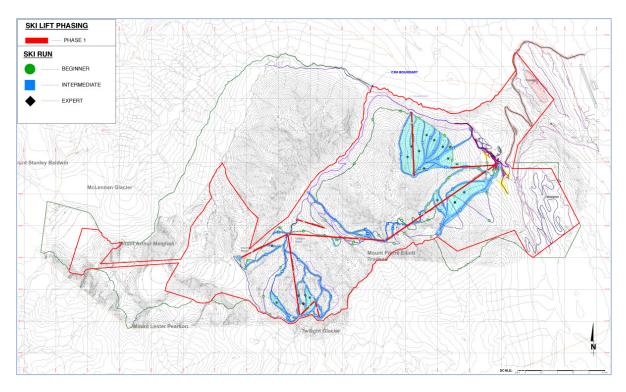
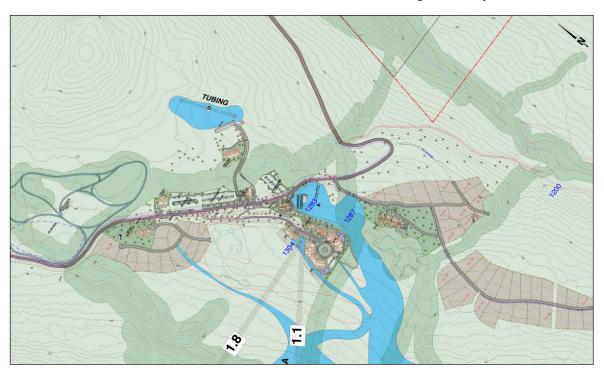


Exhibit 37: Phase One Ski Runs and Lifts





# 7.2 PHASE TWO

The second phase will further develop the skiable terrain from Glacier Ridge as well as the northern face of Mount Trudeau, significantly expanding the skiable territory. The sightseeing experience of the glaciers will continue to be world-class and the vertical drop will increase to 1,595 meters (5,233 feet) as a new day skier base area is constructed near the airport.

The resort village will continue to grow through phase two, adding 88 buildings and 615 bed units at the village site, plus an additional condominium building and townhouse complex at the airport base site for employees reaching a total of 158 buildings and 1,546 bed units by the end of the phase. Comfortable Carrying Capacity (adjusted) will reach 14,222.

Table 48: Phase Two Base Area and On-Mountain Components

Base Area				Mountain		
Bldg. No.	Designation	Bldgs	Bed Units	Lifts	Ski Runs (Ha)	ccc
B1	Condotel	1	60	2.1 Village Connector D-Quad		
B2	Condotel	1	51	2.4 Sawmill D-Quad		
B3	Others	1	-	2.6 Glacier Ridge Upper Bowl D-Quad		
B4	Others	1	-	2.7 Glacier Ridge Lower Bowl D-Quad		
B5	Convention Centre	1	-			
B6	Others	1	-			
B7-B12	Duplex	6	48			
B13-B65	Single Family Chalet	53	318			
B66	Bed & Breakfast	1	6			
B67-B88	Single Family Chalet	22	132			
	Employee Housing	1	70			
<b>Total Phas</b>	e 2	89	690	4 Lifts	283	3,601
Cumulative	9	158	1,546	15 Lifts	813	9,189

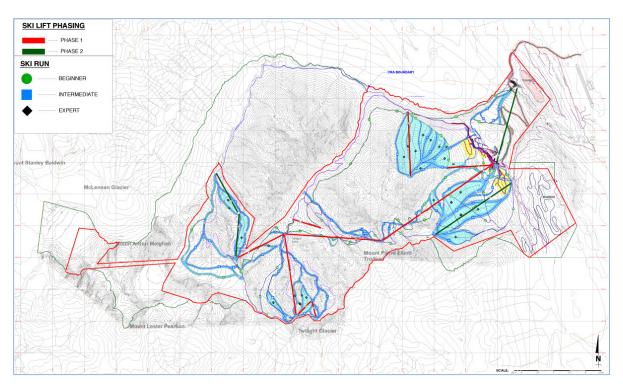


Exhibit 39: Phase Two Ski Runs and Lifts





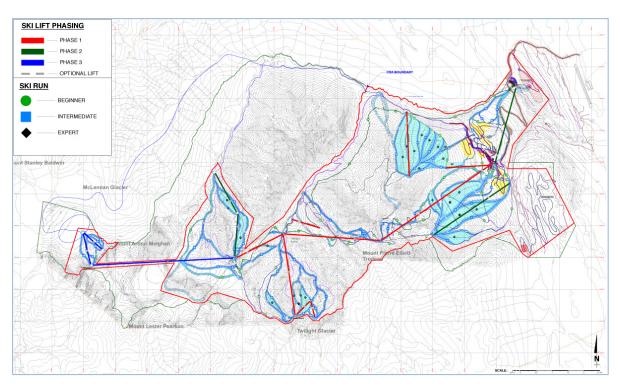
# 7.3 PHASE THREE

The lift system in the third phase will reach a saddle below Mount Arthur Meighen, at 3,205 meters (10,515 feet), further expanding the summer skiing to an optimal location and creating the most dramatic sightseeing experience of the project, a major international draw showing mountains with glaciers from a spectacular and unique viewpoint. The vertical drop to the resort base near the airport will reach 2,090 meters (6,857 feet), amongst the largest in the world, and could reach 2,260 meters (7,415 feet) with the installation of an optional lift, the second largest in-bounds vertical drop in the world in absolute terms and without requiring snowmaking – a particularly noteworthy attribute that is unlikely to be replicated elsewhere.

By the end of phase three, the resort will reach build out with 247 buildings and 1,997 bed units of market housing plus 4 buildings and 298 bed units of non-market employee housing.

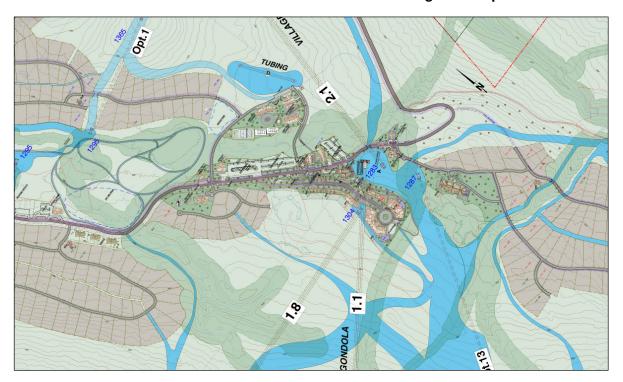
Table 49: Phase Three Base Area and On-Mountain Components

Base Area				Mountain		
Bldg. No.	Designation	Bldgs	Bed Units	Lifts	Ski Runs (Ha)	ccc
C1	Service	1	-	3.1 Premier Glacier Express		
C2	Condotel	1	75	3.3 T-bar		
C3	Others	1	-	3.4 T-bar		
C4	Place of Worship	1	-			
C5	Others	1	-			
C6-C90	Single Family Chalet	85	510			
C91	Bed & Breakfast	1	6			
	Employee Housing	1	62			
	Employee Housing	1	96			
<b>Total Phas</b>	e 3	91	749	3 Lifts	31	312
Cumulative	9	251	2,295	18 Lifts	844	9,500



**Exhibit 41: Phase Three Ski Runs and Lifts** 





# 8. ROADS & INFRASTRUCTURE

### 8.1 ACCESS & LOCAL ROADS

# 8.1.1 Arterial/Primary Access Road

The arterial or primary access road to the resort is British Columbia Highway 5 known as the Southern Yellowhead Highway that stretches from Hope BC to Tête Jaune Cache, north of the Village of Valemount. The highway is the primary route connecting Northern Alberta with Southern British Columbia and the Pacific coast.

# 8.1.2 Access Road from Highway 5

The local access road from the Highway 5 will be the current McLennan Road, which becomes the Crooked Creek Road. This is also the access road for the Valemount Airport. The road is accessed from the Highway just north of the Village Valemount and is a two-way paved road to the airport (distance is 3.5km). A one-way bridge crosses the McLennan River. Once the road reaches the airport, it becomes a forest service road from the airport to the resort base site (another 3.5 km). The road is located outside the boundaries of the Village of Valemount and is under the governance of the Regional District of Fraser Fort George and under the jurisdiction of MoTI.

It is proposed that the existing road alignment be largely maintained although it might be realigned in anticipation of a future airport runway expansion. The forest service road will be upgraded to a 8.2-meter MoTI Rural Collector Undivided and Low Volume Rural standard, initially unpaved, with 0.5 meter shoulders. Upgrading to a paved access road standard will occur in accordance to a phasing plan outlined in Section 8.1.6. The road standards will be as outlined in a Memorandum of Understanding signed between the proponent and MoTI on October 8, 2015 and included in Appendix 5.

# 8.1.3 Resort Village Access Road

The road from the day skier parking area and resort base site to the village will follow existing and planned forest service road alignments and will be constructed to MoTl Rural Collector Undivided and Low Volume Rural standards as agreed to with MoTl (October 8, 2015 MOU included in Appendix 5). The standards take into account the mountainous terrain and the estimated traffic, with an 8.2 meter top and a paved surface of 7.2 meters with 0.5 meter unpaved open shoulders. The roadbed may

remain unpaved for the opening phase of the resort, but will be upgraded to a paved standard corresponding to the pace of development as agreed to with MoTI and as indicated in section 8.1.6.

#### 8.1.4 Subdivision Roads

Public roads in the resort base area will be constructed according to Alpine Road Standards (grade, width, etc.) that will be dependent on the size and type of subdivision. Road standards will meet BC supplement to Traffic Association of Canada (TAC) Design Manual – Supplement to TAC Geometric Design Guide – Alpine Ski Village Roads Chapter..

Roads in the heart of the resort village's commercial area that are to be dedicated as MOTI road shall meet all applicable MOTI standards. MOTI design guidelines shall specify the road and right of way standards and the master plan outlines the possible location.

Subdivision and resort roads must be constructed to MOTI standards prior acceptance and dedication as a MOTI public road.

As noted above, the resort village may also be developed as a phased strata corporation, and in this case the internal roads and services would be managed by the strata corporation and be designed for the special purposes of the mountain resort village.

#### 8.1.5 Snow Removal and Maintenance

The private road areas are to be maintained by the owners, who are expected to be represented by a strata corporation. Maintenance includes required summer and winter maintenance and upgrades I. If there are dedicated public roads within the base they will be maintained as per a negotiated agreement with MOTI. VGD plans to negotiate with the Province to resolve maintenance and snow removal issues until the roads are completed to agreed standards. It is a possibility that VGD will form a phased strata corporation and take responsibility for maintenance and snow removal until the strata corporation is funded and fully functioning. Maintenance of the public access road from Highway 5 to the resort base area is expected to be by the Ministry of Transportation and Infrastructure

### 8.1.6 Access Road Phasing Plan

The access road can be divided into two segments – a first segment is approximately

4km and leads from the existing paved airport access road to the bottom resort base and parking area (also known as the "airport base") at approximately 900m elevation, and the second segment is approximately 5km and leads up a relatively steep hill from the bottom resort base area to the resort village at 1,300m elevation. The access road to the resort shall be dedicated public road. This phasing plan is for a dedicated public road reaching the resort village at 1,300m elevation. The plan is based on the Traffic Impact Study as well as the Road Alignment drawings and road design criteria that have been developed by McElhanney Consulting. These are is included in Appendices 5 and 6.

The road design guidelines are selected based on applicability to the regulations that govern the project are subject to but not limited to the following:

- The October 8<sup>th</sup>, 2015 Memorandum of Understanding
- British Columbia Ministry of Transportation and Infrastructure (MoTI)
- Supplement to TAC Geometric Design Guide.
- The base document the MoTI design guide refers to, is the Geometric Design Guide for Canadian Roads (TAC). It is available through the Transportation Association of Canada.

A gravel road built to MoTI standards is expected at the project opening for day skiing. The road is expected to be paved at the time of subdivision and land sales shortly after the resort opening, but at the latest it is expected to be paved to its final standard by the end of Phase One.

Table 50: Public Access Road Phasing

Phase	Year (approx.)	Standard	Peak Hour Trip Generation <sup>26</sup>
Beginning Phase One	2017	MoTI Standard Two Lane Gravel Category B Recreational Road	45
End of Phase One	2021	MoTI Standard Two Lane Rural Collector Road <sup>27</sup>	108
End of Phase Two	2027	MoTI Standard Two Lane Rural Collector Road	234
End of Phase Three (build out)	2037	MoTI Standard Two Lane Rural Collector Road	360

 $<sup>^{\</sup>rm 26}$  As indicated in the Traffic Impact Study included in Appendix 6 of this Master Plan.

<sup>&</sup>lt;sup>27</sup> As described in the Design Criteria document included in Appendix 5 of this Master Plan.

#### 8.2 PARKING CALCULATIONS

The total required parking is based on the Adjusted Comfortable Carrying Capacity (ACCC) of the ski area of the resort. The current assumption of the Master Plan is a mountain design capacity with a CCC of 9,500.

The ACCC is a theoretical number, because the actual number of skiers is significantly reduced by occupancy rates at the resort and by the utilization rate of the lifts generating the uphill capacity. For the resort, a peak utilization rate in the order of 25% would be a reasonable assumption based on current trends, its location, and projections.

It is assumed that at build out, on peak days, day visitors will make up a maximum of 1/3 of the ACCC, amounting to 2,885 day visitors on peak days. 15% (433) are likely to arrive by bus, leaving 2,452 to arrive by car. A total of 1,096 day visitor parking spots will be provided at build out. This amounts to an average of 2.24 visitors/car, which is roughly in range of the 2.5-3.0 visitor/car range recommended by the ASRG.

A total of 21 bus parking spots will also be provided, equalling twice the number of spots (assuming an industry standard average of 40 visitors/bus) required to service day visitors in accordance to ACCC calculations and ratios. This is to accommodate the potential for a heavier weighting of bus traffic relative to other resorts due to the sightseeing opportunities and the travel trends of the Edmonton ski market.

The Master Plan also includes 745 parking spaces provided as part of the tourist residential development. The total number of parking spaces at the resort at build out will be 1,640 – capable of servicing up to 5,760 people.

Table 51: Phase One Peak Day Visitors

ACCC	Peak Utilization	Peak Day Visitors
5,705	33%	1,883

Table 52: Phase One Parking Calculations

Building	Bldgs	Stall/Unit	# of Units	# Parking Stalls	# Bus Stalls	Total Passenger Capacity
Hotel	2	.75	130	98		
Bed & Breakfast	2	6	2	12		
Duplex	0	1	0	0		
Single Family Chalets	54	2	54	108		
Condo	2	1	65	65		
Day Visitor Parking	-	-	-	416	19	
Total Stalls				699	19	
Passengers*				1,567	760	2,326

<sup>\*2.24</sup> passengers/car - 40 passengers/bus

Table 53: Phase Two Peak Day Visitors

ACCC	Peak Utilization	<b>Peak Day Visitors</b>
2,725	33%	899

Table 54: Phase Two Parking Calculations

Building	Bldgs	Stall/Unit	# of Units	# Parking Stalls	# Bus Stalls	Total Passenger Capacity
Hotel	0	0.75	0	0		
Bed & Breakfast	1	6	1	6		
Duplex	6	1	2	12		
Single Family Chalets	53	2	53	106		
Condo	2	1	37	37		
Day Visitor Parking	-	-	-	415	12	
Total Stalls				676	12	
Passengers*				1,514	480	1,994

<sup>\*2.24</sup> passengers/car – 40 passengers/bus

Table 55: Phase Three Peak Day Visitors

ACCC	Peak Utilization	Peak Day Visitors
312	33%	103

Table 56: Phase Three Parking Calculations

Building	Bldgs	Stall/Unit	# of Units	# Parking Stalls	# Bus Stalls	Total Passenger Capacity
Hotel	0	0.75	0	0		
Bed & Breakfast	1	6	1	6		
Duplex	0	1	0	0		
Single Family Chalets	85	2	85	170		
Condo	1	1	25	25		
Day Visitor Parking	-	-	-	64	0	
Total Stalls				265	0	
Passengers*				594	0	594*

<sup>\*2.24</sup> passengers/car – 40 passengers/bus

#### 8.3 WATER SUPPLY

#### 8.3.1 Potable Water

The potable water supply sources for the base village will be from local wells. Yearly water demand is expected to be in the range of 59,836 m³ at build-out. VGD is planning to establish a number of voluntary and mandatory water conservation measures.

Depending on groundwater quality of the additional wells required for the build-out stage of the development, treatment, including chlorination, may be required. The water quality standard will satisfy the guidelines established by Health Canada in the *Guidelines for Canadian Drinking Water Quality*.

Groundwater from the wells will be pumped to holding tanks for any necessary treatment and the treated water repumped into ground level reservoirs. The reservoirs will be sized to accommodate fire protection flows as well as peak daily demand flows. A site servicing plan is included in Appendix 10.

#### 8.3.2 Water Demand

Water demand estimates for mountain resorts are complicated by the fact that generally accepted requirements and data are not be derived from urbanized areas with a history of water wastage, industrial uses etc<sup>28</sup>. It is an important objective for new resort developments to be designed for conservation. It is the project's objective to emulate design and water conservation practices of Sun Peaks Resort and to improve them by 10-20% by utilizing more up-to-date conservation technology. VGD implements a design model that utilizes landscaping and density more suitable for conservation than that of Sun Peaks for the following reasons:

2

<sup>&</sup>lt;sup>28</sup> Water demands are generally grouped in four categories: Residential, Commercial, Industrial, and Institutional. Unlike urbanised areas, a mountain resort does not have industrial and institutional users. The commercial category will be limited to stores and restaurants in a supporting role to the resort and will not include shopping centres and other major commercial water users. The residential category will be the largest, with single family chalets, townhomes, condominiums and hotel type of accommodations.

Water for residential and commercial users falls into three main sectors: (a) residential and commercial building requirements, (b) firefighting requirements and (c) landscaping and irrigation requirements. Item (b) is not calculated in daily or annual water requirements because fire flows are regulated by peak demand design considerations, which are attended to by storage and peak flow requirements. Item (c) will not be required because of landscaping design and covenants which will direct design and maintenance to the regeneration of indigenous forest and vegetation. Calculations are consequently based on the requirements for residential and commercial buildings in a mountain resort area.

- The design guidelines will exclude grass and non-indigenous landscaping;
- Average temperatures are lower and the summer season is shorter due to its more northern latitude;
- There will be no golf course; and
- There will be no snow making requirements.

Surface water and ground water are available and both options have been reviewed by the consulting group. The selected option is to draw water from the ground, which may result in water that requires minimal or no treatment.

# 8.3.2.1 Design Assumptions and Visitor Calculations

Average and peak overnight and day visitor numbers are estimated by conservative design considerations and by comparison with other resorts in a similar market where data can be compared, even if VGD will be unique in several respects. Engineering assumptions have been reviewed in the light of the number of visitors relative to the project design, in light of market comparisons and in light of applicable precedent. The following shows three ways of calculating yearly water demand:

#### By Number of Visitors and Design:

Comfortable Carrying Capacity and Utilization Rate calculations: the project is able to receive approximately 4,373 visitors on a peak winter day. This includes both overnight visitors from the resort and elsewhere and day visitors. 4,373 visitors is based on a 50% Utilization Rate (UR) of the maximum Comfortable Carrying Capacity (CCC) of 8,742 people per day at build out<sup>29</sup>. A 50% UR is not typical for most resorts in B.C., which tend to see peak days with a 20-30% UR.

**Peak capacity:** A peak day may achieve 85% room occupancy for overnight accommodation, equal to a theoretical 1,700 people. Assuming that at peak season 15% of rooms with two beds have only one occupant, this would translate into 1,573 overnight guests. Assuming during peak season a high number of twice the day skiers versus overnight skiers, there would be 3,146

<sup>&</sup>lt;sup>29</sup> To appreciate the relationship between UR and CCC they may be compared to the maximum speed and horsepower of an automobile, which are provided as design data, on the assumption that no one will drive at full speed - the CCC may be compared to the maximum speed of which the automobile may be capable and the UR the average speed at which it is assumed it will be actually driven.

day skiers for a total of 4,719 skiers.

Average overnight visitors: At build out there will be 1,997 tourist bed units. Past and future projections for successful ski resorts indicate that yearly occupancy rates of 35% to 40% are the norm. Although this resort will offer summer skiing, the size of summer skiing will be considerably smaller than the winter area, and summer skiing will remain a smaller operation. If we use a 40% yearly occupancy rate number, this means that there could be 800 visitors per night over the theoretical 365 nights for a total overnight maximum visitor rate of 292,000. As the resort may be closed for 30 days for maintenance and the low season (in the late spring low season the resort may not be shut down, but occupancy is expected to be extremely low – the main season is 180 days in winter and 60 days in summer), the total overnight annual accommodation would be 268,000.

Average day visits: To determine the number of skier visits we assume that 85% to 90% of overnight visitors will be skiers and snowboarders. Therefore, overnight visitors will account for a yearly average of 540 skier visitors per day. Day visitors, because of the bed base of the Village of Valemount and of the bed base of the Jasper region, as well as the frequency of tour bus visits to the region, will be assumed to be a high number of up to 300% of the number of overnight visitors (with a larger component in the summer), or 1,620 skiers and sightseers per day. This totals 2,420 visits per day or 580,800 skier visits per year at build out.

# **By Market Comparison:**

The project should be measured, when completed, against resorts like Marmot Basin or Jackson Hole, which may receive approximately 260,000 skier visits per year or 712 per day average over the entire year or 1,444 per day over a 180 day main season. The resort will have the advantage of greater utilization of lifts in the summer, because of the ability to complement sightseeing with summer skiing. A reasonable ultimate target would be to consider 500,000 skier/sightseer visits per year. 500,000 visits over a period of 335 days would generate a yearly average of 1,194 visitors per day. However, a more appropriate comparison would be created by dividing the total number of visitors by the number of main ski season days, which is estimated at 180 in winter and 60 in summer. Allowing for 10% for the rest of the year, 500,000 visitor days must be divided by 240 season days, which would result in 2,083 skiers/ visitors per day, of which about 38% would be

day visitors and the other 62% would be overnight visitors for a total of 1,292 visitors/night.

Thus the market derived assumption would produce a larger number of average overnight visitors (1,292 vs 800), which can be explained by the fact that a significant number of overnight visitors will stay in the Village of Valemount as opposed to the resort.

#### 8.3.2.2 Water Demand Calculations

In order to calculate average and peak water demand calculations, the following needs to be considered: at build-out, the resort is expected to have an average of 1,300 persons per day over a 335 day year.

Water demand calculations are based on an engineering estimate of 200 to 220 L/person (53 to 58 gallons/person) for overnight visitors and on 30 to 40 L/person (8 to 10 gallons/person) per day visitor, as follows:

# Table 57: Average Yearly Water Demand (Based on 335 Days of Operation)

800 overnight visitors @ 210L/person =	168,000 L/day
50 overnight employees @ 210 L/person =	10,500 L/day
965 day visitors @ 35L/person =	157,500 L/day
80 Day Employees @ 35L/person =	2,800 L/day

Average Day Requirement = 169,400 L/day

Total water required over 335 days of operation = 56,749 m<sup>3</sup>

+ up to 200 employees during 30 day closure @ 210 L/person = 1,260 m<sup>3</sup>

Total Demand =  $58.009 \text{ m}^3$ 

By comparison, the current yearly water usage reported by Sun Peaks Resort is 110,000 cu metres for 3,500 Bed Units, which translates into 31 cu metres per bed. VGD expects to achieve a 10% improvement over Sun Peaks because of the difference in location and the opportunity of improving water conservation strategies, and the small number of overnight employees. Multiplying the resort village build out target of 2,147 beds by 28 cu metres

per bed one would calculate 59,836 m³ per year, which is close to the engineering calculation of 56,749 m³ per year (not including water use during the 30 day closure), and should be an achievable conservation target.

#### 8.3.3 Water Distribution

The proposed water distribution system (shown in Appendix 10) will be designed to provide sufficient potable water at a maximum daily demand flow rate with a fire assumed at any one location within the development. The greatest demand will be generated by fire suppression at the proposed hotel locations. The watermain network will generally follow the proposed roadways. Sufficient watermain looping will be provided for better flow/pressure balancing and elimination of stagnant water problems. Due to the difference in ground elevation of the various parts of the development, the distribution system will operate in different pressure zones. Pressure reducing valves will therefore be required.

Valemount Glacier Destinations Ltd. is discussing with the Simpcw Resources company and its partners the establishment of a public utility company that will provide the necessary services for the project. As soon as the Master Plan is approved and the utility is established, the utility will make an application to obtain a Certificate of Public Convenience and Necessity (CPCN). The utility will build and operate the water supply and distribution system.

#### 8.3.4 Fire Flows

Fire flows will be in accordance with the Insurance Bureau of Canada's publication *Water Supply for Public Fire Protection – A Guide to Recommended Practice*, used by most municipalities in British Columbia. The waterworks system will be designed with input from the Fire Commissioner's Office, the Valemount and District Volunteer Fire Department, and from other existing mountain resort communities.

The minimum reservoir volumes are recommended by Fire Underwriters Survey (F.U.S.). The reservoir volume will include fire storage, balancing or equalizing storage, and an emergency storage. Automatic sprinkler systems will be required for all major building types as per BC Building Code, and are recommended also for the single-family chalets, to substantially reduce the fire flow demand. The highest fire flow demand for the proposed development is estimated at 150 litres per second. This will require some adjustment depending on the type of building construction. The components of the reservoir storage are determined, based on the estimated water demand for each development phase.

# 8.4 SANITARY SEWAGE/WASTEWATER COLLECTION, TREATMENT AND DISPOSAL

A utility will administer the collection, treatment and disposal of liquid waste. A sanitary sewer collection system will service the hotel, condominium, commercial, townhouse and single family areas of the resort. The utility will build and operate the sewage treatment plant and sewer system and will make an application to obtain an approval under the Municipal Sewage Regulation (MSR).

The sewage treatment plant will be constructed pursuant to a design/build proposal from the wastewater industry. A possible option at this time is a sewage treatment system supplied by Ecofluid (see Appendix 7), which is similar to the one constructed at Kicking Horse Mountain Resort in Golden, BC. The system in Golden uses an Upflow Sludge Blanket Filtration process. The expected effluent quality of a plant of this type is as follows:

- BOD5 < 10 mg/L
- Total suspended solids (TSS) < 10 mg/L</li>
- Ammonia < 1 mg/L
- Phosphorus (total) < 1 mg/L.</li>

The treatment process will involve separating the solid fraction from the liquid fraction. The solid fraction will be concentrated to an estimated 4-6% of its initial volume, resulting in relatively low costs for trucking the sludge away. The level of treatment for the liquid fraction is determined by the effluent criteria required in the MSR.

Ultraviolet light will be used for disinfection to avoid potential toxicity issues associated with chlorine. Ultraviolet light is the method of disinfection recommended in the MSR.

The sewage treatment plant will be built in stages to keep up with the progress of the resort development. The treated water may drain by way of pipe to an approved outfall and small drainage field according to the Ministry of Environment application requirements based on the recommendations of the Environmental Impact Study.

# 8.5 STORM WATER AND SNOWMELT MANAGEMENT

# 8.5.1 Development Considerations

Storm water and snowmelt run-off from the uphill ski areas will occur primarily as overland sheet flow and concentrated flow in numerous channels and small creeks criss-crossing the development site. This run-off will be intercepted by cut-off

ditches on the uphill side of the development and routed around into the closest receiving streams. In open areas outside of the development the run-off will be intercepted by roadside ditches and pass through culverts under the roads.

The concentrated base area of development will be serviced with piped storm drains. Where possible, the discharge from ditches and storm drains will be routed through the system of wetlands and lowlands scattered downstream of the development site. This will provide a certain measure of storm water quality and quantity control through natural biofiltration and uncontrolled detention. Opportunities will be explored to enhance this detention or to provide additional detention elsewhere at the site to mitigate the effects of an increase in run-off due to the proposed development.

Efforts will continue to be made to maintain existing hydrologic patterns at the site by reducing the amount of diversions. Drainage areas, as delineated in the Storm Water and Snowmelt Management Plan (Existing Drainage Conditions), will remain unchanged. Although local diversions near the base facilities will be provided to reduce the risk of erosion and water quality problems, overall run-off patterns will be maintained. This is particularly important with respect to maintaining base flows in creeks.

Interceptor cut-off ditches, creek or channel diversions and ditches in general will be designed with minimal gradients, where possible. Where necessary, check dams, riprap armouring and other means of erosion protection will be utilized to ensure erosion does not occur during periods of substantial run-off.

No land disturbance will occur within the 200 year flood plain.

The Development plan will ensure potential for storm water contamination by automotive petroleum products is minimized. This may be accomplished by construction of biofiltration swales intercepting run-off from parking lots and maintenance areas.

## 8.5.2 Implementation Considerations

VGD recognises that storm water and snowmelt run-off can have a significant impact on the receiving environment. Hence the development will incorporate erosion control and pollution control measures to prevent deterioration of the watershed. During both the construction and post-construction phases of the project, VGD will focus on implementing the most applicable Best Management Practices (BMPs) to control the quality of run-off water. These will be in accordance with the project's

Environmental Analysis as well as the "Land Development Guidelines for the Protection of Aquatic Habitat" (DFO/MoELP, 1992).

Soil erosion and subsequent downstream deposition during construction is of particular concern since construction activity has the potential for significant impacts on water quality and aquatic habitat. During the construction period, at-source erosion control techniques will include:

- Minimum land clearing in advance of construction
- Timely revegetation of bare areas after construction
- Diversion ditches
- Riprap and other protection at locations most susceptible to erosion
- Limiting land clearing operations to dryer seasons.

The environmental analysis, together with the results of the hydrological study, will provide the basis for the design of drainage facilities, such as culverts, stream crossings, storm drains, sediment control facilities and other aspects of the Storm Water and Snowmelt Management Plan.

# 8.6 SOLID WASTE/GARBAGE MANAGEMENT PLAN

It is expected that the resort will operate its own waste transfer station. A potential waste transfer station location is shown in the master plan drawings.

# 8.6.1 Introduction to the Solid Waste Management Plan

The Solid Waste Management Plan provides the background and outlines the proposed policies and infrastructure for the **reduction**, **reuse** and **recycling** of solid wastes.

The following sources can generate waste:

- · Construction operations, mobile generators;
- Resort facilities, day use areas, and street receptacles;
- Commercial and institutional facilities;
- Hotels;
- Single family and multifamily complexes;
- Maintenance facilities; and
- Food service facilities.

A conceptual plan is provided for temporary storage of solid waste prior to off-site disposal. Public health and safety concerns have been considered in the preparation of the conceptual plan, particularly with respect to bear and rodent problems. Plans for the minimization, collection and handling of household hazardous wastes are included. Solid waste disposal is the mandate of the regional district, which operates disposal sites.

# 8.6.2 Garbage Collection and Disposal

All domestic waste will be placed in a fully enclosed waste transfer station, which will be designed as a closed, odourless, and predator proof structure.

Due to the presence of wildlife and the potential for animal/human conflicts resulting from unsecured garbage containers, there will be no curbside collection of garbage. Residents will be required to deposit garbage (and recyclable materials) at the waste transfer station. All overnight visitors will be required to keep refuse in enclosed predator-proof areas before dropping it off at the transfer station.

Food and organic wastes will be generated mainly by the catering and restaurant facilities at the hotel and commercial facilities and at the mountain top restaurants. Separate food waste containers will be provided at these locations.

Refuse bins will be provided at ski lifts and at the on-mountain facilities. These bins will be emptied daily and the collected waste dropped off at the central waste storage facility.

A recognized waste management hauler will be retained by the resort to collect and remove the solid waste and recyclable materials from the resort. The non-recyclable refuse will be disposed of at the Foothills Regional Waste Management Facility operated by the regional district. Disposal will be by contract and eventually may be administered by the regional district. Hotel and commercial facilities will contract for their own waste collection.

During initial and subsequent construction, contractors will be obligated to follow the Solid Waste Management Plan included in the EIA (Appendix 3). Construction waste for single family homes or townhouses will be removed by waste management contractors to the Foothills Regional Landfill.

At project opening, there will be no private residences at the resort and the resort operator will collect all garbage in a central location and arrange for removal to the Foothills Regional Waste Management Facility.

The resort transfer station will be made operational at the time of subdivision or when overnight accommodations (including staff housing) are constructed; whichever occurs first.

# 8.6.3 Recycling

The focus will be placed on waste minimization and recycling programs. To match the recycling programs in place in the regional district, the resort may provide for collection of:

- paper (newspaper, magazines, envelopes, telephone books, fax paper);
- cardboard;
- tin and aluminum cans;
- plastic milk jugs; and
- plastics numbered 1, 2, 3, 4, 5 and 6 (except styrofoam).

The resort will not provide curbside collection of recyclable materials because of the presence of wildlife and the potential for animal/human conflicts. Instead, an enclosed recycling depot will be strategically located within the resort complex to ensure cooperation of residents and guests and to keep garbage away from scavenging wildlife. In addition, dedicated bins for recyclable products will be proved at ski lifts and at the on-mountain facilities. These bins will be emptied daily and their contents dropped off at the central waste storage facility.

# 8.6.4 Criteria for Siting and Sizing Solid Waste Transfer Station

The following considerations should be taken into account during design of the transfer station:

- Screening from public view;
- Fencing to exclude animals;
- Accessibility along primary daily travel routes of residential users;
- Snow control (i.e., receptacles should function in high snow load conditions.
   Sheds may be necessary, and manoeuvring room for snow removal equipment);
- Space for one or more compacting animal-proof garbage roll off type bins which allow access to public without need for retaining walls;
- Space for one or more animal-proof compostable material roll off type bins, which allow access to public without need for retaining walls;

- Space for animal proof recycling receptacles for cans, bottles and plastics;
- Space for other items collected for recycling, such as cardboard and newspapers;
- Space for other items that may be collected in the future, such as other plastics;
- Space for Paint care and household hazardous waste collection buildings;
- Stockpile areas for tires and metal goods; and
- Safety measures for public use, such as railings, vehicle barriers, and signage.

Although not always necessary, future consideration may be given to staffing the site, and fencing to restrict or control access and materials deposited.

Local waste haulers should review transfer station depot before the design is finalized.

# 8.6.5 Hazardous and Special Wastes

Those who generate hazardous and special wastes will have to contract directly for its proper disposal. Some special arrangements must be made for hazardous wastes, as they are not accepted at any regional district refuse disposal facility. The collection of hazardous and special waste at the resort is not expected to be a normal occurrence, except on rare occasions.

## 8.6.6 Household Hazardous Waste

Hazardous household waste includes all consumer products that are corrosive, toxic, reactive or flammable (paints, solvents, cleaners, etc.). The major users of the household products will be overnight visitors and maintenance staff of the resort. Where the operations of the resort generate household hazardous waste, the resort will arrange for its proper disposal.

## 8.6.7 Special Waste

Special waste that will be generated includes waste oils and lubricants, refuse from the First Aid facility, and refuse from certain commercial facilities. As refuse from the first aid facility may be considered as Bio-Medical waste, consideration will be given to the co-management of this waste with the nearest hospital. The Ministry of Environment will be consulted on appropriate ways to handle special waste and handling will comply with established legislation and regulation.

Maintenance facilities will be equipped with conventional storage and handling

equipment for used oils and lubricants. These used oils and lubricants will be collected and managed by a recognized recycling facility.

The operation(s) responsible for the production of special wastes will be required to retain a recognized waste management organization to collect and dispose of these materials.

# 8.7 ELECTRICAL POWER

Electrical power will initially be provided by making use of the emergency power system for an early opening for day skiing. Discussions are underway with Tsetsk'wem Management Services, a joint venture between ATCO and Simpcw Resources Limited Liability Partnership to form a utility and provide a power generating facility independent from the BC Hydro grid. The facility will be environmentally progressive and may utilize propane, LNG or bio-diesel to produce energy. Failing that, the project will be supplied with power by B.C. Hydro. Both options are currently being evaluated.

#### 8.8 TELEPHONE AND INTERNET

The installation of appropriate telephone lines with accompanying ADSL Internet service by Telus is a possible form of service. The current alternative is a satellite telephone and Internet system. The feasibility of a fibre-optic connection to Telus' main line through the valley is being evaluated.

# 9. HAZARDS

## 9.1 AVALANCHES

#### 9.1.1 Avalanche Formation

Most of the open slopes of the proposed ski area above elevation 1,900 m. are exposed to avalanches. The avalanches are the result of a combination of the following factors:

- Slopes with inclines greater than 30° near the upper terminals.
- Deep snow which reaches a depth of 2 m. to 2.5 m. on slopes that are not affected by the wind.
- Strong south-westerly winds during snowfalls. The wind deposits deeper snow on the ski slopes which are on the downwind side of the mountain.

Depending on the type of surface of old snow on which new snowfalls, the new snow may remain unstable for the duration of one day to several weeks after a snowfall.

#### 9.1.2 Avalanche Hazard Studies

Avalanche hazard mapping has been prepared by Alan Jones of Dynamic Avalanche Consulting Ltd. and is included in Appendix 4.

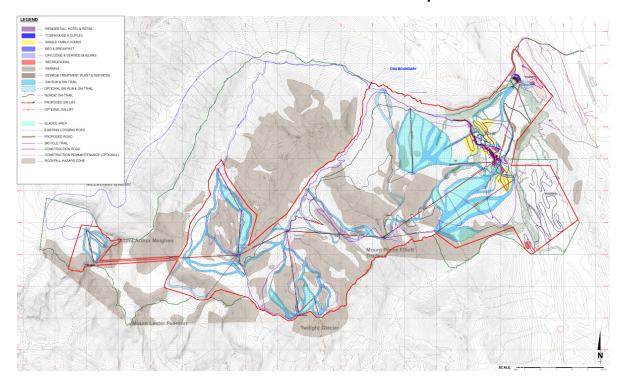
# 9.1.3 Snow Safety Plan

A snow safety plan for the area will be completed by the resort operator before start of winter operations of the expanded ski area. The snow safety plan will contain an inventory of the avalanche paths, a description of the equipment and operation of the avalanche control, the safety measures, and a rescue plan. The rescue plan describes the responsibilities, actions, equipment, and outside resources for situations when an avalanche accident should occur (usually outside the ski area boundary).

# 9.2 GEOTECHNICAL RISK AND ROCKFALL HAZARD ANALYSIS

Geotechnical risk at the resort site is being evaluated by Golder Associates, and their report is attached as Appendix 9. Prior to final detailed design and construction, on site investigations and soil testing will allow the engineers to provide specific recommendations.

Geotechnical risk in the CRA is being evaluated by Shane Kelly P.Eng and his report is attached as Appendix 11. Prior to construction of the lifts and ski run preparation on site investigations will allow to finalize detailed design mitigating or avoiding potential risks.



**Exhibit 43: Rockfall Hazard Map** 

Note: Larger format drawings are available in Appendix 1.

# 9.3 EVACUATION PLANNING

An evacuation plan will be in place prior to the beginning of operations. This plan will describe the procedures and resources required to stage successful evacuations in the case of lift breakdowns.

Evacuation planning has been a consideration in the ski lift layout for the resort. However, because of the topography of the site there are locations where it is not possible to safely ski or walk out should there be a lift breakdown. Major lifts will feature redundant designs, back-up power, and evacuation systems.

Appropriately sized and stocked alpine refuges will be in place at the Glacier Ridge arrival point and McLennan Glacier. The Glacier Ridge refuge will be part of the restaurant and sightseeing facilities, while the refuge at McLennan Glacier will be an alpine cabin which also may be utilized by YORA as a mountaineering cabin.

#### 9.4 FIRE PROTECTION

# 9.4.1 FireSmart & Wildfire Response Strategy

It is intended that the resort will follow FireSmart guidelines and the operator will work together with the resort's first response team and representatives of the Robson Valley Fire Zone to complete a general wildfire hazard assessment and establish an appropriate fire response strategy.

# 9.4.2 Development Controls to Mitigate Fire Risk

Development controls and design will comply with Part 3 of the B.C. Building Code. All multiple occupant buildings will be sprinkler equipped and it is intended that any basement component and the ground floor will be of non-combustible construction with a reinforced concrete structure, covered with stone where above grade. Based on studies of equivalencies for similar buildings at Whistler made by Protection Engineering of Vancouver, it is intended that Building Code compliance for the upper three or four stories of hotel and residential uses be achieved with combustible construction systems, following the guidelines of the provisions of Section 3.2.2.20 of the B.C. Building Code. Water reservoirs will reinforce fire protection procedures.

The B.C. Building Code and Fire Code will be followed in the resort development. In addition to other expanded services, the resort will create its own volunteer fire department and station.

Because the resort is situated in a heavily forested environment, particular consideration will be given to fire prevention and protection. A variety of guidelines to reduce and control the threat of fire are to be incorporated into the design and materials used in the resort:

#### 9.4.2.1 Defensible Space

A surrounding perimeter that resists the spread of fire will be incorporated into building design. Combustible materials, including natural ground and ladder fuels will be removed from the area surrounding each building to create a buffer between potential fire paths and the building structure.

# 9.4.2.2 Building Location

Structures on a slope will be placed at least 10 metres back from any ridge or cliff.

# 9.4.2.3 Roofing

Because retardant treatments are only effective for a period of time, roofing materials will be limited to asphalt shingles, metal, clay tile and concrete products. The pitch of the roof is important as well, the steeper the roof pitch the harder for embers to remain there.

## 9.4.2.4 Vents

The vents around attics, under-eave soffit vents, and chimneys are one way embers may enter a building. Vents and chimneys will be required to be covered with non-combustible wire mesh no larger than 3 mm (1/8 inch).

# 9.4.2.5 Siding

Although stucco is less desirable for resort architecture and is not encouraged as a major component in the design guidelines, it should be noted that wood siding is susceptible to ignition by radiant heat and materials such as stucco, stone and masonry stand up much better under heat and exposure. Stucco may be used in combination with heavy timber and stone to achieve a traditional mountain architecture style as well as enhancing a post and beam or timber frame exposed structure.

# 9.4.2.6 Additional Structures

Outbuildings such as decks, porches, and fences should also receive strong fire prevention attention. A combustible wood fence or trellis attached to a home acts as a fuel bridge, leading a fire right to the structure. Masonry or metal will be used as a protective barrier between fences and structures. Firewood shall not be stored under decks or porches. The underside of decks and porches will be enclosed with non-combustible screening or siding. Elevated decks on a hillside are in the direct line of a fire moving up-slope. Terraced patios will be recommended instead.

# 9.4.2.7 Sprinklers

All buildings shall be sprinklered until when a local fire department is fully established and will provide the level of service expected under the B.C. Building Code.

#### 9.4.3 Fire Protection Services

In theory there would be several options for the provision of full fire protection services at a mountain resort location such as VGD. One option would be contracting for services with the nearest fire department. A second option would be creation of a single fire services district to include the resort, the Village of Valemount and surrounding areas. A third option would be creation of an independent fire service improvement district for the resort. These three options have been reviewed and are not feasible for the foreseeable future, because of the relative remoteness of the resort and the position of the resort in terms of jurisdiction and of existing governance.

The available option is the creation of a local volunteer fire department under the umbrella of a society created for that purpose. The first steps are to create the society and train the initial volunteers. Generally, a fire protection service will be developed in accordance with the provisions of the guidelines contained in the publication in "Establishing and Operating a Fire Department", by the Office of the Fire Commissioner, which operates under the wing of the Ministry of Public Safety and Solicitor General.

The volunteer fire department is expected to become fully operational under with the resort being the authority having jurisdiction or as a municipal service should the resort amalgamate with the Village of Valemount.

An independent fire service will be created to provide fire protection at the resort area, utilizing on-site equipment and trained volunteers, drawn from ski patrol and other ski resort employees. Fire protection services at build-out will be provided by a fully equipped volunteer fire department with its own fire station in accordance with provincial and insurers' guidelines.

In the review of the best way to provide fire protection services at the resort, consideration must be given to insurance implications for property owners, the provision of sprinklers in buildings where service is from a great distance, and the opportunities for utilizing fully trained fire fighters to reinforce search-and-rescue and paramedic skills at the base of the resort. Building design may take into consideration recommendations of the Insurance Advisory Organization in addition to the BC Building Code and Fire Code.

# 9.5 HAZARDOUS AND SPECIAL WASTES

Storage collection and disposal of hazardous and special wastes at the resort is the responsibility of the developer, who makes special arrangements for hazardous wastes, as they are not accepted at any regional district refuse disposal facility. See also Section 8.6 of this master plan.

# 10. ENVIRONMENT

## 10.1 ENVIRONMENTAL STRATEGY

The preservation and maintenance of the natural environment will be a planning and operational priority for the resort. The planning process and subsequent construction and operations are guided by an environmental strategy that meets and exceeds the standards and principles indicated in the "green" resort addendum to the ASRG and that is aligned with the project's strategic goal of creating a resort that is in harmony with the local environment, traditions and people.

**Goal**: Minimize the resort's impact on the natural environment while maximizing resort guests' appreciation of the natural beauty and wildlife of the Premier Range.

## **Objectives:**

- Regulatory: ensure the resort design and facilities meet or exceed all environmental regulations;
- Development Size: minimize footprint and create compact, pedestrian oriented "nodes" of development;
- Energy: minimize energy usage especially with regards to snowmaking and lift infrastructure planning; seek alternative energy sources;
- Water: minimize impacts on water, including avoiding the use of surface water, respecting riparian zones and ensuring adequate bio-filtration in runoff zones, and no snow making;
- Wastewater: incorporate tertiary treatment;
- Wildlife: minimize impacts on habitat and utilize best management practices;
- Waste: minimize by initiating a waste management and recycling program with local facilitators:
- Travel: minimize individual motorized travel;
- Awareness and Information: create an interpretive narrative for the project;
- Monitoring: institute an internal monitoring and reporting program;
- Visual: design for minimal visual impacts on the landscape;
- Social: communicate and consult with First Nations and local stakeholders;
   participate in regional planning initiatives.

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# 10.2 ENVIRONMENTAL OVERVIEW

# 10.2.1 Project Setting

The Premier Range or Premier Group of mountains are located within the Cariboo Mountains of east-central B.C. The range is bounded by the Rausch River and Kiwa Creek to the north, the North Thompson River on the south and west and the Fraser River and its tributaries to the east. The name "Premier Group" was adopted 6 September 1927 by an Order in Council, as arranged by British Columbia and the Geographic Board of Canada to mark the Diamond Jubilee of Confederation; the unnamed mountains in the group were set aside to commemorate former prime ministers of Canada. The form of the name was changed to "Premier Range" on May 23,1962, and it was agreed that peaks over 10,000 feet would be named after deceased former Prime Ministers of Canada.

There are 16 peaks above 9,800 feet still unnamed in the Premier Range, of which 7 peaks exceed 10,000 feet. Other than the 1927 decision to name the highest peak (3516 m / 11,535 ft) after Sir Wilfrid Laurier, the relative elevation and location have not been considered when designating the peaks in this range. The mountain named after Mr. Trudeau was selected because of accessibility.<sup>30</sup>

Mount Arthur Meighen (3205 m. / 10515 ft.) is the seventh highest named peak in the range. Lift access will be provided to Mt. Meighen to achieve summer skiing, a competitive vertical drop, and an unparalleled viewpoint that is critical to the success of the project. The First Nations have expressed an interest in naming iconic points of the project, which will provide a unique feature to the project.

# 10.2.2 Regional Biogeoclimatic Zone Descriptions

According to the Robson Valley Land and Resource Management Plan (LRMP), the following Biogeoclimatic Zones occur in the study area (MNRO, 1999):

# Alpine Tundra (AT)

A significant portion of the study area is classified as alpine tundra. Exposed to severe weather conditions, the alpine tundra zone is characterized by strongly weathered and eroded bedrock, glaciers and snowfields. Many unique plants and animals are found in the alpine tundra zone and are considered sensitive to

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<sup>&</sup>lt;sup>30</sup> Source: http://apps.gov.bc.ca/pub/bcgnws/names/19249.html

#### disturbance.

# Engelmann Spruce-Subalpine Fir (ESSF)

This biogeoclimatic unit is the uppermost forested zone and occurs on mid and upper slope positions. The ESSF is dominated by colluvial material, a reflection of the steep slopes found in many V-shaped valleys. Due to cooler temperatures, most precipitation falls as snow. The ESSF occurs extensively throughout the study area. Forests of the ESSF are dominated by subalpine fir and Engelmann spruce. At the upper elevations, where the climate is cooler and receives more snow, the forests become more clumpy and form a mosaic of open and stunted subalpine fir trees known as parkland.

# Interior Cedar-Hemlock (ICH)

The ICH zone occurs on lower slopes and valley bottom positions where, historically, mature stands were usually uneven-aged or multi-storied even-aged. On mid to lower slope positions morainal blankets derived from glacial processes are common. In the lower slope and valley bottom positions, finer textured glaciolacustrine and glaciofluvial sediments are commonly found and susceptible to erosion. The ICH mm (Moist Mild) subzone represents the majority of the ICH biogeoclimatic zone and occurs along the lower slopes of the trench between Lamming Mills and the Kinbasket Reservoir. This subzone also extends along the valley bottoms in the Castle, Raush, Lower Holmes and Canoe Rivers. The ICH mm is relatively dry, receiving less precipitation than other ICH subzones partly because of the rainshadow effect of the Premier Range. The dominant climax tree species in this subzone are western redcedar and western hemlock. Douglas-fir, lodgepole pine and trembling aspen occur in seral stands. At present, seral stands are relatively common in this subzone due to the drier climate and susceptibility to wildfires as well as past land uses practices (i.e., burning) during the railroad construction period about 90 years ago. The ICH wk3 (Goat Wet Cool) variant is found in the northern portion of the planning area where it occurs on the lower slopes and the valley floor in a relatively wide band between Ptarmigan Creek and Clyde Creek. The ICH wk1 (Wells Gray Wet Cool) variant occurs on lower slopes near the southern end of the Canoe Reach. On the west side of the lake it enters Howard and Foster Creeks and on the east side it enters Dawson and Harvey Creeks. This subzone is considerably moister than other ICH subzones within the plan area. The dominant tree species found are western red cedar and western hemlock. Cottonwood is commonly found on fluvial flood plains and Western yew sporadically occurs in a variety of sites. Small amounts of the ICH wk2 (Missinchinka Wet Cool) are found in the valley bottoms of the Cariboo River and Betty Wendle Creek.

# 10.2.3 Regional Wildlife Overview

According to the LRMP (MNRO, 1999, Section 1.1):

The Robson Valley contains over 200 of British Columbia's 430 bird species including one red-listed species (western grebe) and nine blue-listed bird species. Over 50 mammal species occupy the plan area including four blue-listed species (woodland caribou, grizzly bear, wolverine and fisher).

Regionally significant populations of mountain goats occur in high elevation habitats in the Horsey Creek area adjacent to Mount Robson. Other ungulates such as moose, deer and elk can be found in the valley bottoms primarily in the main valley and floodplain habitats of the Morkill and Raush rivers. Many factors limit the distribution of ungulates in the Robson Valley including steep-sided valleys, high snowfalls and the loss of summer and key winter range from agricultural land development and the flooding of the Kinbasket Reservoir. Because of these limitations, the plan area supports moderate populations of moose, mule deer and white-tailed deer. Elk have increased recently in the plan area and can be found in the valley bottoms of the Holmes River as well as agricultural areas near McBride and Tete Jaune Cache.

Small populations of woodland caribou (mountain ecotype) can be found in the West Twin Creek and East Twin Creek areas. These caribou live primarily in high elevation subalpine habitats where they feed on arboreal lichens (tree lichens) during the winter. Other caribou can also be found east of the Fraser River in the Rocky Mountains during summer. These caribou migrate from Alberta (Willmore Wilderness Area) to the Robson Valley during calving and rutting seasons. Areas that receive the highest use include the upper subalpine and alpine elevations around the Morkill, Forgetmenot and Cushing creeks. Relatively high densities of grizzly bears occur throughout many of the drainages in the plan area, most notably in the Morkill River, Cushing Creek, Goat River and Hugh Allan Creek.

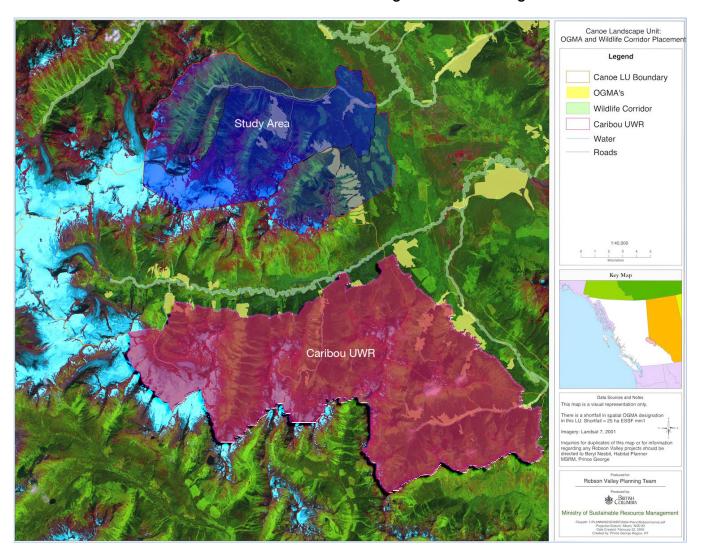
Although no large lakes exist in the Robson Valley, small lakes such as La Salle, Shere, Cedarside and Little Lost Lake provide recreational trout fishing opportunities. In addition, many alpine and subalpine lakes including Loren Lake are unique special features that contribute to the high wilderness and recreational opportunities in the valley.

Several sites within the plan area are known class A fish habitat including the Fraser River and all its tributaries. Blue listed Bull Trout habitat exists on Hugh Allan Creek. Significant Chinook salmon spawning areas include the flood plain reaches of the Morkill, Goat, East Twin, West Twin, McKale, Holmes, Nevin, Holliday, Horsey, McLennan and Swift drainages. Public viewing opportunities of spawning salmon exist in the Fraser River below Rearguard Falls in the Tete Jaune area, in Swift Creek at Valemount and along the Holmes River near McBride.

According to the LRMP regionally significant populations of mountain goats do not appear to occur in the study area, and the steep-sided valleys, high snowfalls and the loss of summer and winter range from agriculture limit the distribution of ungulates in the Robson Valley. The LRMP notes, however that moderate populations of moose, mule deer and white-tailed deer occur in the area and that Elk have increased recently, north of the study area.

Rare and common furbearers and ungulates inhabit the different habitats that can be found within the Robson Valley. Red and blue-listed species include Caribou, Fisher, Grizzly Bear, Wolverine, and the Northern long-eared myotis. Yellow-listed species that are considered of management interest in the region include Mountain Goat, moose, white-tailed, and Mule Deer (Nesbit, Thibeault, & Borgstrom, 2006).

While individual Mountain Caribou have been observed in the study area, current MSRM mapping indicates that herds do not occur in the study area and there is no established Ungulate Winter Range in the study area.



**Exhibit 44: Mountain Caribou Ungulate Winter Range** 

Source: Ministry of Sustainable Resource Management

# 10.2.4 Regional Fisheries Overview

The Robson Valley supports regionally significant fish species, however, an initial literature review suggests that there are no known red-listed species within the CRA. According to Nesbit et al (2006, pg. 13):

Red-listed White Sturgeon (Acipenser transmontanus) are known to exist within the Fraser River drainage. A small but relatively stable sub-population inhabits the upper reaches of the Fraser River, although the true extent of its range is unknown (Pers. Comm. Ray Pillipow). Blue-listed species such as Bull

trout (Salvelinus confluentus) and Cutthroat trout (Oncorhynchus clarki lewisi) populate many of the surrounding watersheds (Fisheries and Oceans Canada, 2003). The McLennan River and its tributaries boast the farthest migrating Chinook salmon population in interior BC (FISH Wizard, 2003; Per. Comm. With Ray Pillipow).

# 10.3 ENVIRONMENTAL CONSTRAINTS

# 10.3.1 Old Growth Management Areas

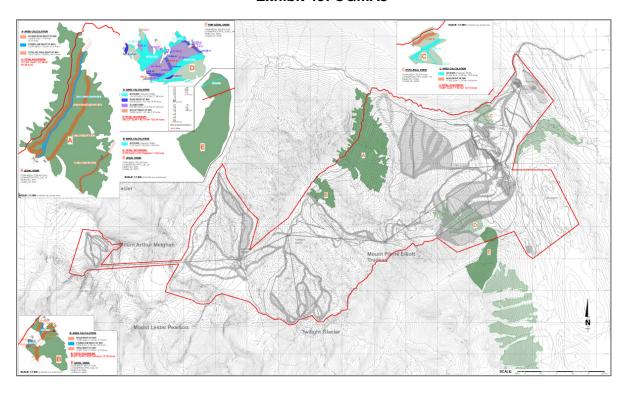
A number of Old Growth Management Areas (OGMA) are present in the CRA. The CRA has been adjusted to try to avoid overlap with OGMAs. Where possible, intrusions into OGMAs are avoided.

OGMAs are land designations that are intended to promote biodiversity and limit the impact of the forestry industry, primarily. The OGMAs in the CRA are identified as having a low biodiversity emphasis (Nesbit, Thibeault, & Borgstrom, 2006, pg. xvi). A low biodiversity emphasis is used for areas where other social and economic demands are the primary management objectives.

Recreation values and, specifically, avoiding conflict with recreational users are amongst the criterion for selecting OGMA placements, so it is with some curiosity to observe the number of OGMAs that were placed on the slopes of Mount Trudeau despite a Notation of Interest for ski area development on the lands, which, while this does not establish a land use decision of any kind, it does suggest existing recreational interest.

A planning objective will be to limit impacts and intrusions on existing OGMAs, particularly during the summer months. Opportunities to co-manage the biodiversity objectives within the CRA may be pursued with the First Nations.

Refer to Section 4.9.4 for more information on OGMAs.



**Exhibit 45: OGMAs** 

Note: Larger scale mapping included in Appendix 1.

# 10.3.2 Wildlife Movement Corridor

A wildlife movement corridor has been designated along the McLennan River. The corridor consists of an enhanced riparian area of 100 metres (330 ft.). According to the *Order to Establish the Kiwa-Tete and Canoe Landscape Unit Objectives* (Ministry of Agriculture and Lands, 2006), "construction of permanent or temporary roads are not to be undertaken within the wildlife corridor unless there are no other practicable options. Temporary roads must be deactivated, rehabilitated and planted as soon as possible."

# 10.3.3 Red Listed Ecological Communities

Three red listed ecological communities were identified during the environmental field studies which necessitated the redesign and relocation of the resort village to avoid any impacts on these communities. These communities are shown in the master plan drawings and in the Environmental Impact Assessment included in Appendix 3.

# 10.3.4 Riparian Buffers

A 30 metre buffer has been established for all riparian areas within the base development areas.

# 10.4 ENVIRONMENTAL IMPACT ASSESSMENT

ENKON Environmental Limited in coordination with Estsek Environmental Services LLP were retained to provide a an Environmental Impact Assessment (EIA) for the resort in support of this master plan submission. The EIA encompasses the entire CRA and assesses the impact of the entire project, including all optional ski lifts and runs, many of which may not be built. The proponent accepts the recommendations and mitigation plans presented in the EIA. The complete EIA is located in Appendix 3. The following is a brief summary.

#### 10.4.1 Baseline Resources

#### **Terrestrial Resources**

The Project Area is located within the Cariboo Mountains Ecosection (CAM) which is located within the Northern Columbia Mountains (NCM) Ecoregion.

Five Biogeoclimatic (BEC) subzones and variants are located within the CRA including Interior Mountain Heather (IMA), Englemann Spruce Subalpine Fir moist mild parkland (ESSFmmp), Engelmann Spruce Subalpine Fir moist mild (ESSFmm1), Interior Cedar Hemlock moist mild (ICHmm) and Subboreal Spruce dry hot (SBSdh1).

There are eight Broad Terrestrial Ecosystem units within the CRA including: Glacier (GL), Alpine Unvegetated (AU), Alpine Tundra (AT), Avalanche Track (AT), Engelmann Spruce – Subalpine Fir Parkland (FP), Engelmann Spruce – Subalpine Fir Dry Forested (EF), Interior Western Hemlock – Douglas-fir (IH), and Subboreal White Spruce – Lodgepole Pine (SL). Terrestrial ecosystem mapping (TEM) and a rare plant assessment were completed in June and July 2015.

Analysis of Vegetation Resource Inventory data within the Resort CRA finds that the CRA is generally non-forested or mature to old growth forest (>81 years). Old Growth Forests (>241 years) are mostly located on north-west aspect slopes of the ESSFmm1. Non-forested areas are located at higher elevations within the IMA and extend downslope into the ESSFmmp and ESSFmm1 on steeper slopes characterized by avalanches. South-east aspect slopes are generally steeper and subject to greater avalanche disturbance. Forested areas with an average tree age <81 years are uncommon and represent only 4% of the CRA.

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Old growth forests in the ESSFmm1 are dominated by Englemann spruce and subalpine fir with decreasing tree heights and increasing canopy gaps as elevation increases approaching the IMA.

As of August 1, 2015, 37 plant species were present on the CDC list, including 8 red-listed species and 29 blue-listed species. Rare plants occurring in the area include 19 vascular plants, 17 mosses and one fungus. There are currently no rare plant occurrence records for the CRA. The only listed plant observed during the survey was whitebark pine (blue-listed provincially but federally listed as Endangered under the Species at Risk Act) which was observed in the ESSFmmp. As of August 1, 2015, the CDC reports the occurrence of eight rare and endangered plant communities in the Headwaters Forest District and in the Fraser-Fort George Regional District that have potential of occurring in the BEC subzone present within the CRA. Best practices management techniques will be implemented should these plant communities be observed in the CRA. There are two red-listed and six blue-listed communities listed. Based on field observations four rare plant communities have the potential to occur on the site:

- Black spruce-Lodgepole pine / Bog laurel / Sphagnum moss blue-listed
- Western redcedar / Skunk cabbage / Sphagnum moss red-listed
- Western redcedar / Falsebox blue-listed
- Subalpine fir / Reindeer lichen / Cup lichen blue-listed

The Black spruce-Lodgepole pine/Bog laurel/Sphagnum moss and the Western redcedar/Skunk cabbage/Sphagnum plant communities have been confirmed to occur on the subject property. The Western redcedar/Falsebox and Subalpine fir/Reindeer lichen/Cup lichen plant communities have not been identified on the site but the appropriate edatopic conditions are known to be present and therefore it has been assumed that there is a very high potential for these communities to be present as well.

# 10.4.1.1 Aquatic Resources

# **Fisheries Resources**

The Robson Valley supports regionally significant fish species; however, an initial literature review suggests that there are no known red-listed species within the CRA. According to Nesbit et al (2006) red-listed white sturgeon (*Acipenser transmontanus*) are known to exist within the Fraser River drainage. A small but relatively stable sub-population inhabits the upper

reaches of the Fraser River, although the true extent of its range is unknown (Pers. Comm. Ray Pillipow). Blue-listed species such as bull trout (*Salvelinus confluentus*) and cutthroat trout (*Oncorhynchus clarki lewisi*) populate many of the surrounding watersheds (Fisheries and Oceans Canada, 2003). The McLennan River and its tributaries boast the farthest migrating chinook salmon population in interior BC (FISH Wizard, 2003; Per. Comm. With Ray Pillipow).

Based on historical fish sampling and analysis of stream gradients (non-fish bearing when gradient >20%), the majority of the watercourses within the immediate vicinity of the concept plan are considered non-fish bearing.

# Fisheries Surveys

An overview flight was conducted on October 09, 2014 to identify and locate potential fish movement barriers along the McLennan River. Two falls and two cascades were identified that could be potential barriers.

Stream walks were conducted between October 07 and October 10, 2014 to survey for spawning bull trout and or evidence of spawning (redds). Walks were conducted in areas of the McLennan River that had reasonable access by truck or ATV. A total of 3km of river was surveyed. Fish habitat assessments were conducted at representative locations during the stream walks. Four sections of river were assessed for bull trout habitat. A water gauging station was established at the proposed bridge crossing at 11U 340419, 5858385. Two water level loggers (Hobo U20) were installed to monitor water level and barometric pressure. As well, a permanent stream flow transect was established to measure stream flow and discharge rates at various times throughout the year.

## Water Quality

Ten baseline water quality stations were identified and installed within the CRA on the McLennan River and tributaries. The water throughout the CRA was very soft (hardness <50 mg/L as CaCO<sub>3</sub>). Hardness ranged from 7.15 mg/L at WQ6 (un-named tributary) to 27.1 mg/L at WQ1 (McLennan River mainstem).

Total suspended solids (TSS) concentrations were variable, ranging from below detection (<3.0 mg/L) at WQ5 and WQ6 to 125 mg/L at WQ8. Sites WQ7 and WQ9 had intermediate TSS concentrations of 27.3 mg/L and 23.9

mg/L, respectively. TSS concentrations at the remaining sites were less than 10 mg/L.

The water quality at sites WQ1, WQ2, WQ3, WQ4, WQ5 and WQ9 met the applicable maximum guidelines for all parameters analyzed. Sites WQ7 (confluence of Hystad Creek and McLennan River) and WQ8 (lower McLennan River) had concentrations of several metals above the guidelines. Total copper, total iron and dissolved aluminum were above their respective guidelines in the lower McLennan River. Total iron was also above the 1000- $\mu$ g/L guideline at the confluence of Hystad Creek and McLennan River. Total chromium was above the 1- $\mu$ g/L guideline for Cr(VI) but below the 8.9- $\mu$ g/L guideline for Cr(III) at both sites. Since the form of chromium was not determined, it is not possible to determine conclusively whether or not the guideline for chromium was met. In addition, dissolved aluminum was above the 100- $\mu$ g/L guideline at site WQ6 (an un-named tributary).

#### 10.4.1.2 Wildlife Resources

The Robson Valley contains over 200 of British Columbia's 430 bird species including one red-listed species (western grebe) and nine blue-listed bird species. Over 50 mammal species occupy the plan area including four blue-listed species (woodland caribou, grizzly bear, wolverine and fisher).

A wildlife movement corridor has been designated along the McLennan River. The corridor consists of an enhanced riparian area of 100 metres (330 ft.). According to the *Order to Establish the Kiwa-Tete and Canoe Landscape Unit Objectives* (Ministry of Agriculture and Lands, 2006), "construction of permanent or temporary roads are not to be undertaken within the wildlife corridor unless there are no other practicable options."

Background literature review from the Conservation Data Centre indicates that within the Headwaters Forest District, and further defined by Fraser-Fort George Regional District, there are 28 listed species with potential to occur within the project area. Of these, there are nine red and blue-listed vertebrate species that have potential to occur within this project area. Additionally, one yellow-listed but regionally significant species is also considered.

The CDC list contains seven red and blue-listed bird species that have potential of occurring within the project boundary. Additionally, after reviewing the Avibase Bird Checklist for the Fraser Fort George Regional

District an additional 14 red and blue-listed species, or SARA listed species that show potential of occurring within the area.

# Wildlife Surveys

Grizzly bear aerial surveys were planned for late October/early November and April to detect tracks for bears entering and exiting dens. Due to weather conditions the October/November survey was not conducted however a successful aerial survey was conducted in April of 2015. Flight lines followed contours ranging from 1900 m to 2500 m through a wide variety of habitat types. No grizzly bears were noted during this survey however two potential den sites were identified.

Aerial surveys were conducted in October 2014, February 2015 and April 2015 to identify ungulate distribution within the project boundary. The focal species for this survey were mountain goats. The CRA was pre-stratified into Biogeoclimatic units and the flight lines focused on the Interior Mountain Heather Alpine (IMA), the Englemann Spruce-Subalpine Fir Moist Mild Parkland (ESSFmmp) and, the Englemann Spruce-Subalpine Fir Moist Mild (ESSFmm1) subzones. Portions of the Interior Cedar Hemlock Moist Mild (ICHmm) and a small portion of the Sub-Boreal Spruce Dry Hot McLennan (SBSdh1) were also surveyed en-route to the Mountain Goat Survey. A total of 12 mountain goats were observed within the CRA in 2014 and an additional 18 during the February 2015 survey.

An aerial survey was conducted for early winter ungulate distribution on December 08, 2014. The focal species for this survey were moose, deer and elk. The CRA was pre-stratified into Biogeoclimatic units and the flight lines focused on the lower elevation, the Englemann Spruce-Subalpine Fir Moist Mild (ESSFmm1), the Interior Cedar Hemlock Moist Mild (ICHmm) and the Sub-Boreal Spruce Dry Hot McLennan (SBSdh1) subzones. The Interior Mountain Heather Alpine (IMA) and the Englemann Spruce-Subalpine Fir Moist Mild Parkland (ESSFmmp) zones were not surveyed. A total of 5 moose and 1 mule deer as well as numerous tracks were observed within the CRA.

Early winter ungulate ground surveys were conducted using twelve triangular track transects established within the CRA to encompass the range of habitat types found within the accessible portions of the CRA. Only transect number 1 was completed on December 09, 2014 before snow conditions deteriorated to the point where tracks could not be distinguished with adequate certainty.

Two species were observed along transect T1: red squirrel (Tamiasciurus hudsonicus) and American marten (Martes americana). In addition to the established triangular transects, wildlife track numbers and locations were recorded along several travel routes during the November 5th and December 8th site visits.

A total of six wildlife cameras were installed during the November 05, 2014 field visit. Cameras were installed in strategic locations where important habitat features or potential movement corridors existed.

A late winter aerial survey was conducted for mountain caribou on April 2, 2015. This survey followed the tree line boundary between ESSFmmp and IMA zones between 1900 m and 2100 m elevation. Although there were areas of suitable habitat noted during the aerial survey there were no tracks or mountain caribou visually identified. Fires along the north side of the Canoe River have fragmented the habitat likely creating a movement barrier for this species into the project area. During this survey tracks of American marten, wolverine and mountain goat were observed.

Bird surveys were conducted during the 2015 field surveys. Common nighthawk surveys were conducted on July 14, 2-15 and used silent listening and call/playback methodology. Survey sites were situated in the ICHmm and SBSdh1 BEC zones. A total of 14 common nighthawks were observed during the survey.

Nocturnal raptor surveys were conducted March 19-20, 2015. Boreal owl and barred owl were targeted using call playback methodology and incidental observations were also recorded (i.e. calls noted prior to commencing the survey). A total of 15 stations were established along site access roads and were accessed with skidoos. No owls were noted during the 2015 nocturnal raptor survey however there were incidental observations of both northern pygmy owl and barred owl.

Breeding bird surveys were conducted during June 15 to 26, 2015. A total of 34 sites were established across all the BEC zones, with most sites located within ICHmm. The sites were focused along site access roads and remote sites were accessed during TEM mapping as crews accessed higher elevation areas via helicopter access. The 34 sites were surveyed using point count methodology. A total of 244 individual observations were recorded from 39 species. Incidental bird observations were also recorded during

other surveys and a total of 64 species were identified on the site.

Amphibian surveys were conducted on May 21 and 22, 2015. Methodology included area constrained searches around five wetlands located within the ICHmm BEC zone. A total of 6 individuals were noted during this survey and an additional 11 individuals were incidentally observed within the property during other field surveys.

# **Potential Wildlife Habitat Use Ratings**

Potential wildlife habitat use ratings were developed for listed species and those of management concerns within the Valemount Resort CRA. GIS analysis was used to quantify and map potential impacts (either using 6-class or 4-class rating scheme) for each species. Species considered included: grizzly bear, black bear, wolverine, fisher, mountain goat, mountain caribou, Rocky Mountain mule deer, white-tailed deer, moose, common nighthawk, olive-sided flycatcher, rusty blackbird, barn swallow and western toad. Although there are no records of caribou herds occurring within the project boundary they were considered due to their close proximity to the site and its proposed activities. Well established mapping of ranges indicate that the Wells Grey South herd is located to the immediate south of the project boundary.

These potential usages of the site are based on information that is currently known about the site conditions and life requisites of wildlife species.

# **10.4.2 Potential Impacts**

# Vegetation

Based on the proposed site layout plan for the Valemount project approximately 990 ha or 11% of the project area will be affected by the development. In summary, the following impacts to vegetation will occur due to the development:

- IMA 311 ha, 31.44% of the total BEC subzone
- ESSFmmp 121 ha, 25.68% of the total subzone
- ESSFmm1 302 ha, 30.54% of the total variant
- ICHmm 254 ha, 12.25% of the total subzone
- SBSdh1 1 ha, 0.05% of the total variant

No red or blue-listed plant communities will be impacted in the IMA, the ESSFmmp

or the SBSdh1. There are potential impacts to rare plant communities in the ICHmm and ESSFmm1 including blue-listed, red-listed and "partially red-listed". The latter category refers to those complex polygons that consist of more than one plant community; one of these being a red-listed plant community. Impacts to rare and endangered plant communities are as follows:

- Blue-listed plant communities 9.96% of those occurring on the site
- Partially red-listed plant communities 10.09% of those occurring on the site
- Red-listed plant communities 4.36% of those occurring on the site

#### **Fisheries**

Consultation with the proponent has resulted in the incorporation of mitigation measures at the conceptual planning level. Where possible, impacts to all riparian areas within the resort base have been avoided based on a preliminary 30m riparian area buffer.

In total, there are ~69 new road crossings and 177 ski run/lift crossings of watercourses within the CRA. It is anticipated that the number of stream crossings will be substantially reduced based on more detailed field assessments and further refinements to the concept plan. All road stream crossings will require notification under the *Water Act*, Section 9 and Part 7 of the Water Act Regulation and project review by Fisheries and Oceans Canada following recent changes to the Fisheries Act (2012) and the new Fisheries Protection Policy Statement (2013). Significant tributary crossings (fish bearing) should be completed with the use of clear-span bridges or bottomless culverts to mitigate impacts to instream and riparian habitat where possible. All culvert and bridge crossings will be constructed as per the Standards and Best Practises for Stream Crossings (MOE 2004).

#### Wildlife

There will also be losses of potentially very high, high, moderate, low and very low (6-class rating scheme) or high, moderate and low (4-class rating scheme) value habitats for each of the wildlife species modeled. The following Table summarizes an approximate breakdown of potential habitat loss for each species.

Table 58: Potential Habitat loss for Wildlife Species within the Valemount Resort CRA

Wildlife Species	Habitat Uses/Life Requisites	Habitat Impacts (ha)					
		Very Low	Low	Moderate	High	Very High	
Grizzly Bear	FD-PE	226	105	Т	0	185	
	FD-PL	8	200	78	162	79	
	FD-S	Т	1	361	393	3	
	FD-F	13	109	205	258	6	
	HI	4	301	69	84	126	
Black Bear	FD-PE	128	0	112	14	0	
	FD-PL	13	112	4	198	8	
	FD-S	1	25	42	476	10	
	FD-F	117	14	180	15	0	
	HI	14	6	26	163	13	
Wolverine	LI-G	-	1	36	788	-	
	LI-W	-	263	73	470	-	
Fisher	LI-G	-	115	141	470	-	
	LI-W	-	141	429	40	-	
Mountain Goat	LI-G	81	25	7	200	96	
	LI-W	258	3	27	20	3	
Mountain Caribou	LI-P	171	282	10	25	75	
	LI-S/F	3	161	22	105	49	

Wildlife Species	Habitat Uses/Life Requisites	Habitat Impacts (ha)					
		Very Low	Low	Moderate	High	Very High	
	LI-W <sub>E</sub>	197	44	0	145	224	
	LI-W <sub>L</sub>	162	320	18	69	29	
Mule Deer	LI-G	-	Т	280	414	-	
	LI-W	-	10	9	2	-	
White-Tailed Deer	LI-G	-	296	206	44	-	
	LI-W	-	12	0	1	-	
Moose	LI-G	-	122	484	60	-	
	LI-W	-	48	9	2	-	
Common Nighthawk	RE-G	-	74	4	0	-	
Olive-Sided Flycatcher	RE-G	-	133	11	305	-	
Rusty Blackbird	RE-G	-	64	14	15	-	
Barn Swallow	RE-G	ı	69	Т	0	ı	
Western Toad	RE-G	-	5	79	0	-	

Note: T: Trace (< 0.5 ha) -: 6-class rating scheme not used

Of the habitat impacts considered there will be percent losses of very high/high associated with the proposed development. For grizzly bears there will be an impact of 11.6% to very high/high feeding in early spring habitat, 17.2% to very high/high feeding in late spring habitat, 15.7% to very high/high feeding in summer habitat, 14.7% to very high/high feeding in fall habitat and 14.3% to very high/high hibernating habitat. For black bears there will be an impact of 6.4% to very high/high feeding in early spring habitat, 18.5% to very high/high feeding in late spring habitat,

13.8% to very high/high feeding in summer habitat, 10.0% to very high/high feeding in fall habitat and 15.6% to very high/high hibernating habitat.

For wolverine there will be an impact of 13.4% to high living during growing season habitat and 14.3% to high living during winter season habitat. For fisher there will be an impact of 14.3% to high living during growing season habitat and 6.8% to high living during winter season habitat.

For mountain goat there will be an impact of 8.5% to very/high living during growing season habitat and 8.1% to very high/high living during winter habitat. For mountain caribou there will be an impact 19.7% to very high/high living during spring habitat, 16.7% to very high/high living during summer/fall habitat, 17.8% to very high/high living during early winter habitat and 23.9% to very high/high living during late winter habitat. For Rocky Mountain mule deer there will be an impact of 15.8% to high living during growing season habitat and 3.3% to high living during winter habitat. For white-tailed deer there will be an impact of 7.4% to high living during growing season habitat and 4.7% to high living during winter habitat. For moose there will be an impact of 11.3% to high living during growing season habitat and 6.6% to high living during winter habitat.

For both common nighthawk and barn swallows there will be no impacts to high value breeding habitat. For olive-sided flycatcher there will be an impact of 12.6% to high breeding habitat. For rusty blackbird there will be an impact of 8.6% to high breeding habitat.

For western toad there was no high value habitat present within the project area.

The above noted wildlife impacts are based on wildlife modeling that considered data collected during terrestrial ecosystem modeling and observations during wildlife surveys done in the 2014/2015 field seasons.

"Preliminary Environmental Management Plans" (EMP) were also prepared to guide the construction and operation of the project to protect environmental values within the resort boundaries. The EMP addresses the following environmental plans:

- Erosion and Sediment Control Plan;
- Solid Waste Management Plan;
- Stormwater Management Plan and Non-point Source Waste Discharge Control Plan;
- Vegetation Management Plan;

- Fish Protection Plan;
- Wildlife Protection Plan:
- Grizzly Bear Management;
- Mountain Goat Management;
- · Wolverine Management;
- Fisher Management;
- Breeding Bird and Raptor Management;
- Reptile Management;
- Bat Management;
- Ungulate Management;
- Recreation Trail Management;
- · Air Quality Protection Plan;
- Hazardous Materials Management Plan;
- Spill Contingency Plan;
- Environmental Monitoring During Construction;
- · Water Quality Monitoring Plan.

There are proposed impacts to very high and high value wildlife habitats associated with this project, as detailed above. Wildlife population and habitat impacts were associated with permanent habitat loss, habitat alteration, construction based disturbance, recreational disturbance, wildlife road collisions and bear-human conflicts. General mitigation measures have been created to address potential impacts to wildlife and habitat impacts. By implementing a Wildlife Protection Plan impacts to species of concern can be minimized as much as possible by limiting access during sensitive times of year or into high value habitats, identifying protecting high value habitats wherever possible and strategically designing roadways and building sites to protect wildlife migration routes and sensitive breeding habitats.

#### 10.5 ENVIRONMENTAL MONITORING AND IMPLEMENTATION

#### 10.5.1 Environmental Monitor

Consistent with the recommendations of the Environmental Impact Assessment (EIA) included in Appendix 3, VGD will employ an environmental monitor who will fulfil the following objectives:

- Ensure proper development and implementation of the Environmental Management Plan (EMP) and other mitigation measures;
- Assess the performance of environmental controls and mitigation measures;
- ensure that the contractor corrects any mitigation measures that are not functioning acceptably; and
- Ensure that water quality, fish and wildlife in the resort area are protected throughout the construction program.

The environmental monitor will be an independent third party who will have the authority to stop construction activities temporarily if unacceptable environmental events occur or appear likely to occur. The Environmental Monitor will be on site full time during instream works (i.e. stream crossings).

The environmental monitor will make weekly inspections during other construction activities to ensure that the construction contractor is following all aspects of the Environmental Management Plan. In addition, the environmental monitor will be on site prior to and during significant rain events. The environmental monitor will report immediately to the appropriate agencies any significant environmental events or construction deviations. He/she also will make regular (monthly) reports on progress with construction, any other (minor) environmental events or impacts that occurred and actions taken to address these events or impacts.

The Environmental Monitor's specific responsibilities will include the following:

- Meeting periodically with the contract project manager to discuss work requirements, compliance issues, and other environmental matters;
- Conducting inspections of all sediment/silt control works;
- Inspecting other aspects of the work area and equipment for general housekeeping, dust control and compliance with the spill prevention plan;
- Monitoring all instream works;
- Conducting fish salvages, as necessary prior to during construction within watercourses; and
- Monitoring receiving water quality during activities that could cause increased turbidity in watercourses.

#### **10.5.2 Environmental Manager**

On the commencement of resort operations VGD will employ a permanent environmental manager to oversee the implementation of the resort's environmental

strategy including all EMPs, to perform necessary reporting, and to liaise with third party consultants.

## 10.6 CONCLUSIONS

Major impediments that cannot be mitigated have not been uncovered following the review of environmental data and literature for the region and the field reports. While there are important biodiversity objectives and initiatives, including OGMAs and Wildlife Corridors, discussions with locals knowledgeable of the area confirm that of the valleys that permit practicable access to the Premier Range from the Village of Valemount (Canoe, McLennan, Tête, and Kiwa), the McLennan drainage appears to be the most suitable for a carefully planned and contained development.

As noted above, this project's planning strategy and goal is to minimize impacts on the natural environment while maximizing guests' appreciation of the beauty and wildlife of the Premier Range. Initiatives to preserve and improve the area's biodiversity are also opportunities to educate and inform visitors. The CRA appears to offer significant interpretive opportunities. These might include learning about glacier formation (viewing the accumulation and ablation zones of the glaciers), glacial topography and geology (viewing moraines, glacier valleys, etc.), discovering alpine vegetation or old growth spruce forests, or even witnessing the spawning of the farthest migrating Chinook salmon population in B.C.

# 11. FIRST NATIONS

The resort is located in the traditional territory of the Simpcw First Nation. The Simpcw, Neskonlith, Canim Lake, and Lheidli T'enneh bands have all asserted consultative areas that overlap the project and require consultation by the Crown. However, the proponent has not seen any evidence that is contrary to the assertion that the project is in the traditional territory of the Simpcw.

The SIMPCW are a division of the Secwepemc, or Shuswap, whose traditional territory encompasses approximately 5,000,000 Ha in the North Thompson region. The area extends from slightly North of McLure to the headwaters of Fraser River near McBride, to Tête Jeune Cache, over to Jasper and south to the headwaters of the Athabasca River. Archaeological studies have identified winter home sites and underground food cache sites at a variety of locations including Finn Creek, Vavenby, Birch Island, Clearwater, Litte Fort, Chu Chua, Barriere River, Louis Creek, and Tête Jeune, and Jasper. Many ancestors of present band members lived in these winter villages or camps. Evidence of life in earlier times can still be found at these ancestral village sites. Currently, Simpcwemc are located on land which is are now the reserves of the Simpcw First Nation.

The Simpcw traditionally were noted for their hunting ability, and had many travel corridors and trails. In the summer months during their seasonal round on the land from spring to the autumn or fall season, much of their time was spent in hunting camps in the mountains above the North Thompson and upper Fraser Rivers. Both river systems provided salmon, which were caught in weirs, nets and by spear.

Meat and fish were smoked or dried then stored for consumption. Numerous plant resources for foods, medicine and technology were also collected and preserved for winter use. There was active trading, among the Secwepemc and other Nations. Sometimes warfare with other Nations in BC and Alberta over natural resources. Presently Simpcw people maintain traditional knowledge, and continue to practice many of their traditions while learning and working in modern society.

Now, the Simpcw First Nation has a membership of nearly 700 people. Their mission statement is "Simpcwemc are who are a culturally proud community, valuing healthy, holistic lifestyles based upon respect, responsibility and continuous participation in growth and education".<sup>31</sup>

<sup>31</sup> http://www.simpcw.com/our-people/our-history

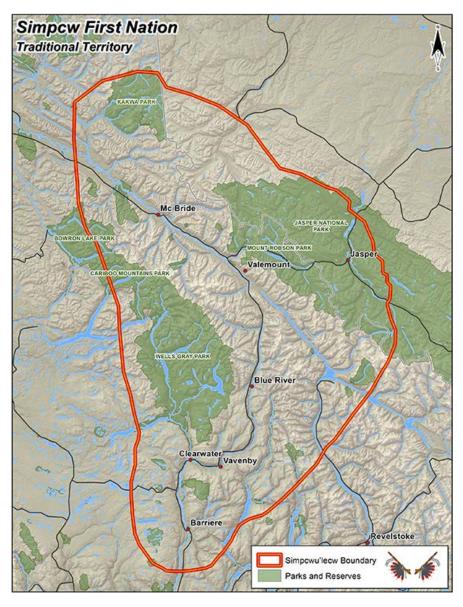


Exhibit 46: Traditional Territory of Simpcw First Nation<sup>32</sup>

# 11.1 BACKGROUND & OBJECTIVES

Following the initial call and inquiry from the Village of Valemount's Mayor and Council and community members, the project team's first step was to go and meet with Simpcw First

<sup>32</sup> Map from: http://www.simpcw.com/our-people/our-land

Nations representatives and determine if there might be First Nations support for the project.

This initiative was taken not only because of the importance of working together with the First Nations, but because one of the dreams of Oberto Oberti has been to introduce the local First Nations to world class tourism, and helping them to be the hosts to the world in their aboriginal lands, and thus creating an industry that will be grounded in showing and enjoying the mountains and the very nature that has been the basis of the First Nations sustainment, traditions and culture since the beginning.

Oberto Oberti had previously been impressed by what the Navajo Nation has been able to do at Monument Valley in the United States, and hopes that in Canada we will surpass that successful, but still relatively modest experience.

Consequently, one of the main objectives of this project proposal is not only to create an international tourism destination with overwhelming public support as per the request of the Village of Valemount, but also to create a model project in terms of cooperation with the First Nations. This project is seen as a unique opportunity to introduce British Columbia's First Nations to the international tourism and ski industry, creating a valley destination of their own, and repositioning a significant area to their ownership and control.

Discussions to this effect started with Simpcw in the spring of 2011 (following the initial call from the Village of Valemount in January 2011), and are on-going with meetings with the Chief and Council members and by conversations with Simpcw's Administrator, initially Dr Doug Brown and now Mr James Foster, and with the Manager of the Simpcw Resources Ltd. company, Sam Phillips.

The project will be designed according to provincial policies and the public interest, achieving the highest and best use of Crown land in a sustainable manner and according to best practices. The First Nations objectives of environmental stewardship are fully endorsed by the proponent group.

In February 2012 Chief Nathan Matthew and Councillor Fred Fortier visited some of the most important French ski areas and resorts and the nearby municipalities at the invitation of France Neige International and La Compagnie des Alpes, During the reciprocal visit by the French delegation to Valemount in March 2012, Fred Fortier and Doug Brown gave an in depth presentation of aboriginal views and interests to the French delegation in the presence of Oberto Oberti, Jill Bodkin and Mike Leahy, representing the Valemount Glacier Destinations Ltd. company.

Fred Fortier participated in the preliminary presentation of the Master Plan concept on June 15<sup>th</sup>, 2012, in Valemount, expressing again the point of view of First Nations and interest in

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working towards a mutually beneficial relationship. Oberto Oberti met Chief Rita Matthew on the following day.

Many other meetings and presentations followed, leading to the conclusion of a Memorandum of Understanding in August 2014, and to cooperation with companies in the Simpcw Resources group of companies. Cooperation in environmental studies and in the planning of services by a public utility company are progressing and negotiations towards an Impact Management and Benefits Agreement are underway. The negotiations include discussions around Simpcw potentially taking an active role in the project.

On October 23<sup>rd</sup>, 2012 Oberto Oberti presented the project concept on site to a Simpcw First Nation delegation. including the new Simpcw Administrator, Kerri Jo Fortier, and the General Manager of the Simpcw Resources Company, Sam Phillips.



**Exhibit 47: Site Visit with Simpcw First Nation Delegation** 



Exhibit 48: Visit with Directors and Manager of Simpcw Resources Ltd.



**Exhibit 49: Site Visit with Simpcw First Nation Delegation** 

Exhibit 50: Simpcw Chief Nathan Matthew Speaking at Master Plan Final Public Open House



#### 11.2 INTERPRETIVE CENTRE

An interpretive centre is planned as an important attraction at the resort village. It will be situated at a prominent location near the arrival point for vehicular traffic to the resort village. The interpretive displays are intended to be similar in concept to those in place at the Wells Gray Provincial Park information centre in Clearwater, BC., but with an expanded scope. A traditional pit house is contemplated for the grounds immediately outside the interpretive centre.

Part of the on-going discussions between VGD and the Simpcw will be around the potential role of Simpcw in the ownership and management of the interpretive centre and other opportunities for retail and office space.



**Exhibit 51: Interpretive Display at Wells Gray Provincial Park** 

# 12. APPROVAL PROCESS, GOVERNANCE & PUBLIC SERVICES

## 12.1 DEVELOPMENT APPROVAL PROCESS

The resort is situated in Electoral Area "H" of the Regional District of Fraser-Fort George adjacent to the Village of Valemount. While there is no zoning, this proposal intends to comply with the general objectives outlined in the *Robson Valley-Canoe Upstream Official Community Plan* (RVCU-OCP), including Commercial and Industrial objectives, Crown Land objectives, Environmental objectives, Tourism objectives, Recreation and Heritage objectives and Services and Infrastructure objectives (RVCU-OCP pgs. 4-6).

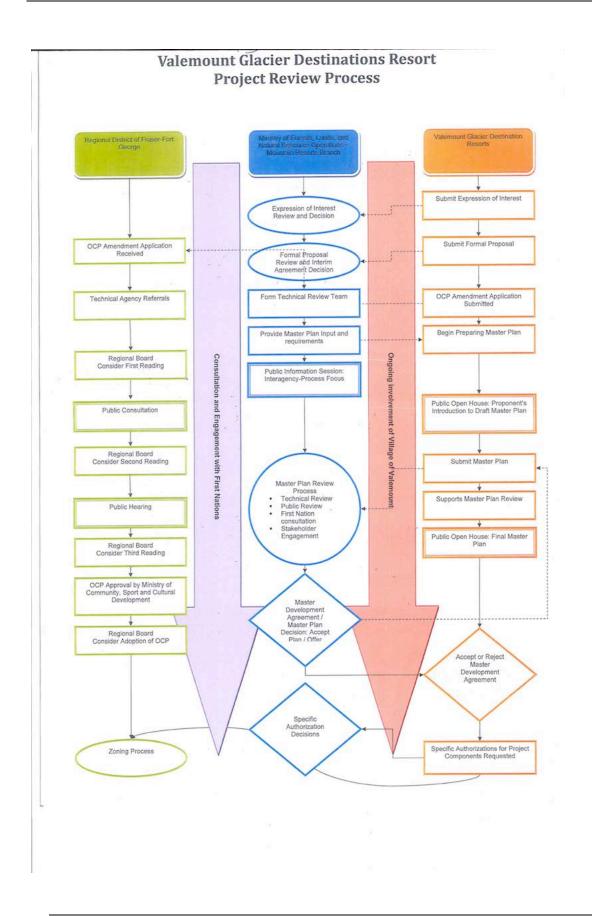
An application for OCP Amendment and rezoning has been submitted and following meetings with regional district and provincial staff it was confirmed that the process will follow a harmonized parallel path with the ASRP approval process for the Master Plan. The intent is to have the local government's OCP and rezoning process completed in concurrence with the provincial Master Plan approval process. This seems to be a good approach as the local government relies on the provincial ministries and does the same referrals as the Mountain Resorts Branch of the Province that administers the ASRP approval process. Following rezoning and Master Plan approval VGD will be in a position to obtain the Master Development Agreement (MDA) form the Province. The current objective is to complete the approval process in 2015 in order to allow the VGD company to start construction in the Spring of 2016 and to open the ski area for Christmas 2016.

Previous communications with the Village of Valemount and the Regional District indicated that the Village of Valemount was interested in doing a boundary expansion to include the Controlled Recreation Area (CRA) prior to completion of the approval process, but following conversations with the Simpow First Nation it became apparent that the removal of the Crown land from the jurisdiction of the regional district would create complex problems that will require more time to find a solution. While the boundary expansion may be desirable from the Village's point of view it is appropriate that it be done carefully and with the necessary time. This should not become a cause for delay of the project, and can be done after the project has started. The project will be completely independent and self-sufficient for services, and will not cause any costs to the Village of Valemount, consequently the timing of the boundary expansion will not affect the project development and will not interfere with the management and the budget of the Village, although every form of mutually beneficial opportunity (such as, for example, power generation) will be pursued.

The support of the Village, as well as that of the Simpcw First Nation, remains essential for

the approval and the success of the project, but the formal approval process will be a harmonized and parallel path administered in cooperation by the Fraser - Fort George Regional District and by the Province.

The path of the harmonized approval process has been presented by provincial staff of the Mountain Resorts Branch as follows:



The Master Plan approval process is under the All Season Resorts Policy of the Province.

The local government approval process is expected to be as follows:

- 1. An amendment to the Robson Valley-Canoe Upstream Official Community Plan (OCP) will be drafted for consideration of adoption by the Regional District Board. The Official Community Plan amendment also includes incorporating the resort village and associated area into a Development Permit Area to address the protection of the natural environment and ecosystems and biological diversity and protection of the environment from hazardous conditions. The proposal is to amend existing the Robson Valley-Canoe Upstream Official Community Plan to incorporate the proposed resort village and associated areas.
- 2. A Zoning Bylaw will be drafted for consideration of adoption by the Regional District Board. The proposal is to create a stand-alone Zoning Bylaw that will incorporate the proposed resort village and associated areas.
- 3. A new Subdivision Servicing Bylaw or an amendment to the existing Subdivision Servicing Bylaw may be drafted for consideration of adoption by the Regional District Board to address subdivision requirements for the resort village and associated area.
- 4. Construction of buildings and structures within the resort village area will be required to obtain Building Permits from the Regional District prior to works starting. The Regional District may consider developing a policy for the Regional District Board's consideration that would require building permit applications within the resort village area to be accompanied by an approval from the DRAA.

#### 12.2 RELATION TO LOCAL GOVERNMENTS

Both the Regional District of Fraser Fort George (RDFFG) and the Village of Valemount support the project. It is expected that the RDFFG will exercise its powers with respect to zoning and building permit processes. An Official Community Plan amendment is being prepared for the area of the proposed resort. The Village of Valemount will not provide any direct services to the resort, but it is home to many of the commercial, health care and support services that will be utilized by resort visitors and employees, and it has also provided much of the enthusiasm for the VGD project.

#### 12.3 OPTIONS FOR LOCAL SERVICES DELIVERY

Because authority for local matters falls under the constitutional powers of the Province, "local government" is merely a delegation by the Province of select powers to local and regional bodies administering public services, utilities, infrastructure, and a variety of

regulatory matters. Since confederation, there have been many solutions to the provisions of local public services, whether organized under a particular public statute or whether provided privately or through a charitable organization.

There has never been a single umbrella statute addressing all aspects of local services. Some of the existing public statutes dealing with local services are the Local Services Act, the Water Act, the Utilities Act, the Fire Services Act, the Local Government Act, the Land Title Act, the Industrial Development Act, and the Mountain Resort Associations Act, just to name a few, being updated from time to time, such as the Local Government Act and the Community Services Statutes Amendment Act. Private statutes have also been used regularly and continuously used over the years such as the Vancouver Charter, the Resort Municipality of Whistler Act, and the Shaughnessy Heights Building Restriction Act, to address unique circumstances.

It is expected that a combination of private development controls, of development regulations (OCP and zoning) administered by the regional district, and of services provided by a public utility company will be a viable legal option until there is sufficient population or desire to pursue a different form of governance, such as amalgamation with the Village of Valemount. It is also expected that as the resort grows it may form its own Mountain Resort Association.

The Mountain Resort Associations Act came into force in 1995. In the scope of the original legislation, there was provision for the establishment of 1) Mountain Resort Areas, 2) Mountain Resort Improvement Districts, 3) Mountain Resort Associations, 4) Mountain Resort Business Improvement Areas, and 5) Mountain Resort Municipalities. The Act was revised a number of times and finally the provisions of the Community Services Amendment Act came into effect in 2007, giving the Minister the power to create the necessary local governance structure for mountain resorts by means of special letters patent. It is not necessary that this provision be considered at this time, as the future governance may be more appropriately determined once the project has started and the resort, the Village of Valemount, the regional district, the Simpcw First Nation and the Province may decide what would be the ultimate solution for the best long term growth of the destination resort. The most likely option being discussed is a boundary expansion of the Village of Valemount.

In the interim, if warranted, VGD may create a Mountain Resort Association, and may create a Mountain Resort Business Improvement Area, which are intended to create an organization that will have the power to promote and market all or part of the mountain resort. Funding is raised through an annual assessment within the resort area or smaller business improvement area. The powers of a Mountain Resort Association include the power to facilitate the operation of the Mountain Resort Area in accordance with its bylaws,

and the most notable advantage of this kind of Association is a more coordinated marketing effort.

#### 12.4 STRUCTURING AND ADMINISTERING SERVICES

In the absence of existing services, whether related to utilities, infrastructure, development control, localized emergency services or regulatory controls, it is necessary to draw from the available options and implement immediate effective measures to fill the gap. None of these services are expected to be provided by the RDFFG or by the Village of Valemount, except where arranged by contract.

## 12.4.1 Public Utility Companies

While utilities are often administered by "local government" or improvement districts, the operation of a public utility company is the option that has been pursued by VGD as an interim or even long term measure. VGD is in discussions with Tsetsk'wem Management Services, a joint venture between ATCO and Simpcw Resources Limited Liability Partnership to establish a utility company for the resort. Water, telephone, cable, propane gas, electricity and other services may be provided by the utility company as the need arises and the economic well-being and the enjoyment of the resort require it. There is ample precedent for public utility companies which are a welcome opportunity for local involvement in generating local jobs. Public utility companies in general are not prime areas of investment for profit but neither are they money losers. For example, the Comptroller of Water Rights approved "the rate of return on operating equity and the operating margin" for the Sun Peaks Utility Co. Ltd. for 1998 at 11.25%, and it has been determined that is feasible and possible to operate a public utility company and facilitate both quality services and investment in the resort areas in this manner.

#### 12.4.2 Administration of Water and Sewer Infrastructure

The water supply service to the resort is expected to be operated by a public utility company. VGD's engineers and environmental consultants, together with the utility company will make an application to obtain a Certificate of Public Necessity and Convenience from the Comptroller under the *Water Act*, which is necessary when a water supply serves more than five people.

The sanitary sewer systems for the collection, treatment and disposal of liquid waste is another service that would normally be provided through the administration of a public jurisdiction, but due to the remote location, the sewer system and the

treatment plant will also need to be operated by the utility company that will become the provider of services at the resort village. The sewage disposal and treatment system must comply with the requisite Provincial standards and require Provincial permits. VGD's engineers and environmental consultants, together with the utility company will make an application to obtain an approval for the design and construction of the sewage system and of the treatment plant under the Municipal Services Regulation approval process.

## 12.4.3 Managing Development Control

For the purposes of this plan, development control includes the application of a broad range of zoning principles, servicing requirements, review and approval of applicable design guidelines and administration of a scheme of building code compliance.

Development control is normally under the jurisdiction of local governments, which in this case is the Regional District of Fraser - Fort George. For the VGD project there is a greater level of development control because there is a Master Plan and there is a strong interest of the master developer in achieving a high quality development through consistent and enforceable development controls that will achieve the objectives of this Master Plan.

The developer's option for the application of the Master Plan and accompanying Design Guidelines (Appendix 2 of this Master Plan) includes the filing of land use covenants on each title in the resort area, under Section 219 of the *Land Title Act*. Another tool that VGD may use to ensure compliance with building restrictions is the registration on title of a statutory building scheme under Section 220 of the *Land Title Act*. The Design Guidelines that are part of the Master Plan have been prepared to implement the objectives of the Master Plan and to facilitate the administration of development controls.

Development Permit Guidelines are proposed by the regional district to address the protection of the natural environment and ecosystems and biological diversity and protection of the environment from hazardous conditions.

Building Inspection services will be conducted pursuant to current Regional District regulation and the BC Building Code and Building Act. The Regional District will require building permits for all buildings and structures proposed within the resort village. An application with supporting documents will need to be submitted for review prior to a building permit being issued. Completion of a building permit and

inspections will be based on the building regulations.

The building permit is a technical permit issued by the local government in compliance with the B.C. Building Code. Building code compliance is usually enforced by local government, but especially in remote locations this could also be administered through a professional certification system. While the B.C. Building Code is applicable throughout the Province, enforcement mechanisms are not in place in all regions. As code compliance is mandatory, it may not be necessary for the RDFFG to provide building inspection services, because professional compliance certification will be available and mandatory. The design professional shall provide the evidence of insurance and the Letters of Assurance required by code to the Building Inspector and make the necessary field reviews and reporting. This method was initiated by the City of Vancouver in 1983 under the Certified Professional Program and has been followed by a number of other jurisdictions.

The covenants placed on title in the resort area will require building drawings to be submitted to VGD together with letters of assurance by design professionals. The design professionals provide proof of professional liability insurance and certify that the proposed buildings and other structures comply with all applicable code requirements and Master Plan provisions also to the developer, VGD..

VGD plans to establish a Design Review and Approval Authority (DRAA) to receive plans together with building code letters of assurance and to weigh the plans against the Design Guidelines, the building envelopes and the zoning principles of the Master Plan and other criteria that may be set out in the covenants. It is intended that the DRAA will be comprised of a B.C. Registered Architect named by VGD, who initially will be the project designer; by a planner or a professional engineer, or other technical person who will be part of the design, construction and development management group named by VGD or by the regional district; and a representative from the Village of Valemount who could be named by the Mayor following consultations with the regional district, the Village of Valemount Council and the Valemount Ski Society.

An alternative simplified model for a DRAA would be to name the design firm of architects for the resort to review design proposals for compliance with the Master Plan and to report to VGD and to the regional district.

The Regional District may consider developing a policy for the Regional District Board's consideration that would require building permit applications within the resort village area to be accompanied by an approval from the DRAA.

## 12.4.3.1 Summary of Development Controls.

In conclusion, the control system for the VGD project is as follows:

- 1) The approved Master Plan, including the Design Guidelines (which have been expanded in this Master Plan), is the guiding document of the planned development of the ski resort, in accordance with the Master Development Agreement granted by the Province. This document provides planning guidance to the development in a manner that is similar to a municipal Official Community Plan and zoning by-law, but provides greater preliminary design information in order to achieve a cohesive resort ambience for a smaller and transient tourist community.
- 2) The developer, VGD, is required to follow the Master Plan by the agreement signed with the Province; if the developer is in default the Province has the right and the ability to take back the ski area and the resort project, and it may offer it for a price to another developer. The approved Master Plan is the guiding document for both developer and Province.
- 3) The Master Plan locates and defines all permitted uses, it also provides a preliminary volumetric definition of all buildings and the preliminary approximate location of all roads, trails and services, which are to be developed according to BC municipal engineering standards and to meet the approval of the BC Ministry of Transportation.
- 4) VGD and its specialist consultants must complete detailed design, following the Master Plan, and must satisfy all conditions precedent for subdivision approval according to existing legislation and regulations before applying for land grants. Minimum engineering standards are defined in the design guidelines to be those that are equivalent to municipal regulations prevalent in the Province, and professional engineering certification is required. The public utility company and its engineers are expected to be responsible for municipal work.
- 5) Once land grants are made, covenants are registered on all titles to make mandatory compliance with the Master Plan and all its requirements.
- 6) The covenants also require that the owner of each parcel, in accordance with the Master Plan and provincial legislation, follow a Certified Professional Program employing registered BC professionals to ensure compliance with the BC Building Code and certify each building project.
- 7) The registered professionals of each owner must certify at the preliminary

design stage that their design complies with the Master Plan and the Design Guidelines. The Design Review and Approval Authority (DRAA) of VGD, or the firm of architects and planners in charge of the VGD master plan, reviews the submission and once compliance is verified confirms to the owner that the there is a favourable opinion.

- 8) The regional district issues a development permit when required.
- 9) The Regional District requires a building permit for all buildings and structures proposed within the resort village. An application with supporting documents will need to be submitted for review prior to a building permit being issued. Completion of a building permit and inspections will be based on building regulations.
- 10) The regional district may not review the submissions regarding compliance with the BC Building Code, which is the responsibility of the registered professionals, so that liabilities are clearly defined. The registered professionals are required to provide proof of insurance.
- 11) When buildings are completed the registered professionals are required to provide occupancy certification and to submit the final Letters of Assurance, as specified in the B.C. Building Code, to the regional district.

The above system has been substantially in place in other jurisdictions and is being perfected with the availability of a Master Plan and related design Guidelines. The Certified Professional system is particularly suitable for a project in a remote location. The system illustrated above reduces time, cost and liabilities for the local government, while providing the assurance a strict level of compliance with the Master Plan and with the B.C. Building Code.

The project is intended to be designed, constructed and maintained without generating costs to the local government, with the developer and the public utility company providing all normal services and the necessary maintenance.

#### 12.4.4 Emergency Services Generally

In Valemount, fire police and ambulance services are handled separately. The Valemount and District Volunteer Fire Department provides fire protection in the Valemount area and only covers a defined service area. This defined area covers the Village of Valemount and a portion of Electoral Area 'H' of the Regional District. The proposed resort village is outside of this service area. Police and ambulance services are part of a broader service area.

Other emergency services such as search-and-rescue and emergency response programs will be co-ordinated by a resort emergency co-ordinator or through the RCMP who in turn call upon trained volunteers.

In relation to emergency services, VGD will arrange for its ski hill operations to employ a certified professional ski patrol with basic paramedic training to provide for stabilisation and transfer of injured skiers to facilities in the Village of Valemount and Prince George. The ski patrol provides search-and-rescue operations within the Controlled Recreation Area and will call in regional search-and-rescue volunteers on an as-needed basis and in accordance with industry standards.

#### 12.4.5 Fire Protection Services

See Section 9.4 of this Master Plan.

#### 12.4.6 Police Services

The RCMP has a detachment based in the Village of Valemount, which serves a broad area that includes the resort area. Services to VGD are operated from Valemount and include the usual traffic patrol and investigation services as well as operating a crime prevention and ski watch program. There is not expected to be an immediate need for an increase in detachment size as a result of the development of VGD, because ski areas do not generate a great deal of crime. Search-and-rescue operations are dispatched by the RCMP utilizing the volunteers under the Provincial Emergency Preparedness Program. The RCMP works along with search-and-rescue teams on an as-needed basis.

## 12.4.7 Medical and Ambulance Services

The Valemount Community Health Centre is under the jurisdiction of Northern Health and underwent a \$3.3 million renovation in 2012. According to the *Rocky Mountain* Goat, "some of the upgrades include wider hallways, better videoconferencing capability, digital radiology system and a ceiling lift in the emergency room so patients can be lifted by machine instead of by hand. The bigger videoconference screens will allow patients direct access to specialists and allow doctors and nurses to stay in Valemount for training instead of travelling." <sup>33</sup>

The centre now serves the Valemount area and is capable of providing services to VGD. As population and the tax base grow in the future, so too will the Province

<sup>33</sup> http://www.therockymountaingoat.com/2012/07/revamped-valemount-healthclinic-bright-and-modern/

have to expand the hospital facilities.

Regional hospitals are the University Hospital of Northern British Columbia in Prince George and Royal Inland Hospital in Kamloops.

Paramedical services will be provided at the ski area in conjunction with the certified professional ski patrol services. Injuries will be dealt with at the resort's medical clinic to stabilize victims. At build-out, an ambulance vehicle will be located near the base area of the resort at the firehall. Patients will be transferred to regional hospitals as necessary.

Ambulance service is currently available to the Valemount area through the BC Ambulance Service, which provides coverage to a broad area with 2 ambulances stationed in the Village of Valemount. On-site ambulance service will be provided according to industry standards in commensuration with the growth of skier visits.

#### 12.5 DEVELOPMENT CONTROL COVENANTS AND RELATED MATTERS

There is more than one way to achieve the administrative objectives and to create a regulatory framework to apply to the resort area.

To achieve the desirable development controls during the first stage of development, rules and regulations will be registered on title to each parcel of land created during the subdivision or lease process. The Province is the Transferee of the key conditions of land use with respect to bed unit count and overall site use, and VGD is the Transferee of the more detailed interim and permanent covenants as well as the author of the statutory building scheme. Together, these documents provide most of the details necessary to enforce land use and development regulations. The covenants may be divided up into issues for ease of enforcement.

## 12.5.1 Site Layout and Design Guidelines

General site layout and more specific design guidelines are contained in a covenant in favour of VGD. This will be permanent. The guidelines will be essentially as in the Master Plan with some refinement to clarify concepts of design for easier application

Design Guidelines provide a harmonized aesthetic framework as well as functional guidelines such as snow management.

and interpretation by the Design Review and Approval Authority (DRAA). This covenant would require review and approval by the DRAA of a proposal as to its compliance with the guidelines. Presentation requirements would be set out, with a simpler format being required for single-family dwellings than for other buildings. The regional district will not be responsible for the implementation or enforcement of these conditions.

## 12.5.2 Bed Unit and Parcel Use

By way of covenant, in favour of the Province, bed unit and parcel use are controlled and limit land use on each parcel to a particular building use or uses (including permissive uses such as a health spa, tennis courts, and convention facilities in addition to any mandatory or primary uses). Bed units are limited to the maximum number for each parcel as generated by the corresponding ski lifts and related development. This covenant would be changed if there were a future change or minor modification in the Master Plan with respect to a particular parcel.

## 12.5.3 Detailed Siting, Construction and Use

There will be a covenant in favour of VGD containing siting and density conditions for each lot, together with servicing requirements beyond those in the RDFFG subdivision servicing bylaw. This will include, for example, setbacks, maximum tree clearance and maximum floor areas for each building type. The regional district will not be responsible for the implementation or enforcement of these conditions.

Compliance with the Master Plan objectives, such as garbage control, sewer hookup, water hook up and energy efficiency in building design, will also be the subject of this covenant. The submission requirements for a review by the DRAA will include drawings showing management of sunlight, emergency vehicle access, grading requirements, a description of functional building operations and project volumetric compliance.

The garbage requirement will be to deposit garbage at least every four days at the waste transfer station and to forbid at all times from keeping any garbage stored outside, but rather within the main building or a fully enclosed predator proof outbuilding. The compliance with the energy efficient design standards could also be included, such as adherence to the B.C. Hydro Power Smart Guidelines and the referenced CBIP Commercial Power Conservation Guidelines (for 25% less power consumption than the Model National Energy Code for Buildings). This whole covenant will simply remain on title in whole or in part until VGD was satisfied that it could release the covenant after the creation of suitable replacement regulations by local government.

Further provisions will be to the effect that, once initially subdivided, no parcel could be re-subdivided to yield any increase in the number of lots except for the creation of strata lots, (excluding bare land strata lots).

Each building type may have the following zoning restrictions by way of land use covenant: a maximum floor area (not an F.S.R.) front, side and rear setbacks, height limits, minimum on-site parking requirements, (either covered or non-covered as the case may be). This covenant, where in favour of VGD, will refer to the DRAA or to the professionals in charge of the master plan for development approval.

The anticipated setbacks, heights and other regulations or each building type permitted in the Master Plan will adhere to BC Reg 513/2004<sup>34</sup> and will be as per the

<sup>&</sup>lt;sup>34</sup> http://www.qp.gov.bc.ca/statreg/reg/T/Transportation513\_2004/513\_2004.htm (see Part 3, Sections 11-13).

Design Guidelines attached to this document. (See Appendix 2).

Parking requirements will be set out on a per parcel basis to comply with the overall parking plan for the skiing and the resort base as outlined in the Master Plan. The parking space standards will be in accordance with the I.C.B.C. parking recommendations, which could be relaxed by the DRAA, for freehold parcels in the case of either hardship or reasonable engineering considerations.

Prior to issuance of a building permit the covenant will require letters of assurance from a registered B.C. Architect and the Engineers, giving witness to compliance with the B.C. Building Code and related code requirements, first upon submitting an application for development approval and again, by way of confirmation upon building completion prior to occupancy.

For leased areas, an appropriate version of the above covenant would be in favour of the Province, assuming that there will be a title for these areas registered under the *Land Title Act*. This covenant will provide for details of the requisite ski area base where not specifically provided in the Lease document itself. For example there could be a requirement for the components of an operational ski facility including a ticket booth, rest rooms, a ski rental area, ski school, skiers' lockers, a personnel canteen and brown bag lunch room, a cafeteria, kitchen, store rooms, gift shop, radio and dispatch office for the ski patrol, security, search and rescue and the RCMP, and a location for first aid services, etc.

#### 12.5.4 Environmental Covenant

An environmental covenant will be prepared in favour of the Province for prohibition of tree clearance and minimum building setbacks adjacent to a water course. If necessary, other relevant environmental issues that are canvassed in the Master Plan could be included in this environmental covenant, where the land is registered under the *Land Title Act*. The regional district will not be responsible for the implementation or enforcement of these conditions.

#### 12.5.5 Rental Pool Covenant

A rental pool covenant, providing that a residential unit will be managed and marketed as tourist accommodation, will be put on title for a targeted number of the condotel units in any one portion of the development, including clauses that provide for redecoration at the discretion of VGD or its assigned rental pool management company from time to time and financed through the rental pool scheme from revenues. This is to ensure the product is current and the units have similar

standards of furniture and finishes, especially with the passage of time. The overall target is for a minimum of 50% of bed units in the completed project to be included in the rental pool. The regional district will not be responsible for the implementation or enforcement of these conditions.

## 12.5.6 Statutory Building Scheme

A Statutory Building Scheme will be registered by VGD against all single family chalets with detailed design guidelines and related restrictions. The instruments will provide for an enforcement mechanism by all property owners and therefore extend enforcement beyond VGD. Local government seldom has the power to enforce such guidelines on single family development unless achieved through voluntary covenant, although statutory development permit areas are generally used with a degree of success. In this respect VGD has a better opportunity of enforcing and achieving successful conceptual and aesthetic design controls, ensuring the quality of the development permit area controls. The regional district will not be responsible for the implementation or enforcement of these conditions.

## 12.5.7 Timing of the Documentation

The proposed covenants must be consistent with the approved uses of the land parcels as foreseen when the land is actually subdivided. Some minor modifications will likely be required to provide for the specific details of a particular grant or subdivision. Covenants will likely be filed concurrently with the deposit of each final subdivision plans in the Land Title Office. Other similar documents to be filed with the subdivision plan include statutory rights of way and easements.

## 12.6 OTHER REGULATORY CONTROLS

Governance by covenant on title should be limited to land use and related issues in order to be in strict compliance with the terms of Section 219 of the *Land Title Act*. The equivalent of regulatory bylaws, such as noise, dog control, business licensing, traffic regulation, etc. may be included as covenants on title. Regulatory bylaws may also be instituted by the regional district, via the local Electoral Area Director and the Board of the Regional District if they choose to legislate in these areas. However, noise, foul odours and other issues, such as troublesome dogs may be actionable as nuisances by individual land owners at common law if they should become a problem. In addition, VGD may exercise its powers granted by the Province for the administration of the Controlled Recreation Area to control any nuisance problems that originate from areas other than fee simple land. For instance, the *Livestock Protection Act* provides a scheme to deal with uncontrolled dogs where there is no adequate

local regulation. Traffic issues on dedicated roads will be subject to the *Transportation Act* and *Motor Vehicle Act* until there is supplementary local legislation. Traffic and other regulatory rules on private property will be subject to owner control such as through bylaws of a strata corporation.

## 12.7 MISCELLANEOUS PERMITS REQUIRED

Following a Master Development Agreement with the province and an Official Community Plan amendment and rezoning from the regional district, a wide range of permits are required before and during construction as well as before and during operations. These permits include:

- A certificate of public convenience and necessity for the provision of water;
- Operating permit as per Drinking Water Protection Act and Regulations;
- Application to Northern Health for a water system construction and operating permit. This includes:
  - a. Permit to construct
  - b. Permit to operate (after construction is complete)
    - i. Water system operating permit application
    - ii. Emergency response plan
      - iii. Proof of operator training (training is dependent on size of population served)
    - iv. Proposed maintenance plan for water system
- Solid and hazardous waste disposal: all waste must be disposed of in an approved waste disposal facility to prevent a health hazard as required by the Public Health Act. Proposed plan for solid waste disposal must be submitted to Northern Health;
- Wastewater: Any wastewater from the site must be disposed of in an adequate wastewater treatment system as required by the Environmental Management Act and Municipal Wastewater Regulation.
- A sewerage filing must be submitted to Northern Health (if less than 22,700 litres per day) or work with the Ministry of Environment for acquiring a permit (if greater than 22,700 litres per day);
- A road use permit or a road user agreement for existing access roads;
- Road and bridge construction permits from MoTI;
- All road stream crossings will require notification under the Water Act Section 9

- and Part 7 of the Water Act Regulation;
- If fish salvages are necessary, a fish salvage permit must be obtained prior to commencing salvage activities;
- Assorted Development and Building Permits from RDFFG;
- All food premises must be permitted as listed in the Food Premise Regulations.
   Applications for the permit must be sent to Northern Health, this includes:
  - a. Application for Health approval
  - b. Proposed floor plan
  - c. Proposed menu
  - d. Food safety plan
  - e. Sanitation plan
    - f. Proof of food safety training (i.e. FoodSafe level 1 certification) by owner and/or manager
- Archaeological sites (both recorded and unrecorded) are protected under the Heritage Conservation Act and must not be altered or damaged without a site alteration permit from the Archaeology Branch

# 13. SOCIO-ECONOMIC CONSIDERATIONS

## 13.1 REGIONAL OVERVIEW

## **13.1.1 Local Population**

The population of the Robson Valley is approximately 3,600. Valemount and McBride, the two largest and only incorporated communities, contain approximately half the population with the other half living in other smaller communities (Dunster, Tete Jaune, Crescent Spur and Loos, in rough order of size) and more rural areas. Yellowhead Highway 16, connecting Prince George with Jasper National Park, and Highway 5, connecting Tete Jaune with Kamloops, are the main transportation routes through the Valley. The CN Railway runs parallel to both highway routes.

The Village of Valemount, with a population of about 1,044 and located near the junction of the two highways, is the region's primary growth centre. McBride, with a population of about 674, is located 80 km northwest of Valemount on Highway 16. Total population in the Robson Valley has declined approximately 20% since 1980, likely due to declines in forestry employment.

The loss of population does not include the loss of people who go to Alberta and north-eastern British Columbia to work during the week or on 2-3 week shifts in the oil sands and natural gas fields, which was identified as a major concern through local interviews (Millier Dickinson Blais Inc., 2010 pg. 15).

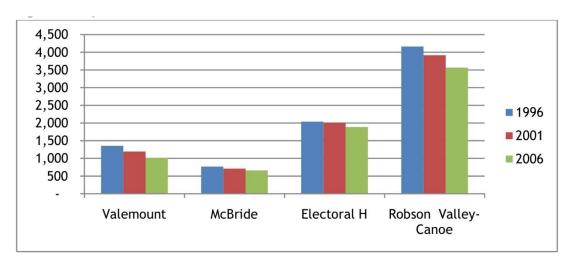
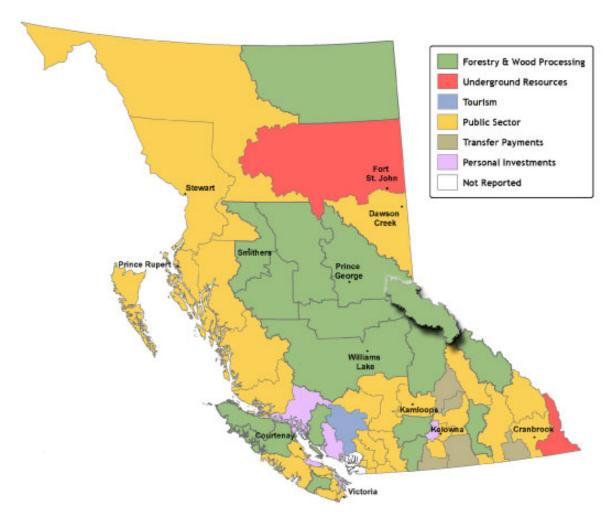


Table 59: Robson Valley Population

Source: Millier Dickenson Blais Inc. (2010) pg. 13

## 13.1.2 Regional Economy

Historically, forestry has been the single most important sector in the Valley's economy, directly and indirectly accounting for about one third of income and employment. Many farmers have been loggers and truckers. However, the industry has seen significant decline in the past 30 years and both the Valemount and McBride mills have closed. The only remaining working sawmill in the region is the Hauer Bros. sawmill in Tete Jaune which employs 15 people and specializes in square lumber with markets in Eastern Canada (Millier Dickinson Blais Inc., 2010).



**Table 60: Dominant Basic Income Sources** 

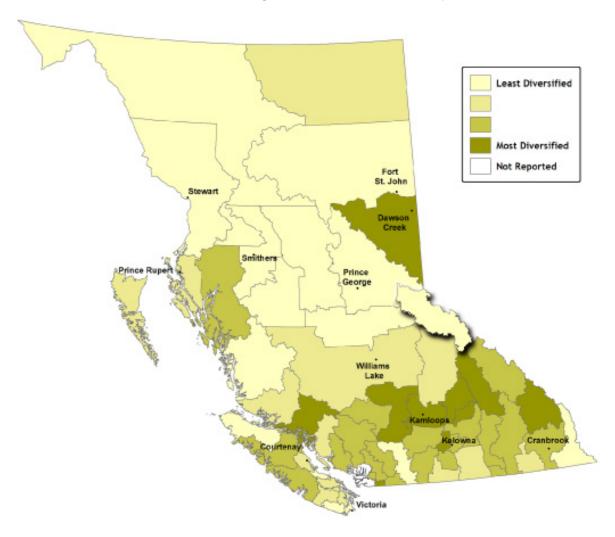


Table 61: Regional Economic Diversity

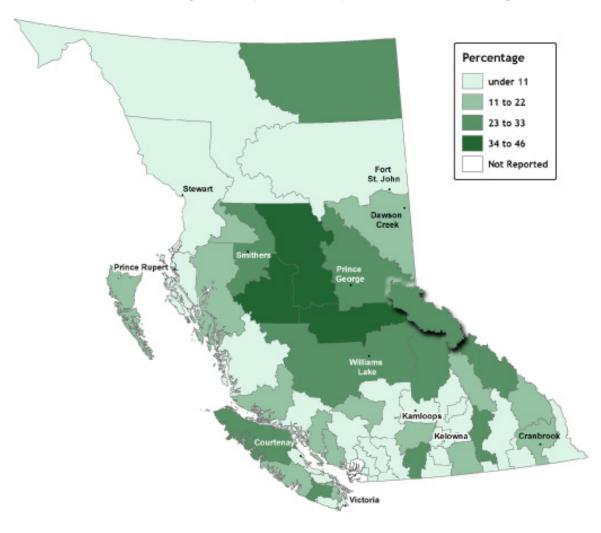


Table 62: Dependency on Forestry and Wood Processing

The Robson Valley saw the largest increase in the Forest Vulnerability Index (FVI) in British Columbia between 2001 and 2006, rising 9 points to 59<sup>35</sup> (Horne, 2009 pg. 48), suggesting that the local economy is increasingly vulnerable to the business cycles of the forestry sector.

Forestry accounted for 33% of the Robson Valley's basic income dependency

<sup>&</sup>lt;sup>35</sup> FVI combines dependence on Forestry with diversity to provide an index that indicates how vulnerable the community in question is to downturns in the local forest sector. A higher number shows greater vulnerability and numbers close to zero show virtually no such vulnerability.

(income that flows directly into the community from the outside world). The region's public sector saw large growth from 2001-2006 and accounted for 21% in 2006. Transfer payments from senior governments accounted for an additional 16% of the income flows to the region, while the tourism sector generated 11%, construction 5% and agriculture 1% (Horne, 2009).

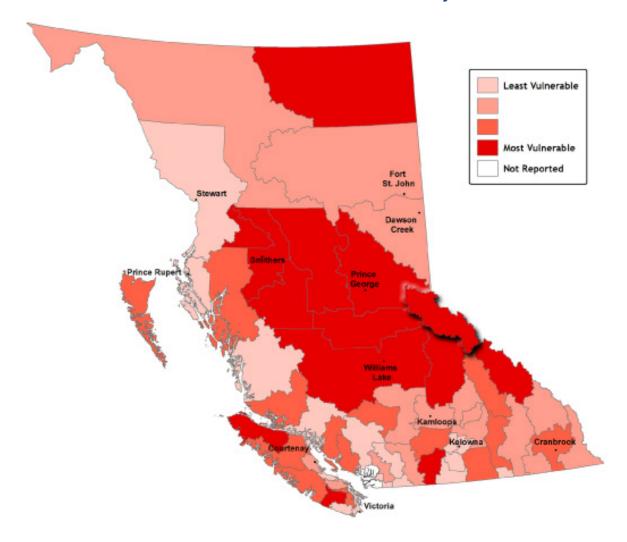


Table 63: Forest Sector Vulnerability

Source: BC Stats, January 2009 (Horne, 2009)

One of the primary reasons the consultant group was approached by representatives of the Village of Valemount was to help develop a lasting and sustainable economic engine for the region. Given the scenic attributes of the region, tourism represents its strongest growth potential. This potential is augmented by a diversity of recreation opportunities, exceptional climate for snow sports and proximity to Mount Robson

and Jasper parks. These Parks help to draw over one million visitors annually through the Valley. Data provided on park use and by commercial operators also suggest strong historical growth in recreation demand (MNRO, 1999).

Despite lacking a showpiece attraction to draw visitors, the Village of Valemount reports that tourists already generate approximately 150,000 overnight visits per year spending approximately \$12.5 million in Valemount (approximately \$8.5 million in accommodation).

Given the region's natural attributes and the unique and rare possibility of accessing high alpine glaciers for sightseeing and year round snow sports, international tourism drawn by a prime and unique destination represents the greatest potential to ensure long-term economic growth in the Robson Valley.

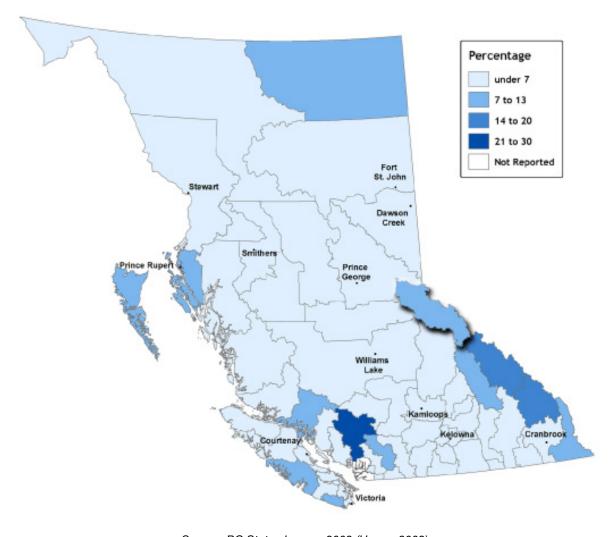


Table 64: Dependence on Tourism

Historically, mining and energy have not been significant components of the Valley's economy. There are a variety of mineral occurrences throughout the region including some precious metals and a variety of industrial minerals. There are past producing areas of silica and mica in the Valemount area as well as potential for gypsum in the upper Forgetmenot Creek. No major developments are expected in the Valley, but there may be longer term possibilities in industrial minerals and small scale hydro, including geothermal hydro.

Millier Dickinson Blais Inc. (2010, pgs 7-12) interviewed 50 local stakeholders to

discuss the Robson-Canoe region's economic future and opportunities. Their future goals and visions were summarzied to include the following:

- A good place to work, live and raise a family.
- An area with year round recreation that is known for its outdoor amenities and not its industry.
- To have an increase in population with controlled growth and new business opportunities.
- Strong local government who will ensure that infrastructure is in place for future growth.
- Superior quality of life.
- Smart growth keeping environment in mind clean water and mountains.
- "I want to tell people where I live and they know where that is!".
- A place that is good for seniors to live with good amenities and a comfortable lifestyle.
- Maintain a small town atmosphere not overdeveloped.

## 13.2 LOCAL GOVERNMENT AND AUTHORITIES HAVING JURISDICTION

The project is in the Regional District of Fraser-Fort George. It is in the immediate proximity of the Village of Valemount, which is the nearest administrative authority, and over time it might become the administrative authority for the resort by agreement or with a boundary expansion.

There have been extensive contacts with the Village of Valemount, with its Mayor and Council, with its Administrator and its Economic Development Officer, and with local non-government groups, in particular the Valemount Ski Society and the Chamber of Commerce. Participation by VGD representatives in two Economic Development Round Table meetings in the Summer 2011, organized jointly by the federal Member of Parliament, by the local provincial MLA and by the provincial Ministers of Jobs, Tourism and Economic Development, allowed to expose the project concept and to confirm senior governments' support from the time of the initial Expression of Interest.

Support in principle by the regional district was discussed at various times, was confirmed by the first presentation to the Board of Directors of the RDFFG on January 16<sup>th</sup>, 2012, and lastly at the September meetings in Whistler on the occasion of the UBCM convention and at the December 16<sup>th</sup>, 2014 presentation to the Mayor and Council of the Village of Valemount followed by meetings with Terry McEachen, General Manager Development

Services, and with Jim Martin, Chief Administrative Officer.

The application for an Amendment to the Official Community Plan and for rezoning is being processed by the RDFFG concurrently with the provincial review process of the Master Plan under the provincial ASRP. This is an example of successful harmonization of the local government and provincial processes.

# Exhibit 52: Letter from Minister Shirley Bond & Cathy McLeod, MP

LEGISLATIVE OFFICE: SHIRLEY BOND, M.L.A. PARLIAMENT BUILDINGS VICTORIA, B.C. V8W 9E2 PHONE: 250 387-1978 FAX: 250 356-2290



AUG 0 8 2011

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July 27, 2011

Oberto Oberti
Oberto Oberti Architecture and Urban Design Inc.
660 - 1188 West Georgia Street
Vancouver, BC V6E 4A2

Dear Oberto,

We would like to take this opportunity to thank you for attending our Economic Roundtable in Valemount on July 4. This was a great opportunity to discuss the challenges and opportunities that face the area and we are very pleased that you took the time to attend. Your ideas and concerns were greatly appreciated.

This was the first step in an important process. We are committed to continuing this process with our next meeting in August.

We look forward to working with you in the future. Sincerely,

Shirley Bond, MLA

Prince George - Valemount

Cathy McLeod, MP

Kamloops - Thompson - Cariboo

# **Exhibit 53: Letter from Donna Barrett, MLA**

Legislative Office:

East Annex, Parliament Buildings Victoria, B.C. V8V 1X4

Phone: 250 387-3820 Fax: 250 387-9066



**British Columbia** 

Legislative Assembly

AUG 17 2011



Donna Barnett, M.L.A. Parliamentary Secretary for Regional Economic Development (Cariboo-Chilcotin)

website: www.donnabarnettmla.bc.ca e-mail: donna.barnett.mla@leg.bc.ca

Toll-Free: 1 866 305-3804

100 Mile House 7 - 530 Horse Lake Road PO Box 95 V0K 2E0 Phone: 250 395-3916 Fax: 250 395-3973

Williams Lake 301 - 383 Oliver Street Phone: 250 305-3800 Fax: 250 305-3808

Aug, 10, 2011

Mr. Oberto Oberti Oberto Oberti Architecture and Urban Design Inc. 660 - 1188 W Georgia St Valemount, BC V6E 4A2

Dear Oberto,

On behalf of the Provincial Government Rural Caucus, I wish to thank you for taking time out of your busy schedule to meet with us.

We appreciated the openness and frankness of your presentation. Once our tour is over our report will be presented to the Provincial Government Caucus.

Thank you again. Responses to the many items we have heard on our tour will be brought forward and responses made in a timely manner.

Yours truly

Donna Barnett, MLA

Chair of the Provincial Rural Caucus

#### 13.3 LOCAL SUPPORT

Support for the project from the residents of the Robson Valley is exceptional. This may be due in part to the fact that this project has been essentially started as a public request by the local community. As indicated previously, the Mayor and Council, together with the Economic Development Officer of the Village of Valemount and with a number of interested local residents independently contacted the Pheidias Group, known to them because of previous design projects in Valemount and elsewhere, in January 2011 to investigate the possibility of developing an international-class ski resort in the Valemount region.

Support for the concept and for a proposal based on the Premier Range and Mt. Arthur Meighen has grown during the investigative and scoping process resulting in the formation of the non-profit Valemount Ski Society and a number of initiatives and letters of support from community leaders.

On the occasion of the visit to Valemount of a French ski industry delegation to visit the site and to be introduced to the project, in March 2012, the Valemount Ski Society organized a signature campaign during the preceding weeks and, at the welcoming reception for the French delegation, delivered a book with a petition in support of the project with over 500 signatures to Oberto Oberti and to provincial government representatives. This is more than voters at election times. The total population of Valemount is 1,000. This support is shared and demonstrated by the representatives of the local First Nations people, who also greeted the French delegation, and has been consistent through the steps of the approval process. The proponent group is reciprocating by engaging with the community and building on the extraordinary relationship, ensuring that the design meets the expectations not only of the investors but also of the community. The project is community driven and in a tourism project the positive attitude of the community is a route to success.

#### 13.3.1 Discounts for Locals

A 30% discount program for lift tickets and other amenities will be in place for local residents.

#### 13.3.2 Transportation to Resort Base and Village

The resort operator will provide shuttle buses linking the Village of Valemount with the resort base and village.

#### 13.3.3 Letters of Support

#### **Exhibit 54: Village of Valemount Letter of Support**



# Village of Valemount

735 Cranberry Lake Road Box 168 · Valemount, BC V0E 220

Telephone: 250.566.4435 · Fax: 250.566.4249 · www.valemount.ca

November 10, 2011

Mr. Oberto Oberti MAIBC
President of Pheidias Project Management Corporation
Suite 660 – 1188 West Georgia Street
Vancouver, BC V6E 4A2

Dear Mr. Oberti:

At the in-camera meeting November 8, 2011, Council received and discussed your request for a letter of support regarding an international destination tourism project in the Premier Range, West of Valemount.

Council strongly supports the project your company is planning under the name of *Valemount Glacier Destinations Ltd.* This support is also based on the merit that your company is willing to closely cooperate with all the First Nations claiming the area.

We appreciated the presentation that you gave to Council on May 17, 2011. We also enjoyed your presentations at the Economic Round Table meetings organized by MP Cathy McLeod and MLA Shirley Bond held in Valemount on July 5, 2011 and September 13, 2011.

We welcome this initiative, and your purpose to produce a successful and sustainable project that is clearly in the public interest, and we wish to support it during the approval process and in the implementation phase—namely, the final construction of the project.

Your Expression of Interest being submitted to the Resort Development Branch of the Ministry of Forests, Lands and Natural Resource Operations is a clear signal to Valemount's residents of the beginning of a transition from a one-industry-economy to a more mixed and diversified economy.

By investing in the Valemount Area, *Valemount Glacier Destinations Ltd.* provides the community with a very positive signal in times of economic uncertainty. We can only support and encourage organizations willing to invest time and efforts in the improvement of local economic opportunities.

We are looking forward to working with you in the next phases of the design and permitting process; and most importantly, we are looking forward with excitement to the day when we will be able to ride the gondola to the top of the Cariboo Mountains.

Yours truly,

Bob Smith MAYOR

## **Exhibit 55: Valemount & Area Chamber of Commerce Letter of Support**

1433-6th Ave Box 690 Valemount BC V0E Phone/fax: 250-566-0061 info@valemountchamber.com

Valemount & Area Chamber of Commerce

November 10, 2011

Mr. Oberto Oberti MAIBC President Pheidias Project Management Corporation Suite 660 - 1188 West Georgia Street Vancouver, B.C. V6E 4A2

Dear Mr. Oberti.

We enjoyed your presentations at the Economic Round Table meetings of last summer and we understand that your company is the prime consultant for an international destination tourism project being planned for Valemount Glacier Destinations Ltd., in close cooperation with the First Nations, in the Premier Range, West of Valemount.

We welcome this initiative, and your purpose to produce a successful and sustainable project that is clearly in the public interest, and we wish to support it during the approval process and in the implementation phase to construction of the project.

We are looking forward to working with the design team in the next phases of the design and permitting process and to the day when will ride the gondola to the top.

Best regards

Christine Latimer (Chair)

Tammy VandeNobelen (Vice Chair)

ie Birkbeck (Secretary/Treasurer)

# **Exhibit 56: Yellowhead Outdoor Recreation Association Letter of Support**



Yellowhead Outdoor Recreation Association Box 278, Valemount, BC VOE 220

November 15, 2011

Mr. Oberto Oberti , MAIBC
Pheidias Project Management Corporation
Suite 660 – 1188 West Georgia Street
Vancouver, BC V6E 4A2

Re: Valemount Glacier Destinations Project

Dear Mr. Oberti

The Yellowhead Outdoor Recreation Association (YORA) is a Valemount-based organization that promotes non-motorized recreational activities in the Canoe and Robson Valleys. YORA also maintains local cross-country ski trails and manages and maintains two backcountry cabins.

I was very pleased to have been invited to be part of the round table discussions this past summer regarding the possibility of a destination tourism project in the Premier Range, west of Valemount. Several of our members have ski-toured or hiked in the area and are aware of the incredible beauty and amazing potential the area has to offer. Hence, YORA would like to offer full support for the Valemount Glacier Destinations project to move forward in its approval process.

YORA feels that not only would this project provide outstanding recreation opportunities for valley residents, but it also has the potential to provide a much needed economic boost to the region.

We look forward to continuing to have an opportunity to provide input into the project as the development process unfolds. Of course, I personally excitedly look forward to the day when I can make a few turns on this "ski mountain".

Sincerely

Patricia Thoni

President, Yellowhead Outdoor Recreation Association

## **Exhibit 57: Valemount Ski Society Letter of Support**



Box 21 • Valemount •British Columbia •V0E 2Z0

November 9, 2011

Mr. Oberto Oberti MAIBC
President of Pheidias Project Management Corporation
Suite 660 – 1188 West Georgia Street
Vancouver, BC V6E 4A2

Dear Mr. Oberti,

The Valemount Ski Society strongly supports the international destination tourism project that your company is planning for Valemount Glacier Destinations Ltd., in close cooperation with the First Nations, in the Premier Range, West of Valemount.

We enjoyed your presentations at the Economic Round Table meetings organized by MP Cathy McLeod and MLA Shirley Bond held in Valemount on July 5, 2011 and September 13, 2011. We also appreciated the presentations that you gave to our members and Council on May 17, 2011.

We welcome this initiative, and your purpose to produce a successful and sustainable project that is clearly in the public interest, and we wish to support it during the approval process and in the implementation phase—namely, the final construction of the project.

Your Expression of Interest that will be submitted to the *Resort Development Branch of the Ministry of Forests, Lands and Natural Resource Operations* is a clear signal to Valemount's residents of the beginning of a transition from a one-industry-economy to a more mixed and diversified economy.

By investing in the Valemount Area, *Valemount Glacier Destinations Ltd.* provides the community with a very positive signal in times of economic uncertainty. We can only support and encourage organizations willing to invest time and efforts in the improvement of local economic opportunities.

We are looking forward to working with you in the next phases of the design and permitting process; and most importantly, we are looking forward with excitement to the day when we will be able to ride the gondola to the top of the Cariboo Mountains.

Best regards,

e Nusse

Curtis Pawliuk

Susan O'Dwyer

Patriela Thöni

Rudy Thôni  Curthia Piper  Christine Latimer  Bulle distance  Bruce Wilkinson  Silylo Gislimberti	Valemount Ski Society	Letter of Support O. Oberti
Silyio Gislimberti	Cynthia Piper	Christine Latimer  Bauce USIA
	Jennifer Robinson	Silvio Gislimberti

#### 13.4 SOCIO-ECONOMIC IMPACTS & CONSIDERATIONS

The project is designed to be comparatively small for a destination ski resort. For example it will have approximately 2,000 tourist bed units at build out compared to Sun Peaks' 23,000 bed units or Whistler's more than 60,000 bed units. Nevertheless, it is expected to a have a positive socio-economic impact on the Robson Valley as well as the Simpow First Nation.

#### 13.4.1 Sustainable Economic Diversification

The resort will diversify the local economy and will produce long-term economic benefits over a relatively small development footprint. It will provide employment and generate revenue in perpetuity as it relies on snow and majestic views as opposed to exhaustible resources such as minerals, trees or other natural resource extractions.

#### 13.4.2 Business Opportunities

A wide range of business opportunities are expected to be created by resort visitors and vacation home owners. These include increased business opportunities for current stakeholders and license holders ranging from dog-sled tour operators to heli-skiing. According to the economic impact analysis included in Appendix 8, Valemount would receive an additional \$139.7 million/year in additional visitor spending within the community at project build out.

#### 13.4.3 Employment

In addition to opportunities related to commercial recreation, the resort is expected to generate significant long-term construction and operations employment. At build out, the total employment impact of the resort operations is estimated at 432.2 full-time, year-round jobs (Appendix 8).

#### 13.4.4 Employee Training and Valemount Learning Centre

The training of locals and the creation of a true "ski culture" with attendant expertise in the Village of Valemount is an important consideration and a desirable outcome of the project, as identified by the Valemount Ski Society.

The Valemount Learning Centre may become an active partner in facilitating job skills training and career training for active and prospective employees of the resort.

The Valemount Learning Society (formerly Canoe Robson Educational Development

Association – CREDA and commonly known as the Valemount Learning Centre) has been providing educational services in the Canoe/Robson Valley since 1984 in association with the College of New Caledonia.

The Valemount Learning Centre represents the Valemount campus of the College of New Caledonia, and ran the full-time Northern Outdoor Recreation and Ecotourism (NORE) program for several years. In 2010 the college suspended the program due to a decline in enrolment. The College continues to support VLC with a yearly grant to cover the cost of wages for the Continuing Education Program Coordinator.

#### 13.4.5 Schools

Both the Valemount elementary school and high school have struggled to maintain adequate enrolment in recent years. Current enrolment is 72 for the elementary school and approximately 82 for the high school. While the majority of seasonal resort employees are not expected to have children, its management staff may have children. The resort may also indirectly attract young families to the region. According to the *Valley Sentinel* the optimism generated by this resort proposal is already impacting the Village.<sup>36</sup> The Village of Valemount indicates that the capacity for the elementary school is approximately 300 students and the high school approximately 200 students.<sup>37</sup>

#### 13.4.6 Culture

In addition to the opportunity to further develop Valemount's mountain culture, the resort will provide opportunities for First Nations through a dedicated Interpretive Centre, as well as other interpretive opportunities, including, for example, for the guide outfitter, trapper, the Valemount Museum and local outdoor recreation organizations.

#### 13.4.7 Health and Healthcare

As has been observed anecdotally in other resort communities, the resort is likely to attract healthy, outdoor recreation oriented individuals to the area who are unlikely to place a heavy burden on existing medical facilities.

A ski resort can bring about positive community health aspects and appeals to a

 $<sup>^{36}\</sup> http://www.thevalleysentinel.com/blog/school-is-back-enrollment-numbers-exceed-expectations-all-round/$ 

<sup>&</sup>lt;sup>37</sup> Telephone call to Silvio Gislimberti, Valemount EDO, February 1, 2016.

healthy demographic. According to Burtscher et al (2013), "long-term skiers showed more favourable life-style characteristics and a better health status than the general population. Prevalences of hypercholesterolemia, systemic hypertension, diabetes, the frequency of mental stress and the occurrence of memory deficits declined with increasing yearly skiing frequency."

However, the resort will also attract numerous short-term visitors and day-visitors who will be participating in sports that will expose them to injury and may put a strain on the existing health care facility in Valemount.

The risk of injury for skiers and snowboarders averages approximately 1.3 per 1,000 skier days,<sup>38</sup> which translates to 176 injuries/year at the resort initially, potentially growing to approximately 313/year by Phase 2, and 694/year by Phase 3. The majority of ski injuries are fractures and sprains in the lower extremities as well as broken wrists and thumbs.

The resort will have its own medical/first aid centre and ambulance so that injured guests may be stabilized on site and then transferred to regional hospitals as necessary. Initially, the medical/first aid centre will only provide first aid, but the resort will work with Northern Health to determine the appropriate level of increased care as the resort grows.

While skiing does result in increased injuries, according to Burtscher and Ruedi (2015) during the past five decades recreational alpine skiing has become increasingly safer. Skier injury rates decreased from 5.9 per 1,000 skier days in 1961 at one major resort to a range of 0.6 to 2.0 per 1000 skier days at major resorts today.

#### 13.4.8 Real Estate

The resort's impact on real estate prices in the Village of Valemount in the long-term is difficult to predict, primarily because real estate prices are dependent on numerous market conditions that transcend the resort. Anecdotally, when Kicking Horse Mountain Resort opened near Golden in 2000 and Revelstoke Mountain Resort opened adjacent to Revelstoke in 2008, real estate prices in both towns soared on speculative buying but returned to the mean after only a few years,<sup>39</sup> even while prices at the nearby resort villages commanded a considerable premium. While

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<sup>38</sup> http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4483689/

<sup>39</sup> http://www.revelstokereview.com/news/225056372.html

impossible to predict, a similar scenario may unfold in the Village of Valemount.

The Village of Valemount also has a considerable amount of undeveloped land and its administration can use zoning restrictions to control the amount of land available to the market and thereby influence pricing.

# 14. MARKET COMMENTARY

#### 14.1 THE SKIER MARKET OVERVIEW

The North American ski industry has grown steadily over the past few decades and now generates nearly 90 million skier visits per year, or approximately 23% of world skier visits (estimated to total over 400 million). Comparatively, the European Alps have 45% market share (approximately 185 million skier visits), Western Europe (i.e. ski areas not situated in the Alps such

Despite a wealth of glaciers and high mountains, B.C. captures only 1.5% of world skier visits, largely because access to its best mountains is only via helicopter.

as those in Spain, Poland, and Scandinavia) 11%, Eastern Europe 9% and Asia and the Pacific, 14% (Vanat, April 2014). British Columbia captures 1.5% of the world's skier visits (approximately 6 million visits). More than 1/3 of B.C.'s skier visits are captured by its only international-calibre destination, Whistler Blackcomb.

Skiing is supply-driven (Ecosign, 1998), evidenced by the fact that regions with ample quality product and new product development consistently record better skier visits. From 1978/79 to 2012/2013 skier visits in British Columbia grew nearly 400%, and in Alberta they grew nearly 200%. In the U.S. in the same period they grew only 25%.

Much of B.C.'s growth was attributed to the growth of Whistler Blackcomb and the development of regional resorts such as Sun Peaks and Kicking Horse. Alberta resorts also improved during the period and benefited from spill-over, as the popularity of skiing in western Canada gained momentum. Better locations have attracted more skiers and the industry, particularly in the U.S., France and Austria, has shown remarkable resiliency in the latest recession.

While investment and market growth has begun to slow in B.C., new markets are emerging. At Whistler, it is increasingly common to share a chairlift with skiers from the U.K., Australia, Mexico or China.

### 14.1.1 Canadian Skier Market

According to the Canadian Ski Council (2009 and 2011), the Canadian ski market has been both resilient and stagnant in recent years. Despite a recession, a strong Canadian dollar, and poor snow conditions at key resorts, 18.7 million skier visits were recorded in the difficult 2008/09 season – only 2 percent below the five-year

average. 18.2 million skier visits were recorded in 2009/10 and 19.3 million in 2012/2013, the third highest on record. While skier visits by domestic skiers have grown, the total number of domestic skiers, have been slow to grow.

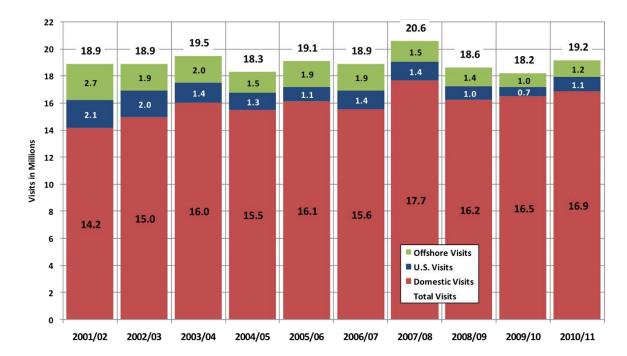


Table 65: Canadian Skier Visits

Source: Canadian Ski Council (2011)

Of concern is the fact that international skier visits (both U.S. and overseas) in Canada have dropped 50% since 2001 (Canadian Ski Council, 2011). When considered against the recent record skier visits in the U.S. and general skier visit growth trends in many international markets including France, Austria, Germany, China and the Scandinavian countries, the large decline of foreign skier visits to Canada indicates that Canada's product mix is increasingly inadequate in an international context. Whistler and Banff, and to a lesser extent, Tremblant QC, are the only well-known resorts in the international markets (Vanat, April 2014).

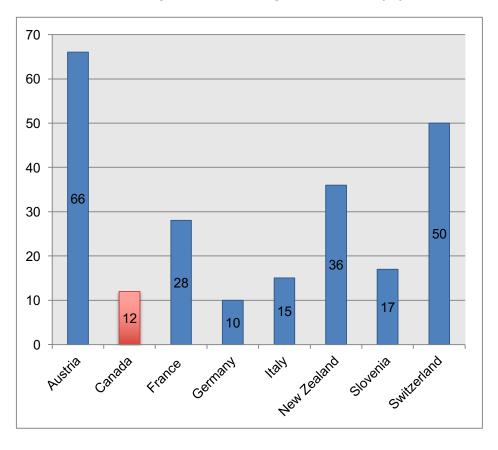


Table 66: Proportion of Foreign Skier Visits (%)

Finally, the ratio of visits/ski lift in Canada is 20,679, and is amongst the highest in the world, suggesting that Canada's more popular ski areas tend towards overcrowding, but this also reflects the fact that Europe, which generates the bulk of the world's skier visits, has invested significantly in new and modernized lift infrastructure, addressing some of the criticisms of its industry dating back to the 1980s and 1990s. For example, between 2002 and 2009, 445 new ski lifts were installed in Italy alone.

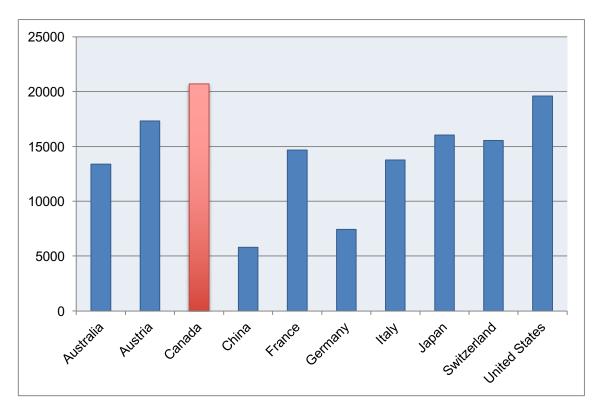


Table 67: Skier Visits/Lift

Source: 2011 International Report on Mountain Tourism (Vanat, 2011)

#### 14.1.2 British Columbia Skier Market

B.C. skier visits grew from the 1 million range in the early 1980s to 6 million currently. The phenomenal growth is attributed to the creation of Blackcomb in 1980 and the growth of Whistler Blackcomb as an international destination. Whistler Blackcomb accounts for a more than a third of all skier visits in B.C. and recorded 2.04 million skier visits in 2012/2013. From the 2001/2002 ski season to the 2012/2013 ski season, Whistler Blackcomb's visits increased at a compound annual growth rate of 2.2%. (Whistler Blackcomb Holdings Inc., 2013).

# Due to the expansion of Whistler, B.C. skier visits grew 400% from 1980 to 2000.

The overall rate of growth has subsided in recent years. The B.C. skier market only grew 5% in past 12 years while the U.S. market grew 15%. (CWSAA, 2011). This is partly attributed to macroeconomic factors such as the value of the Canadian dollar; however, a significant issue has been insufficient investment to attract an international clientele to B.C., largely due to massive regulatory hurdles faced by applicants resulting in a product mix that with the exception of Whistler Blackcomb, does not stand out against international competition and therefore is more prone to the vaguaries of weather and currency fluctuations than the leading resorts of Switzerland, for example.

With the exception of Kicking Horse Mountain Resort and Revelstoke Mountain Resort, which are primarily regional destinations, comparatively little new terrain to attract an increasingly sophisticated international skier market has been developed in the past decade. Conversely, significant infrastructure improvements have been made at prime U.S., European and Asian destinations during the same period.<sup>40</sup>

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<sup>&</sup>lt;sup>40</sup> Renewal of the American ski industry continues. The Aspen Times reported \$357 million on capital improvements were planned for the 2011-12 season, up 31% from the previous season. http://www.aspentimes.com/article/20110515/NEWS/110519898

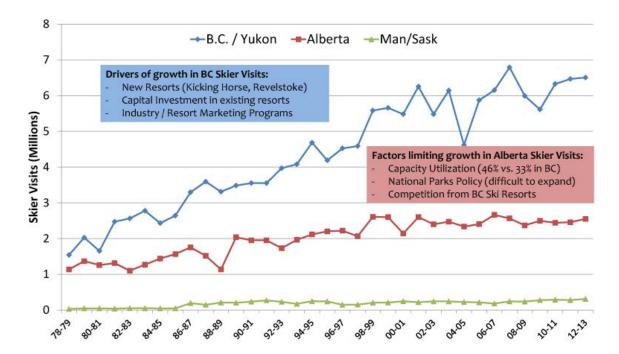


Table 68: Western Canada Skier Visits By Region<sup>41</sup>

## 14.1.3 U.S. Skier Market

In the 2008/09 season, at the peak of the financial crisis and recession, U.S. skier visits totalled 57.4 million, the fourth best on record. <sup>42</sup> In 2009/10, skier visits were 59.8 million only 1.2 percent below the then-record 60.5 million visits achieved in 2007/08. <sup>43</sup>

The 2010/2011 ski season saw a record 60.54 million skier visits, bolstered in part by above-average snow conditions in the Western half of the continent, a phenomenon which underlines the significance of snow conditions in generating skier visits.

U.S. ski areas tallied an estimated 56.2 million skier and snowboarder visits during the 2013-14 season—a figure just shy of the 10-year average of 57.3 million, and down only 1.3 percent from the previous year's 56.9 million skier visits, according to the NSAA.

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<sup>&</sup>lt;sup>41</sup> Source: Canada West Skiers Association

<sup>42</sup> http://www.nsaa.org/nsaa/press/0809/kottke-2009.asp

<sup>43</sup> http://www.nsaa.org/nsaa/press/1011/kottke-2010.asp

# Table 69: U.S. Skier Visits

Table 6
Estimated U.S. Snowsports Visits by Region, 1978/79 – 2012/13 (in millions) (Extrapolated Data\*)

SEASON	Northeast	Southeast	Midwest	Rocky Mtn.	Pacific Southwest	Pacific Northwest	Pacific West (total)	Total	Index (1978/79 = 100)
2012/13	13.334	5.155	7.273	19.800	7.140	4.202	11.342	56.904	113
2011/12	11.021	4.405	6.382	19.130	6.066	3.962	10.028	50.966	102
2010/11	13.887	5.789	7.811	20.900	8.111	4.042	12.153	60.540	121
2009/10	13.411	6.016	7.718	20.378	8.411	3.853	12.264	59.787	119
2008/09	13.730	5.664	7.247	19.974	7.091	3.647	10.738	57.354	114
2007/08	14.261	5.204	8.099	21.324	7.617	3.998	11.615	60.502	121
2006/07	11.801	4.888	7.200	20.849	6.536	3.794	10.330	55.068	110
2005/06	12.505	5.839	7.787	20.717	7.916	4.133	12.049	58.897	117
2004/05	13.661	5.504	7.533	19.606	8.888	1.690	10.579	56.882	113
2003/04	12.892	5.588	7.773	18.868	8.033	3.912	11.946	57.067	114
2002/03	13.991	5.833	8.129	18.728	7.885	3.027	10.913	57.594	115
2001/02	12.188	4.994	6.980	18.123	7.947	4.179	12.126	54.411	108
2000/01	13.697	5.458	7.580	19.324	7.836	3.442	11.278	57.337	114
1999/00	12.025	5.191	6.422	18.109	6.651	3.800	10.451	52.198	104
1998/99	12.299	4.261	6.005	18.440	7.485	3.599	11.084	52.089	104
1997/98	12.712	4.343	6.707	19.191	7.918	3.251	11.169	54.122	108
1996/97	12.407	4.231	7.137	18.904	6.359	3.482	9.841	52.520	105
1995/96	13.825	5.693	7.284	18.148	6.012	3.022	9.034	53.983	108
1994/95	11.265	4.746	6.907	18.412	Not avail.	Not avail.	11.346	52.677	105
1993/94	13.718	5.808	7.364	17.503	Not avail.	Not avail.	10.244	54.637	109
1992/93	13.217	4.660	6.978	18.602	Not avail.	Not avail.	10.575	54.032	108
1991/92	12.252	4.425	6.535	17.687	Not avail.	Not avail.	9.936	50.835	101
1990/91	11.157	4.257	6.486	16.706	Not avail.	Not avail.	8.115	46.722	93
1989/90	13.299	4.447	6.915	16.048	Not avail.	Not avail.	9.311	50.020	100
1988/89	12.741	5.424	7.013	16.601	Not avail.	Not avail.	11.556	53.335	106
1987/88	14.421	5.885	6.783	16.564	Not avail.	Not avail.	10.255	53.908	107
1986/87	14.745	5.816	6.944	16.680	Not avail.	Not avail.	9.564	53.749	107
1985/86	12.836	5.218	7.201	16.869	Not avail.	Not avail.	9.797	51.921	103
1984/85	11.083	4.394	6.899	17.626	Not avail.	Not avail.	11.352	51.354	102
1983/84	12.087	5.175	6.961	16.801	Not avail.	Not avail.	9.606	50.630	101
1982/83	9.523	4.256	6.213	14.808	Not avail.	Not avail.	12.061	46.861	93
1981/82	11.467	5.064	7.846	15.337	Not avail.	Not avail.	11.004	50.718	101
1980/81	8.953	4.172	7.688	10.486	Not avail.	Not avail.	8.401	39.700	79
1979/80	8.655	4.230	8.682	17.160	Not avail.	Not avail.	9.473	48.200	96
1978/79	11.294	3.763	9.743	15.837	Not avail.	Not avail.	9.560	50.197	100

Northeast: CT, MA, ME, NH, NY, VT, RI Southeast: AL, GA, KY, MD, NC, NJ, PA, TN, VA, WV Midwest: IA, IL, IN, MI, MN, MO, ND, NE, OH, SD, WI Rocky Mountain: CO, ID, MT, NM, UT, WY Pacific Southwest: AZ, CA, NV Pacific Northwest: AK, OR, WA

Note: Pacific West visits are segmented by sub region (Pacific Southwest and Pacific Northwest) from 1995/96 – 2012/13. Pacific West visits are reported in aggregate total for 1978/79 – 1994/95 (sub regional breakouts unavailable).

Source: Kottke End of Season Survey 2012/2013 Final Report

<sup>\* &</sup>lt;u>Users of the regional data in this table are cautioned</u> that prior to 1982 no estimate of industry-wide snowsports visits was made for the "End of Season" studies. Therefore, for 1978/79 to 1980/81 the estimates were derived by applying the NSAA Members' Skier Visit Index. Since 1982, the estimates have been obtained by applying a statistical extrapolation procedure using regional mathematical equations derived from the NSAA survey respondent data. The procedure is reported in "An Estimate of the U.S. Ski Industry Business Volume and Lift Capacity for 1981/82," unpublished NSAA report (November 1982), by Marvin Kottke.

## 14.1.4 British Columbia/Colorado Comparison

The heart of the U.S. skier market is situated in the central Rocky Mountains, in Colorado and Utah. Colorado is the largest single North American ski market, generating approximately 12 million skier visits per year, double British Columbia's. Colorado also has roughly double the number of destination resorts as B.C., yet it has a similar population base (in fact,

Colorado generates twice the skier visits as B.C., even though it has the same population base, less favourable access and inferior mountains.

combined, BC and Alberta have a larger population than Colorado and Utah). Colorado also has more difficult access<sup>44</sup> (fewer major airports and difficult road conditions) and presents greater challenges to international tourists (visa requirements, heightened security).

One of British Columbia's biggest handicaps in international markets is the perception that its ski resorts are susceptible to poor snow conditions, rain and unpredictable weather conditions. These perceptions are true of many of B.C.'s larger resorts which are situated at low elevations, including most notably, Whistler

There is a growing perception that B.C. ski resorts are plagued by unreliable weather and snow conditions.

Blackcomb. The fact was brought home dramatically in the 2014/2015 season that saw early and season-long closures of many resorts on British Columbia's Pacific coast and was also brought to world-wide attention during the 2010 Winter Olympics, where remarkable efforts were made to truck in snow to Cypress and the

alpine events at Whistler were marred by soft and soggy snow conditions.<sup>45</sup> It has been well-documented that snow conditions and weather are primary determinants of ski resort success (Falk, 2011).

Anecdotally, during a recent meeting with potential ski industry investors in Geneva,

<sup>&</sup>lt;sup>44</sup> For example, Aspen is 3.5 - 4 hours by car from Denver. Telluride is 6.5 hours away. Telluride is an interesting example for Valemount. It is similarly distant from major population centres (albeit via more difficult mountain roads) and it had a similar population base (c.1,000) when ski resort development began in earnest in the 1980s. The town now has over 2,000 residents and its ski resort generates a substantial 450,000 skier visits/year.

<sup>&</sup>lt;sup>45</sup> The usually dominant Austrian men's ski team was shut out of the medals at Whistler. Some attribution was given to the soft and wet snow conditions which were unlike the typically hard and icy skiing surfaces of the World Cup circuit.

Switzerland, one of the first questions was, "how reliable is the weather, doesn't it rain often?".

If the right mountains and the right terrain is developed for skiing, B.C. can compare favourably and greatly surpass Colorado. B.C. has glaciers, mountains with greater vertical drops, valley bases situated at more comfortable elevations, mountain vistas and scenery that is more dramatic and beautiful, and snow quality (in the interior) that matches Colorado's and has been made legendary by the heli-ski industry.

In the latest five-year strategy for tourism development in British Columbia – *Gaining the Edge*, Premier Christy Clark is quoted as saying, "British Columbia will become North America's No. 1 ski destination" (Ministry of Tourism Jobs and Innovation, 2011). It is a laudable and achievable goal, but major and timely new ski infrastructure development that provides access to some of our best and most competitive mountains will be required before B.C. can surpass Colorado as North America's leading ski destination.

We must provide access to our best and most competitive mountains in order to become North America's leading ski destination and a true global skiing destination.

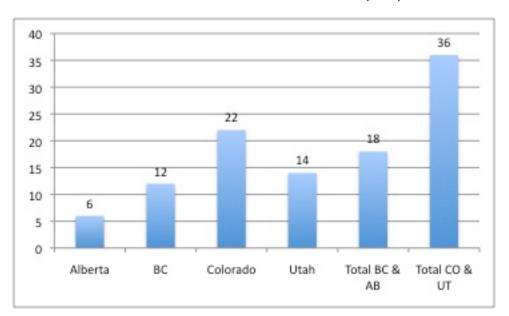
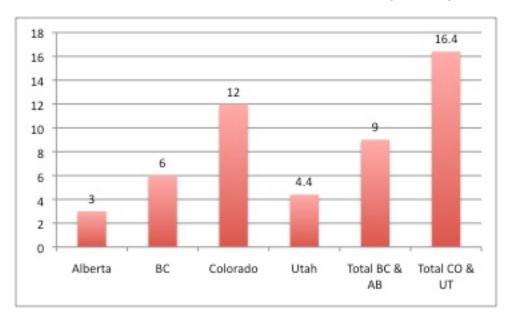


Table 70: No. of Destination Ski Resorts in AB, BC, CO and UT





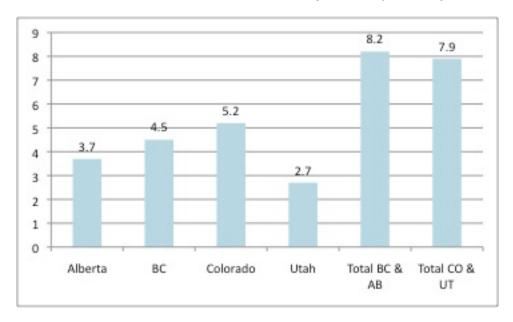
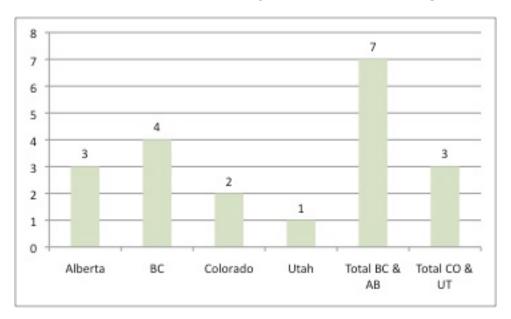


Table 72: AB, BC, CO and UT Population (millions)





## 14.1.5 Summer Skiing Market – A Unique Opportunity

Despite a robust skier market, which is the second largest in the world, summer skiing is largely undeveloped in North America. Aspiring athletes and national-level racers train on the glaciers of the European Alps or in New Zealand or Chile during the summer.<sup>46</sup>

Quality summer skiing is an untapped market opportunity for B.C.

According to the Canadian Ski Council (2009) there are 351 ski clubs related to alpine skiing, snowboarding, freestyle skiing and disabled alpine skiing in Canada with over 20,000 active racers and over 35,000 active members (officials, coaches, volunteers). The United States Ski and Snowboard Association (USSA), the parent body of the U.S. national ski and snowboard teams boasts 30,000 members, including 22,000 nationally ranked athletes (2009/10 Annual Report) and over 100,000 volunteers and participants. The roughly 180,000 active racers and supporting club members in North America are a captive market for summer skiing at Valemount.

#### 14.2 SIGHTSEEING & TOURISM MARKET

According to the *BC Resort Strategy and Action Plan* (2005, pg. 5), tourism is a US \$4.5 trillion industry directly accounting for 67 million jobs and 3.7 per cent of GDP worldwide. In 2003, 21.9 million visitors to British Columbia generated tourism revenues of \$8.9 billion – representing approximately 2% of the world market. In 2010, tourism in B.C. generated \$13.4 billion in revenue and \$1.2 billion in taxes (Ministry of Tourism Jobs and Innovation, 2011).

No existing ski resort in North America can attract international sightseers in the manner of Switzerland's Matterhorn or France's Mont Blanc

The world tourism and sightseeing market is substantially larger than the skier market. While

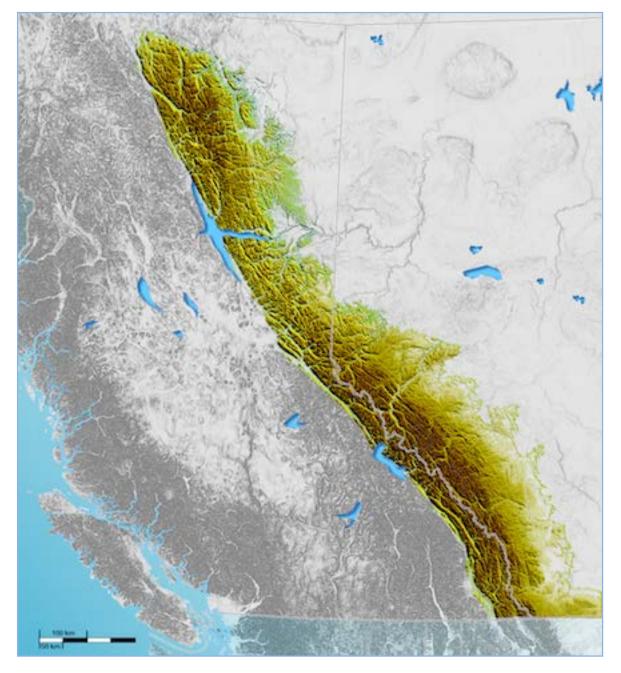
(http://www.cbc.ca/canada/british-columbia/features/athletesblog/2008/07/post\_2.html). Only elite athletes had access to the site due to the expense of the temporary facilities and limited accommodations. Due to funding challenges, Winsport Canada suspended its summer training programs on Farnham Glacier in 2010.

coaches praised the training site for its snow conditions and terrain features

<sup>&</sup>lt;sup>46</sup> In 2003, the Calgary Olympic Development Association (CODA), now known as Winsport Canada, began operating summer training camps on Farnham Glacier in BC's Purcell Mountains for elite athletes (<a href="http://www.winsportcanada.ca/facilities/camp\_green.cfm">http://www.winsportcanada.ca/facilities/camp\_green.cfm</a>). The camps were subsidized with tax dollars from Winsport as well as the Olympic 'Own the Podium' program and private donations, mainly from the Green family. A temporary camp was built at the foot of Farnham Glacier and access to the site was partly via helicopter and partly via an improved logging road. Glacier access was provided via snow cats. Athletes and

many ski resorts in Canada have developed year-round activities and attractions, no single ski resort in Canada specifically targets an international sightseeing clientele in the same manner as St. Moritz and Zermatt in Switzerland, Cortina and Courmayeur in Italy or Chamonix and Meribel in France. Whistler is developing its sightseeing market, especially with the installation of the Peak to Peak Gondola, but visitors are drawn to Whistler because of the numerous activities it offers, not specifically to sightsee. Further, the Peak to Peak Gondola cannot compete at an international level with the experience and views of the Mont Blanc in France or the Jungfrau and Matterhorn in Switzerland, or even the Columbia Icefields or Lake Louise in Banff National Park. Grouse Mountain near Vancouver and Kicking Horse Mountain Resort have an important sightseeing component to their operations, but they are adjunct attractions.

The Mount Sir Wilfred Laurier massif and the views of Mount Robson, the highest point of the Canadian Rockies and a UNESCO World Heritage site, compare favourably with the best of the Alps, and the experience of standing on glaciers at 3,000 m elevation in the midst of a stunning landscape and scenery will be unmatched in North America.



**Table 74: Canadian Rockies** 

The extent of the Canadian Rockies is massive, yet very few of its peaks are accessible to tourists and much of the range is protected as parkland. The project will offer magnificent views of the highest point of the Canadian Rockies, Mount Robson (3,954 m./ 12,293 ft.). While the Rockies are an iconic brand that generate 60% of all of Canada's park revenues, less than 2% of the world's skier visits occur in the Canadian Rockies and adjoining mountain ranges.

## 14.2.1 Mountain Tourism in Switzerland – a Comparative Perspective

The European Alps extend along the borders of France, Italy, Switzerland, Germany, Liechtenstein, Austria and Slovenia and are an important economic generator for those countries. The Alps generate attract more than 50 million visitors/year and 185 million skier visits/year (46% of world skier visits).

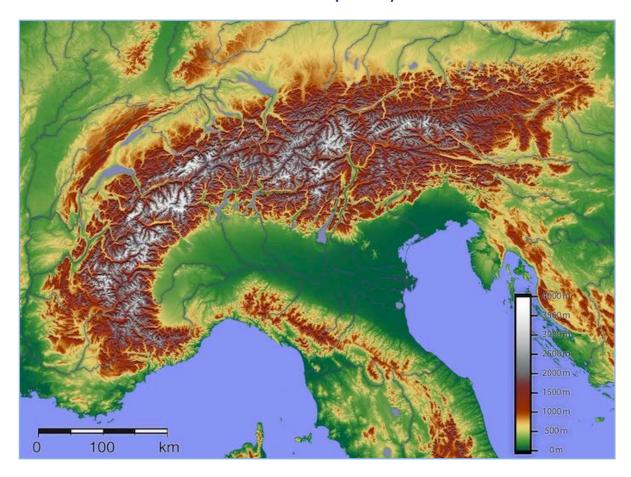


Table 75: European Alps

The extent of the Alps is much smaller than the Canadian Rockies; however, the Alps are moderately higher, with 82 summits over 4,000 m (13,123 ft.). <sup>47</sup> The highest, Mont Blanc, is 4,808 m. (15,774 ft.). 46% of the world's skier visits are generated in the Alps (Vanat, May 2011).

Switzerland's tourism industry relies heavily on the attraction of the Alps and this presents several points of comparison with Canada's mountain tourism industry. Switzerland is a tiny country. It is 41,284 km<sup>2</sup> or approximately 4% the size of British

<sup>47</sup> http://en.wikipedia.org/wiki/List\_of\_Alpine\_Four-thousanders

Columbia (944,735 km²) or 0.004% the size of Canada (9,984,670 km²). Its population is 7,825,243, or slightly less than 1/4<sup>th</sup> of Canada's (34,108,752), yet its international overnight visitor numbers, largely attracted by its mountainous regions (Strauss, Bergen, & Stalder, 2011), exceed Canada's, which is more dependent on its major urban centres (Statistics Canada, 2011).

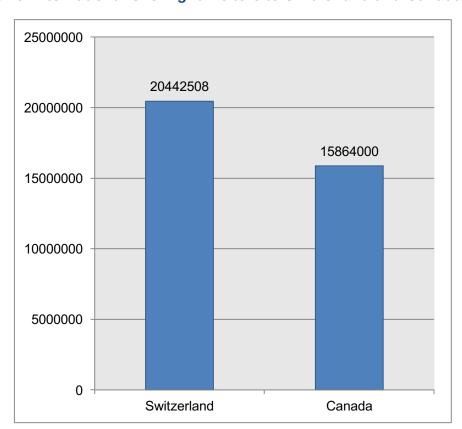


Table 76: International Overnight Visitors to Switzerland and Canada in 2010

Moreover, Switzerland's tourism balance of payments in 2010 was \$4.47 billion<sup>48</sup> (Schweizer Tourismus-Verband, 2011) while Canada recorded a defict of \$14.3 billion (Statistics Canada, 2011). Canada's tourism deficit has grown 1100% in the past decade (from \$1.3 billion in 2001) suggesting that Canadians have become increasingly disinterested in the tourism opportunites available within their own country.

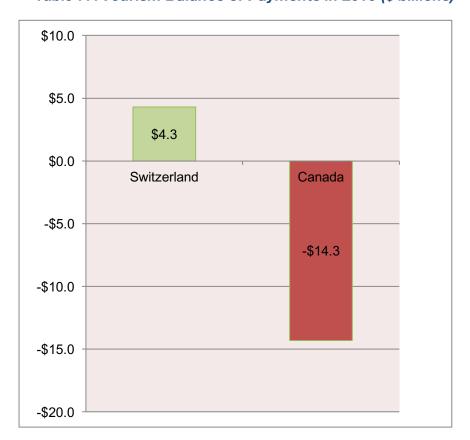


Table 77: Tourism Balance of Payments in 2010 (\$ billions)

Canada's tourism deficit has grown 1,100% since 2001.

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<sup>&</sup>lt;sup>48</sup> Canadian dollars

The bulk of international overnight visitors to both countries originate within their own continents. 68% of visitors to Switzerland originate from elsewhere in Europe and 74% of visitors to Canada originate from the United States (plus 1% from Mexico).

Despite language and cultural barriers, as well as longer and more difficult travel, Switzerland draws the same number of American skiers as Canada. During the 2009/10 ski season, 700,000 overnight visits were generated by Americans in Switzerland (Schweizer Tourismus-Verband, 2011). Approximately the same number of Americans skier visits were recorded in Canada (Tourism B.C., 2009) despite the geographic proximity and the fact that Canada draws over 11 million overnight visitors from the U.S. for reasons other than skiing, while Switzerland draws only 2.1 million U.S. visitors overall.

In 2009/10 Switzerland drew nearly as many U.S. skiers as Canada.

Switzerland also captures a greater proportion (in absolute and percentage numbers) of intercontinental travelers, particularly travellers from important emerging markets.

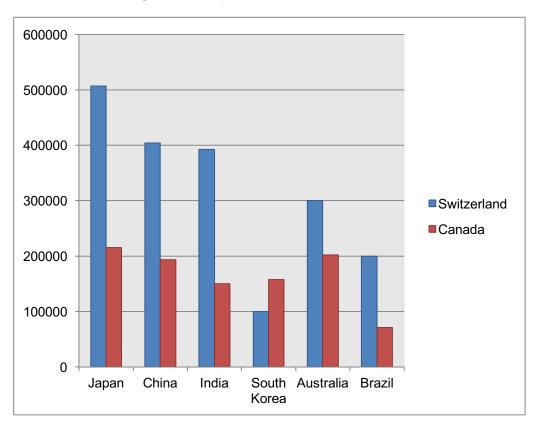
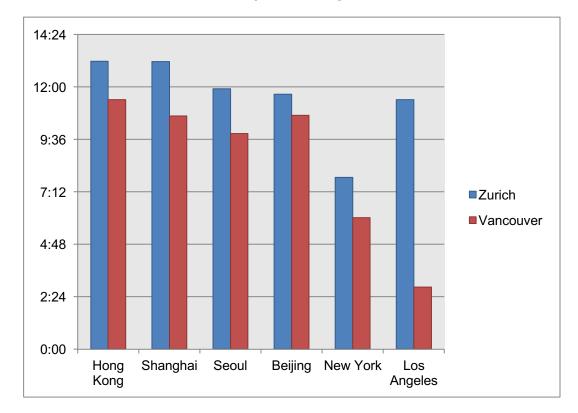


Table 78: Overnight Visits by Intercontinental Travellers in 2010

Emerging market and long-haul travellers are favouring Switzerland over Canada.

The Swiss Alps attract more than twice as many visitors from Japan, China and India. However, with new investment and new access to some of its more globally-competitive mountains, Canada is well-positioned to improve its market share, particularly in light of recent settlement patterns and the strong connections many Canadian residents have with Asia.

Travel times between Canada and established and emerging long-haul markets are also less than Switzerland's.



**Table 79: Comparative Flight Times** 

#### 14.3 MACROENVIRONMENT

## 14.3.1 Ski Industry Demographics

## 14.3.1.1 Skier Population

110 million people participate in skiing on a worldwide basis. While the participation rate in Canada has declined moderately in recent years, the global market is growing, particularly in Asia and Eastern Europe. World skiers currently generate approximately 400 million skier visits per year, which are expected to increase to 420 million by 2020 (Vanat, May 2011).

Table 80: Selected Skiing and Snowboarding Populations 2010

Country	Skiers
United States	13064460
France	12170980
Germany	11531737
Japan	11455957
Canada	4981904
Italy	4651626
Russia	3517552
China	3325111
Austria	2953992
Switzerland	2805162
South Korea	2418970
Poland	2310942
Czech Republic	2044182
Spain	2024553
Sweden	1809078
Finland	1258740
Norway	1161114
India	1147996
Argentina	1012050
Australia	420146

Source: 2011 International Report on Mountain Tourism (Vanat, 2011)

China is the fastest growing skier market in the world, rising more than 1,500% in the past decade. Chinese skiers rose from 200,000 in 2000 to over 3 million currently, generating approximately 5 million domestic skier visits. While there have been growing pains, <sup>4950</sup> projections for China's ultimate market potential range from 27 million, according to the UN's World Tourism Organization, to 120 million, dwarfing all existing skier markets (Vanat, May

<sup>&</sup>lt;sup>49</sup> http://www.cnn.com/2010/BUSINESS/02/08/china.ski.industry/index.html

<sup>&</sup>lt;sup>50</sup> Interestingly, some of the major resort developers in China have Canadian origins (http://www.canada.com/vancouversun/news/business/story.html?id=66335b60-46db-4be7-a5fe-12337e568e1f) and raise capital on Canadian markets (http://www.marketwire.com/press-release/Mountain-China-Announces-Convertible-Bond-Financing-and-Provides-Operational-Update-TSX-VENTURE-MCG-1386960.htm), which speaks in part to the difficulty of developing new products in North America due to regulatory and other hurdles, despite an apparent appetite for investment.

2011).

## 14.3.1.2 Age Demographics

The ski market and the tourism industry encompass wide age demographics; the core market is comprised of people aged 15-64, of which baby boomers are a major component. However, in addition to the larger sightseeing and recreational skier market, the resort will also attract competitive domestic skiers in the 12-34 year age group, particularly for summer skiing. Domestically, they represent approximately 46% of the Canadian skier population (Canadian Ski Council, 2009).

The U.S. National Ski Areas Association program, "Model for Growth", has been adopted by the Canadian Ski Council as a strategy to boost the domestic skier market and to mitigate the declining participation rates of baby boomers. The strategy focuses on attracting newer, younger participants and converting them into loyal skiers and snowboarders. (National Ski Areas Association, 2009). Conversion rates in Canada were 18.4 percent in 2010/11 (Canadian Ski Council, 2011).

While conversion programs are important and necessary initiatives, especially as they apply to the domestic market, gaining market share and new participants is substantially more complex than converting beginners. Factors including product mix, product positioning, technology, marketing and pricing are all elements to be evaluated, particularly when targeting emerging and overseas markets such as China, where 80% of skiers are aged under 40.

#### 14.3.1.3 Ethnic Origin and Gender

Even in ethnically diverse countries like Canada, skiers are overwhelmingly Caucasian (88%) and 62% are male, suggesting the industry has an opportunity to target new demographic segments. The rising popularity and participation in winter snow sports in Asian markets represents a positive trend towards diversification.

## 14.3.1.4 Affluence

The skier market is generally affluent and increasingly so. In 2008, 70% of Canadian skiers declared household incomes of \$75,000+, up from 65% in

2007 and 60% in 2006 (Canadian Ski Council, 2009, pg. 19). Comparatively, in 2008 the median after-tax income in Canada was \$63,900.<sup>51</sup> Economic stability is likely a contributing factor to the industry's ability to withstand the recent economic downturn, but as the industry caters to and targets a more affluent market, it can also limit its growth potential. However, as a new initiative, this project has the unique capability of selecting the markets it chooses to serve, at least initially.

## 14.3.2 Political-Legal

Regulatory barriers to ski industry development in North America are extremely high and the choicest locations for ski resort development are often situated in park or conservation areas resulting in a shortage of development opportunities. The ski industry does not favour the birth of new competitive resorts and tends to pressure politicians and government staff to deny or make difficult applications for new ski areas. Once a suitable location is identified, it is not uncommon for an application to undergo a review process lasting 10 or more years. Since 1980, only one new ski resort entirely on crown land has been approved and constructed in British Columbia (Kicking Horse Mountain Resort), despite a multitude of applications.

# 14.3.3 Ecological

The well-funded international lobby against new development in mountainous regions is a substantial barrier to entry. In order to overcome the objections of the anti-development lobby and to gain the public trust, a development proposal must prove in a scientific manner to the relevant review agencies that it will cause a minimal environmental impact and will be in the public interest.

## 14.3.4 Socio-Cultural

First Nation considerations and cooperation are an important element to the success of the project.

#### 14.3.5 Technological

Advancements ranging from new products (snowboards) to enhanced equipment (shaped skis) have had a profound impact on the industry – rejuvenating the youthful demographics and prolonging the enjoyment of the sport amongst the boomer

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<sup>&</sup>lt;sup>51</sup> http://www.statcan.gc.ca/pub/<u>75-202-x/2008000/hl-fs-eng.htm</u>

generation.

### 14.4 COMPETITIVE SITUATION

# 14.4.1 Winter Skiing Destinations in Western Canada and the United States

The main competition for destination skiers in North America are the resorts of western Canada and the western United States.

### Strengths:

- Established market presence with known qualities;
- Substantial tourism marketing infrastructure and support networks;
- Well-developed resort villages with a wide variety of attractions and entertainment options.

#### Weaknesses:

- Largely unremarkable mountains in terms of vertical drops and scenery;
- Base elevations that are too low (British Columbia);
- Base elevations that are too high (Colorado);
- Highly variable climatic conditions;
- Very few glacier skiing opportunities;
- No connectivity between ski areas.

# 14.4.2 Winter Skiing Destinations in Europe

The European Alps attract the largest share of international skier visits in the world, including overseas travellers. Overseas and international skiers will be an important target market for the resort.

#### Strengths:

- Long-established market presence with known qualities;
- Substantial tourism marketing infrastructure and support networks;
- Centuries-old villages with a wide variety of attractions and entertainment options;
- Ideal vertical drops and elevations;
- Spectacular scenery;

- Cultural richness;
- Diverse access possibilities and well-developed travel infrastructure;
- Modern and cutting-edge lift infrastructure;
- Long stretches of inter-connected resorts and lift facilities.

#### Weaknesses:

- · Distance from emerging markets;
- Language and cultural barriers;
- Highly variable snow conditions;
- Crowded high density tourism;
- Limited areas of unspoilt nature.

# 14.4.3 Summer Skiing and Glacier Sightseeing Facilities in Canada

There are no purpose-built high alpine glacier sightseeing facilities or true summer ski facilities in Canada. Only one resort, Whistler Blackcomb offers some summer glacier skiing through July, primarily catering to freestyle skiing/snowboarding camps and clinics.

#### Strengths:

Established market presence and brand recognition

## Weaknesses:

- Summer facilities are extremely limited, consisting of 2 short T-bar lifts on marginal snow fields which are open only through July;
- Inconsistent weather prone to rain;
- Low elevation glacier (2,300 m/ 7,642 ft).

# 14.4.4 Summer Skiing and Glacier Sightseeing Facilities in the United States

There are no high alpine glacier sightseeing facilities in the United States. Mt. Hood, Oregon is the only year round skiing facility in North America and is a mecca for North American summer ski training. While not a glacier, the temperatures dip below freezing at night, giving solid snow at 7am but softening as the sun rises, so skiing is only offered until 1:30 pm.

# Strengths:

- Established market presence and brand recognition;
- Famous Timberline Lodge (Jack Nicholson in *The Shining*);

#### Weaknesses:

- Inconsistent weather prone to rain, sun-exposure; lack of glacier;
- Middling 2,603m/ 8,540ft. elevation;
- Overcrowding.

Both Mt. Hood and Blackcomb are insufficiently large to accommodate FIS homologated training for speed events in summer.

# 14.4.5 Summer Skiing and Glacier Sightseeing Facilities in Europe

There are numerous, popular, high-alpine glacier sightseeing facilities in Europe, including on the Mont Blanc near Chamonix, the Jungfrau near Grindewald and the Klein Matterhorn and the Gornergrat near Zermatt. Over 100 ski lifts are available for year-round skiing in Europe. Summer skiing in the Alps is popular, although it is often overcrowded. Certain summer skiing facilities have been negatively impacted by (more lucrative) sightseeing operations. American and Canadian ski racers have used the Alps for training in summer since the early 1960s.

### Strengths:

- Substantial infrastructure and market presence;
- Easy access;
- Ideal elevations for summer skiing (over 3,000m.) and awe-inspiring views.

#### Weaknesses:

- Distant;
- Overcrowding;
- Expensive.

### 14.5 VGD VISITOR PROJECTIONS AND ORIGINS

Initial visitor projections for the project are very conservative. Projections have been made on the basis of the existing market and reasonable capture rates of existing tourist traffic in the region, the experience of recent new ski resorts in British Columbia, and qualitative considerations, including the unique product offering and considerations of current and future trends in the tourism industry.

# 14.5.1 Initial Winter Skier Visits and Origins of Skiers

Initial winter skier visits are projected to be 128,000, which is approximately half of the current skier visits of nearby Marmot Basin and is similar to the opening year skier visits at Revelstoke Mountain Resort (opened in December 2007) and Kicking Horse Mountain Resort (opened in December 2000).

While 40% of Whistler's winter skier visits originate from outside its regional market (which includes Vancouver and Seattle)<sup>52</sup> – and this may be a target for VGD at build out – initially, the majority of skiers at VGD are expected to originate from local and regional markets, including Edmonton, Prince George, and Kamloops.

Jasper will be an important source for day skiers and overnight accommodations. Jasper has approximately 2,459 tourist hotel rooms or approximately 4,918 hotel bed units.<sup>53</sup>

Edmonton is also an important regional market. Valemount is already frequently visited by snowmobilers from Edmonton<sup>54</sup> and 90% of Marmot Basin's skiers come from Edmonton or Northern Alberta<sup>55</sup>, which underscores the importance of this market, at least initially, for Valemount. Ski bus tours are popular and Edmontonians are known to travel considerable distances for ski day trips, including to Marmot Basin and as far as Lake Louise.<sup>56</sup> Weekend trips to Sun Peaks, Big White and even Fernie are not uncommon.

According to the Canadian Ski Council, there are approximately 589,000 people who ski in Alberta. If Albertans ski the Canadian average of 3.7 days/skier (Vanat, 2015), this translates to 2.24 million skier days or visits. A reasonable assumption based on population figures is that 40% or approximately 900,000 of those skier visits originate from Northern Alberta. 128,000 skier visits translates into a 14% capture rate of Northern Albertan skier visits, which given the qualitative attributes of the resort, is a modest target.

<sup>52</sup> https://www.whistlerblackcomb.com/~/media/Files/Investor-Relations/WBHI-AIF-2014.ashx?la=en

<sup>&</sup>lt;sup>53</sup> http://www.assembly.ab.ca/lao/library/egovdocs/2006/alet/144063\_06.pdf

<sup>&</sup>lt;sup>54</sup> http://www.fitzhugh.ca/winter-tourism-keeping-the-lights-on-in-valemount/

<sup>55</sup> http://www.edmontonsun.com/2013/01/19/hicks-how-albertas-ski-resorts-fuel-winter-vacation-towns

<sup>&</sup>lt;sup>56</sup> http://magicbus.ca/trips/

Of course not all skiers will come from Northern Alberta. British Columbia residents, including day skiers from Prince George, are expected to account for a significant number of skier visits.

Finally, there is the long-haul and international market. This represents the greatest growth factor for skier visits for the resort. Initially, international skier visits are expected to be modest, in line with Canadian averages, which are approximately 10% (Vanat, 2015) of all skier visits.

While it is difficult to forecast the numbers of long-haul domestic skiers due to a lack of readily available data, Ontario and Quebec have 1,619,000 and 1,426,000 skiers each. A mere 1% capture rate of the more than 11 million skier days generated by these skiers translates into 110,000 skier visits – a number that is much greater than the initial expectations for the project.

Edmonton International Airport is likely to be the access point for most long-haul travellers. There are a number of shuttle bus companies that already provide service to Jasper, including Sun Dog, Brewster and Greyhound. As noted earlier, Prince George airport, Kamloops airport and the Valemount airport provide alternative air access points. Rail is another alternative to car or bus travel, with an existing Via Rail stop in Valemount.

# 14.5.2 Initial Sightseeing Visits and Origins of Sightseers

The Canadian Rocky Mountain National Parks attracted 7,977,977 person-visits in 2014-15.57

The National Parks have a proven ability to attract visitors from afar – nearly 60% of Banff's visitors are from outside Alberta. 20% are from elsewhere in Canada, 24% from the U.S. and 10% from Europe. Of significance, 68% of visitors are repeat visitors, including 31.5% of Europeans and 51% of Asians. This speaks to the value and attractiveness of Canada's Rocky Mountains relative to other alternatives that are available to long-haul travellers. (Outspan Group Inc., 2011).

However, despite the existing attractions and proven draw of Canada's Rocky Mountains, there are no opportunities to access glaciers easily and enjoy the rarefied air and stunning vistas from 3,000 meters elevation. Providing such an attraction will

http://www.pc.gc.ca/eng/docs/pc/attend/~/media/docs/pc/attend/Parks%20Canada%20Attendance%202014 -15.ashx

<sup>57</sup> 

give the resort a unique opportunity to capture a meaningful percentage of the Rocky Mountain tourism market.

Even without a centrepiece attraction, spill-over from the Parks already occurs; the Village of Valemount reports that in 2015 tourists generated 124,727 overnight visits per year spending approximately \$12.5 million in Valemount (approximately \$7.4 million in accommodation).<sup>58</sup>

In 2014/15, Jasper National Park recorded 2,167,469 visits, a 7% increase over the previous year. <sup>59</sup> Current opening-year projections for the resort are 105,000 sightseeing day-visits, representing a conservative 4.8% capture rate of Jasper National Park's visitors and comparing with other Jasper area attractions such as the Jasper Tramway (120,000 visitors/year), Maligne Lake (380,000 visitors/year), <sup>60</sup> the Glacier Discovery Centre (approx. 1,000,000 visitors/year) and the Glacier Discovery Walk (approx. 250,000 visitors/year). <sup>61</sup>

Valemount is approximately an hour and 20 minutes' driving time from Jasper. For comparative purposes, according to Travel Alberta, 62 the most popular day excursions for sightseeing from Jasper include:

- Glacier Discovery Centre (one hour, 25 minutes driving time from Jasper);
- Glacier Skywalk (one hour, 19 minutes);
- Maligne Lake (one hour, 14 minutes);
- Miette Hot Springs (50 minutes);
- Jasper Tramway (15 minutes).

<sup>&</sup>lt;sup>58</sup> Statistics provided by Silvio Gilslimberti, Village of Valemount EDO, January 27, 2016

<sup>59</sup> 

http://www.pc.gc.ca/eng/docs/pc/attend/~/media/docs/pc/attend/Parks%20Canada%20Attendance%202014 -15.ashx

<sup>&</sup>lt;sup>60</sup> http://www.jasperenvironmental.org/wp-content/uploads/2013/10/Maligne-Valley-Situation-Analysis-FINAL-October-29-2013-1.pdf

<sup>&</sup>lt;sup>61</sup> https://www.brewster.ca/brewster\_travel/media/Shared/Media-Resource-Docs/Brewster-Glacier-Skywalk-CEAA-18NOV2011-Final.pdf

<sup>62</sup> http://travelalberta.com/Places%20to%20Go/Parks/Jasper%20National%20Park.aspx

# 14.6 MARKET OPPORTUNITY CONCLUSION

The world ski and mountain tourism industry is significantly large and British Columbia captures only a tiny share of it, despite having some of the best mountains and best climate for skiing in the world and two of the only developable locations in North America that can compete with the best of the Alps in terms of geographic features, climate and access.

The project is uniquely positioned to offer one of the most impressive skiable terrains in the world, augmented by awe-inspiring sightseeing and year-round skiing on what may be the only lift-accessible high alpine glaciers in North America.<sup>63</sup>

<sup>&</sup>lt;sup>63</sup> Pending the status of the Jumbo Glacier Resort project in B.C.'s Purcell Range.

# 15. OPPORTUNITIES AND CONSTRAINTS ANALYSIS

### 15.1 OPPORTUNITIES AND CONSTRAINTS

# 15.1.1 Strengths

- The ski area will be most impressive in North America, with a large CRA, and will feature one of the world's largest cumulative vertical drops and longest inbounds ski runs and renowned natural snow conditions amidst an unspoiled and vast natural environment. The resort will be uniquely positioned to capture a percentage of international skiers who seek a truly world-class alpine experience, currently available only via heli-skiing.
- Accessible, reliable summer skiing is not realistically possible elsewhere in
  North America, except at Jumbo Glacier Resort, which is currently on hold.
  Although the Rocky Mountains and adjoining chains extend from Alaska to New
  Mexico and beyond, only eastern British Columbia has large chains of
  mountains in ideal climatic conditions with glaciers at high elevations (over
  3,000 meters), outstanding ski slopes, and easy access from major highways
  and airports. Colorado has high mountain peaks, but lacks the high-elevation
  glaciers, scenery, accessibility and large vertical drops of B.C.'s interior
  mountains.
- The project group's management and consultant team is made up of experienced industry planners and managers, including former F.I.S. accredited racers, and current tourism industry operators.
- An amicable and cooperative relationship with the local First Nations, who plan to participate in the project, has created a key local force..
- The project is community driven and enjoys significant support from the Village of Valemount and the largest number of its citizens.
- The investment community in Eastern Canada is impressed by the quality of the project and the unique, almost unanimous support.

### 15.1.2 Weaknesses

- The project is capital intensive with long returns;
- The financing of the project can be difficult in the current economic climate and is unlikely to be provided by traditional lenders;
- There is a general lack of knowledge of the industry;

- Communicating with financial interests when there is an adverse cultural mindset against new ski resort projects from competition-averse industry participants and from the anti-development lobby can be challenging;
- The summer skiing market in North America is largely untested.

# 15.1.3 Opportunities

The initial opportunity is to capture a percentage of the existing large National Parks tourism market by offering a unique and truly world-class experience: lift access to glaciated mountain tops and awe-inspiring panoramas above 3,000 meters in elevation.

The project can help reverse the trend of diminishing overseas skier visits to B.C.; it is well-positioned capture a share of the world skier market. The resort site's geographic and topographic attributes in terms of elevations, vertical drops and slope exposure are unmatched and its unspoiled and vast natural setting is a proven attraction to overseas and long-haul travellers. The area's snow conditions are renowned and well-known by the heli-ski community. The nearby Rocky Mountain National Parks have been called the "crown jewel" of Canada's parks system and are internationally recognized as part of Canada's "brand". Air, road and rail access to the region is excellent, better than many resort locations in Colorado, and more spectacular and scenic than most locations in the Alps.

Another opportunity is the provision of a summer ski training facility on the North American continent. The need for such a facility has been recognized by the Canadian national ski team and numerous amateur ski clubs throughout the continent. The need has been unmet partly due to the unfamiliarity with summer ski operations by the North American public and investors, and partly due to the difficulty of securing a suitable location and the challenge of financing a new and independent operation given the regulatory hurdles and approval process expenditures required to establish a permanent alpine operation. The ski racing community is a captive market for this product.

#### **15.1.4 Threats**

The primary threat is the cost associated with establishing the resort infrastructure and the lack of understanding of the tourism industry potential, with the consequence that banks do not finance the development of ski and sightseeing destinations, and financing is entirely dependent on the ability to raise equity capital with individuals and companies that can spend the time to understand the project

and appreciate the opportunity. This can be rendered more challenging by the negative approach by the majority of existing B.C. ski areas, who support the opinion that the skier market has reached regional "carrying capacity" and oppose the development of new ski areas.

## 15.2 ISSUES ANALYSIS

The project is uniquely positioned to capture a share of the National Parks visitors by offering a unique and exclusive glacier viewpoint and a skiable terrain and vertical drop that cannot be surpassed in North America. In the near term, it may have a near monopoly on the North American summer ski market. It will, however, need to achieve sufficient occupancy and margins via its operations to be a financial success.

British Columbia's tourism and ski industry is ready for a new product that is an order of magnitude more impressive than current offerings and that can attract a larger share of overseas visitors to the Province. The creation of an iconic destination has the potential to generate new excitement for the whole of B.C.'s ski industry.

# 16. LIST OF STAKEHOLDER CONSULTATIONS

Chronology of project scoping and list of significant stakeholders' meetings:

- First investigations for earlier clients regarding the Premier Range occurred in the late 1980s. Oberto Oberti stayed at Terracana Ranch with Mike Amorth and explored on maps and on the terrain potential access routes for a prime ski resort site with access to the glaciers.
- 2. As outlined in the initial (1995) and final (2010) Master Plan for Jumbo Glacier Resort, the Premier Range and Mount Sir Wilfred Laurier were considered among the 3 best options for site locations for the project commissioned by Nikken Canada Holdings, to identify the best location for year-round skiing in North America. Among the reasons for the choice of Jumbo Mountain among the 3 locations, were latitude, elevations and climate, plus the existence of a forestry road to the base of the mountain, the proximity of Panorama and of Banff, and the proximity of Cranbrook and Calgary airports. Time has confirmed that the Purcell Range, where Jumbo Mountain is located, and the Premier Range, where Mount Arthur Meighen and Mount Sir Wilfred Laurier are located, represent the two best options for ski area development in North America.
- 3. In May 2007, Marc Lotzer and Shirley Sanders through Saas Fee (5th Avenue) Land Developments Inc. retained Oberto Oberti Architecture and Urban Design Inc. to design a major project in Valemount on the former high school site on 5th Avenue, in the centre of the Village.
- 4. The design was very favourably received and following a successful public hearing the Village of Valemount completed the necessary rezoning and Development Permit.
- 5. Oberto Oberti and Glenn Ledingham had extensive exposure to the stakeholders in Valemount, especially through the local Chamber of Commerce and the Economic Development Office.
- 6. Marc Lotzer asked Oberto Oberti again to explore ski development potential around Valemount, examining Canoe Mountain, Mount Trudeau and the Premier Range. Mount Albreda's potential and proximity to the 'highway was also noted. However at that time the Saas Fee developers did not ask for any further studies, and proposals for further studies did not receive a response.
- 7. In June 2008, following a successful response to an RFP, the Village of Valemount retained Oberto Oberti Architecture and Urban Design Inc. to design an entry and a

- street beautification project for the Village.
- 8. On January 7, 2011, Silvio Gislimberti, Economic Development Officer of the Village of Valemount called Oberto Oberti with a request for telephone conference.
- 9. On January 19 2011, there was a telephone conference with senior staff of the Village of Valemount and with a group of residents, including Patricia and Rudi Thoni and Joe Nusse, desiring to promote ski resort development. During the telephone conference Oberto Oberti was asked to come to Valemount to assess the feasibility of a major mountain resort project. It was proposed to focus the project on Mount Albreda. Joe Nusse reported on his visit to major mountain destinations, including ski areas, and the high Andes mountaineering region surrounding Mt. Aconcagua, and made a persuasive argument that the Valemount region had equal or superior potential with much better access and proximity to major international flight centres than any mountain destination on the South American continent.
- 10. Following the conference call Oberto Oberti presented the request of the Village to several of his Vancouver clients.
- 11. On February 17, 2011, Sam Phillips, Operations Manager of Simpcw Resources Ltd, a company of the Simpcw First Nation came to visit the Pheidias Group's office and met Oberto Oberti, explaining that the Simpcw are a very progressive and business-like First Nation, interested in sustainable tourism development.
- 12. In March 2011, Egon Weger, Manager of the Mountain Resorts Branch of the Province called Oberto Oberti several times to brief him on the support for a tourism project focused on the area in the proximity of Valemount. He also consulted in a preliminary fashion with other Ministries' staff on the potential merit and issues of various potential locations.
- 13. On May 16, 2011, Oberto and Tommaso Oberti met with the Simpcw First Nation at their office. The Chief and Council, the Administrator, Dr. Doug Brown, and Sam Phillips attended the meeting. The Chief and Council indicated that they would favour a ski area concept near Valemount, but would not support doing it on Mount Albreda if Mike Wiegele were not prepared to accept such intrusion into his heli-ski territory. They indicated that they have joint ownership of Albreda Lodge. The alternative would have to be in the Premier Range.
- 14. On May 16, 2011, Oberto and Tommaso Oberti met with Mike Wiegele and Adam Brown in Blue River. Mike Wiegele advised very clearly that he would oppose a project on Mount Albreda. A telephone conversation with Max Lentz, Thompson Nicola Regional District Director, indicated that the Regional District also would not

- support a project on Mount Albreda if Mike Wiegele would not support it.
- 15. On May 17, 2011, Oberto and Tommaso Oberti met the with Mayor and Council of the Village of Valemount, with the Economic Development Officer, and with a local group organized by Joe Nusse to promote ski development, a group that formed itself into the Valemount Ski Society. The meeting renewed and re-established contacts made in 2007 and 2008. In the discussion the Obertis presented an overview of the ski industry and of the requirements to be met to create an international destination. It was explained that it is extremely difficult to find a location and to design a project that meets all the criteria. In addition, most of the appropriate locations have already been placed in parks, protected areas and conservation areas, and even when they are not excluded because of land use exclusions it is rare to find a location where there is the necessary political support. The Mount Albreda location would not be suitable because of the lack of regional district and First Nations support. Instead, if there would be confirmed support for it, the higher portions of the Premier Range would be suitable for a prime skiing and sightseeing destination. A project reaching Mount Arthur Meighen, expanding the area already earmarked for a ski area in provincial planning, would be suitable for an international destination, if the public support for such a project could be confirmed. The initial exploratory meetings should determine if the support exists. The Obertis clarified that the Phedias design and development management group would not be prepared to lead its clients into a project approval process that does not have solid public, political and First Nations support. Specific reference was made to the successful process that opened the door to the creation of the Kicking Horse Mountain Resort as the model to be followed.
- 16. A follow up meeting with the same group on the same day confirmed support for the proposal that a destination ski project should be planned in the Premier Range, with the idea to reach Mount Arthur Meighen through the Mount Trudeau area, as conceptually proposed by Oberto Oberti earlier in the morning.
- 17. On May 29, 2011, Oberto Oberti had an extensive meeting with Joe Nusse, representing the Valemount Ski Society.
- 18. On June 17, 2011, Joe Nusse and 6 members of the Ski Society meet with Minister Shirley Bond and explained the preliminary concept outlined at the May 17th meetings.
- 19. On July 4, 2011, Oberto Oberti participated at an economic round table meeting that included all the stakeholders in the valley, organized by Cathy McLeod MP, and by the two provincial Ministers Shirley Bond and Pat Bell. Following the round table

- Oberto Oberti spoke with Terry McEachen, general manager of development services, of the Regional District of Fraser Fort George, who indicated the regional district's support in principle for the concept. This was followed by a conceptual discussion of the project with the two Ministers and the Ski Society by Jill Bodkin, Oberto Oberti and Tommaso Oberti.
- 20. On July 5, 2011, Jill Bodkin, a director of the newly formed Valemount Glacier Destinations Ltd. company (VGD), Oberto Oberti and Tommaso Oberti met at the Simpcw First Nation's office with Doug Brown, Sam Phillips and a Council Member.
- 21. On July 5, 2011, Jill Bodkin, Oberto Oberti and Tommaso Oberti met in Kamloops with provincial Mountain Resorts Branch senior staff (Psyche Brown, Bill Hunter and Drew Frymire) and discussed the concept and the process.
- 22. On July 26, 2011, Oberto Oberti met with Doug Brown in Kamloops and discussed forms of partnership and joint venture between the project developer and the First Nations. Doug Brown confirmed the business interest of the Simpow First Nation.
- 23. On August 15, 2011, Oberto Oberti and Stephen and Mike Leahy met in Valemount with the Mayor and Council, with the Ski Society and with the Economic Development Officer and the Administrator of the Village. A site visit on the ground and by helicopter followed the meetings.
- 24. On August 16, 2011, Oberto Oberti met again with Doug Brown.
- 25. On August 17, 2011, Oberto Oberti met with Kelly Mortensen, of McBride, discussing potential project issues, and a meeting with Jim Colvin as a potential developer.
- 26. On September 3, 2011, Oberto Oberti met with Kelly Mortensen and with Jim Colvin of SKC Developments, and discussed the opportunity of having them become part of the new project and the new development with VGD.
- 27. On September 12, 2011, Oberto Oberti met Dr. Doug Brown in Kamloops.
- 28. On September 13, 2011, there was a second round table meeting in Valemount, with representatives of the two provincial Ministers and with Cathy McLeod MP in attendance. All local stakeholders were present. Oberto Oberti was invited to make a presentation on the tourism industry, B.C.'s potential and the conceptual strength of a project in the Premier Range. Doug Brown mentioned Simpcw is open to workig with the proponent to consider favouring the project.
- 29. Following the round table Oberto Oberti met with Doug Brown, discussing a letter of intent to be prepared by Doug. Brown for the Simpcw First Nation.
- 30. On September 23, 2011, Oberto Oberti met with Jim Colvin in White Rock,

- discussing possible collaboration.
- 31. On September 27, 2011, Kelly Mortensen, on his own initiative, met with Cameron Beck, Band Manager of the Lheidli T'enneh, and presented Mr. Oberti's biography and the destination project concept discussed in Valemount.
- 32. On October 6, 2011, a letter of intent was received from the Simpow First Nation.
- 33. On October 12, 2011, Kelly Mortensen advised Oberto Oberti that he had introduced proposed key people and the project concept to Justin Trudeau, with a favourable response.
- 34. On October 23, 2011, Oberto Oberti met with Joe Nusse, Founding Director of the Valemount Ski Society, in Vancouver, to discuss the project concept and to plan one on one meetings with some of the key stakeholders and supporters met earlier, at the July round table in Valemount.
- 35. On November 8, 2011, Oberto Oberti presented the preliminary concept to the Chief and Council of the Simpow First Nation.
- 36. On November 8, 2011, Oberto Oberti met with senior staff of the provincial Mountain Resorts Branch of the Province of B.C., Psyche Brown and Bill Hunter, and made a conference call to Terry McEachen of the Regional District of Fraser Fort George, to arrange future presentations and to inform them of the planned Expression of Interest.
- 37. On November 23, 2011, Oberto Oberti met with Terry McEachen and senior planning staff at the regional district's office and presented the preliminary concept.
- 38. On November 23, 2011, Oberto Oberti met with the new Mayor and Council, with senior Village of Valemount staff, with representatives of the Valemount Ski Society and of the public, who expressed renewed support for the project concept,
- 39. On November 24, 2011, Oberto Oberti met in Valemount with the operator of the local cat skiing operation and with representatives of the Valemount Ski Society, Joseph Nusse and Rudi Thoni reviewing conceptual plans of the ski area.
- 40. On December 7, 2011, Oberto Oberti, Jill Bodkin, Mike Leahy and Tom Oberti met with Dave Butler, of Canadian Mountain Holidays, and presented the concept of the project.
- 41. On January 16th, 2012, at an Economic Development Forum meeting sponsored by the Province, the Smpcw First Nation and the Village of Valemount presented the project as a project that has priority for their community.
- 42. On January 17th, 2012, Oberto Oberti met with the Mayor and Council and the

- Economic development Officer of the Village of Valemount, and with representatives of the Valemount Ski Society.
- 43. On January 19th, , 2012, Oberto Oberti presented the project concept to the Directors of the Regional District of Fraser Fort George. The Directors expressed unanimous support for the project and encouraged the proponent to come back with an application.
- 44. On February 7th, 2012, Oberto Oberti, together with Chief Nathan Matthew and Councillor Fred Fortier of the Simpcw First Nation, in Chambery at the invitation of France Neige International, presented the project concept to the senior members of the French ski industry that have expressed an interest in Western Canada. Senior members of the industry, including la Compagnie des Alpes and La Caisse des Depots et Consignations, attended the presentation.
- 45. On February 21st, 2012, Oberto Oberti discussed the project, and gave a report on the French interest in the project, in a conference call with the Mayor and with the Economic Development Officer of the Village of Valemount.
- 46. On March 9th, 2012, Oberto Oberti met in Vancouver with Kelly Mortensen of McBride, going over the Expression of Interest and the conceptual plans for the project
- 47. On March 29th, 2012, a French technical team was received in Valemount, meeting the Mayor and Council, the Economic Development Officer, representatives of the Simpcw First Nation (Councillor Fred Fortier and Administrator Doug Brown), the Presidents of the Valemount Ski Society, of the Chamber of Commerce and of other organizations.
- 48. On this occasion a petition in support of the project signed by more than 500 residents, was presented by the President of the Valemount Ski Society, Bruce Wilkinson, to Oberto Oberti, in the presence of VGD directors Jill Bodkin and Mike Leahy.
- 49. On March 30th, 2012, Councillor Fred Fortier and Doug Brown, Administrator, of the Simpcw First Nation, in the presence of Jill Bodkin, Mike Leahy and Oberto Oberti, gave a presentation to the French technical team of the project proposal from Simpcw's perspective and noted Simpcw's interest in building a mutually beneficial relationship with VGD.
- 50. On March 31st, 2012, with the support and assistance of members of the Valemount Ski Society, Oberto Oberti and Mike Leahy skied from Twilight Glacier with the French technical team, exploring the site.

- 51. On May 4th, 2012, Oberto Oberti met in Valemount with the Mayor and Council members and the Economic Development Officer of the Village of Valemount and gave a planning progress update.
- 52. On May 4th, 2012, Oberto Oberti met with Valemount with the President and with members of the Valemount Ski Society and gave a planning progress update.
- 53. On May 17th, 2012, Oberto Oberti met with the Board of Directors of the Simpcw Resources Ltd., a company of the Simpcw First Nation, presenting the work included in the Expression of Interest and discussing a concept of partnership participation in a limited liability partnership of companies with the proponent company, VGD, as managing partner.
- 54. On May 22nd, 2012, Oberto Oberti met with Philippe Lebresseur, Benoit Robert and Rainer Giersch in Chambery and confirmed the strong interest of the French companies and of the Rhone Alpes region in this project.
- 55. On June 5, 2012, Oberto Oberti met with Laurent Vigier and Eric Guilpart, of la Caisse des Depots, with Philippe Lebresseur of France Neige International, and with Rainer Giersch, of the Province of B.C., in Paris, examining avenues of French participation in the project.
- 56. On June 15th, 2012, at the invitation of the Valemount Ski Society, Oberto Oberti presented in Valemount the concept of the preliminary master plan that will form the basis of the Master Plan application, and explained the approval process ahead.
- 57. On June 16th, 2012 Oberto Oberti met with the Mayor and Council members and the Economic development Officer in Valemount, and made a site visit with them and with Joe Nusse, a Director of the Valemount Ski Society, of the approach near the airport.
- 58. On June 16th, 2012, Oberto Oberti met with newly elected Chief Rita Matthew of the Simpcw First Nation in Barriere, and presented to conceptual work done to date and the concept of the partnership leading to a prime First Nation tourism destination.
- 59. On July 10th, 2012, Oberto Oberti discussed partnership concepts for the VGD project with Doug Brown, Simpcw First Nation Administrator.
- 60. On August 29th partnership concepts were further discussed with Doug Brown and Sam Phillips for the Simpcw Resources Company and Steve Leahy and Jill Bodkin, Directors of VGD
- 61. On September 17, 2012, Oberto Oberti had a conference call with with Doug Brown, Administrator, and Sam Phillips, Manager, Simpcw Resources Company and Fred

- Fortier Director of the Simpcw Resources Company, discussing progress in the partnership concepts for the project and steps toward a Memorandum of Understanding and contracts for studies.
- 62. On September 28, 2012, Oberto Oberti had a conference call with Bill Hunter and Psyche Brown of the provincial Mountain Resorts Branch, reviewing the project proposal, the approval process and the preliminary business plan case for the project.
- 63. On November 8, 2012, Oberto Oberti met in Kamloops with Simpcw companies' representatives, Sam Phillips and Bill Rublee, presenting the project, and discussing cooperation and studies.
- On November 15, 2012, Oberto Oberti met in Vancouver with Dr. Jane Sterk, Leader of the Green Party, and with Rebecca Helps, Executive Director of the Green Party, presenting the project and discussing the tourism industry, environmental objectives and sustainable policies. Dr. Sterk and Rebecca Helps stated that the Green Party would like to support a project designed with sustainable principles in mind and that has so much grass roots support, including First Nations support.
- 65. On January 30, 2013, Oberto Oberti met with Kerri Jo Fortier of the Simpcw First Nation, presenting the project concept and discussing Simpcw First Nation interests and involvement.
- 66. On February 6, 2013, Oberto Oberti met with provincial Mountain Resorts Branch senior staff reviewing planning progress.
- 67. On March 4, 2013, Oberto Oberti met with Sam Phillips and Kerri Jo Fortier in Kamloops, discussing the project also with Adam Brown, Simpow First Nation's consultant, in a conference call.
- 68. On March 5, 2013, Oberto Oberti presented the project by invitation at Thompson River University, in Kamloops.
- 69. On March 27, 2013, VGD received the official confirmation of the Interim Agreement with the Province for exclusive rights to the development according to the ASRP approval process.
- 70. On April 22, 2013, Oberto Oberti presented the project and discussed the planning progress with the Valemount Ski Society members, local stakeholders and provincial staff.
- 71. On April 23, 2013, Oberto Oberti reviewed project progress with Mayor and Council in Valemount.

- 72. On April 23, 2013, Oberto Oberti met with Sam Phillips in Kamloops and reported on project progress and planned studies.
- 73. On May 14, 2013, Oberto Oberti met with Bill Hunter and Psyche Brown of the provincial Mountain Resorts Branch discussing the Master Plan approval process according to the ASRP and the progress of the studies and of the timeline, and the harmonization with the local government OCP and rezoning process.
- 74. On May 19th, 2013, discussions over a draft of a Memorandum of Understanding were initiated with correspondence between Doug Brown and Oberto Oberti.
- 75. On June 5th, 2013, representatives of the provincial Mountain Resorts Branch, the regional district and the Village of Valemount met in Valemount to discuss the government review processes and to answer questions at a public meeting.
- 76. On July 9, 2013, Oberto Oberti met with Troy Machan and Ashok Parek from the BC Ministry for International Trade.
- 77. On July 17, 2013, Oberto Oberti met in Valemount with the Mayor and Council, the Valemount Ski Society, local stakeholders, Simpcw representatives and a French delegation from Cluster Montagne (previously France Neige International) and held a community presentation for the local stakeholders and the French guests.
- 78. On July 19, 2013, Oberto Oberti met with ministers Bennett and Yamamoto with the French delegation from Cluster Montagne, discussing tourism industry opportunities and French interest in cooperation and investment.
- 79. On August 20, 2013, Oberto Oberti met with the President of CMH in Banff, discussing the Formal Proposal and CMH concerns.
- 80. On October 7th Kerri Jo Fortier, new Simpcw First Nation administrator, resumed conversations with Oberto Oberti regarding a Memorandum of Understanding with the VGD company and drafts of study contracts.
- 81. On October 16, 2013, Oberto Oberti met with provincial staff and reviewing an issue tracking spread sheet generated by the Mountain Resorts Branch of the Province following the provincial Ministries' reviews of the Formal Proposal, addressing Master Plan requirements.
- 82. On October 22, 2013, Oberto Oberti met with the Mayor and Council of the Village of Valemount, giving a project update.
- 83. On October 23, 2013, Oberto Oberti met in Valemount with a Simpcw First Nation Council delegation, including also Kerri Jo Fortier and Sam Phillips, visiting the mountain and the project site together.

- 84. On November 6, 2013, Oberto Oberti met in Banff with the President of CMH, discussing the master plan concept and its progress, and CMH interests. The President offered to come to Vancouver to review the master plan progress and to discuss CHM concerns looking at the project drawings together.
- 85. On December 12, 2013, Oberto Oberti met with Sam Phillips and Steven Patterson of the Simpcw First Nation in Kamloops, reviewing a draft Memorandum of Understanding and avenues of cooperation between the project proponent and the Simpcw Resources Company.
- 86. On January 23, 2014, a formal application for OCP amendment and rezoning was initiated at the Regional District of Fraser Fort George with the submission of the Formal Proposal and preliminary master plan.
- 87. On March 21, 2014 Oberto Oberti met with Hunter Milborne in Toronto and presented the Valemount Glacier Destinations project and its opportunity. Hunter Milborne volunteered to encourage Greg Marchant and his investment group to become involved with the Valemount Glacier Destinations project and the VGD company
- 88. On April 10th Tom Oberti and Mike Leahy, VGD Director, joined Drew Frymire of the provincial Mountain Resort Branch in Valemount for meetings with the Valemount Ski Society and with VARDA on the Master Plan progress and the provincial review process.
- 89. On April 10th, Tom Oberti, Mike Leahy, Drew Frymire and Reg Nolander met with Colin Niemeyer, guide outfitter, to discuss his concerns about the impacts of the project on his business.
- 90. On May 1, 2014, conference call with Oberto and Tom Oberti and with Sam Phillips, Bill Rublee, Shelly Loring, Kellen Smith, and Kenna Williams of the Simpow Resources Company and of Estsek Environmental Ltd. to discuss cooperation between Estsek and Enkon Environmental Ltd. and moving forward regarding the practical aspects of cooperation in the Master Plan and project development.
- 91. On May 15, 2014, Oberto Oberti presented the project and its progress in Valemount to the Valemount Ski Society, and discussed the approval process.
- 92. On May 16, 2014, Oberto Oberti gave a presentation of the project in Valemount by invitation to the Annual General Meeting of the Trans Canada Yellowhead Association. This presentation was attended also by First Nations representatives, by the Mayor and Council of the Village of Valemount and by Valemount community stakeholders.
- 93. On May 16, 2014, Oberto Oberti and Mike Leahy, met in a special meeting with

- provincial Minister Shirley Bond, with Chief Rita Matthew of the Simpow First Nation and with Mayor Andru McCracken of the Village of Valemount, discussing the project and the Master Plan approval process and discussing the interest of all participants in the project.
- 94. On June 5, 2014, Oberto Oberti met with Sam Phillips, and in conference call with Bill Rublee and James Foster, and reviewed the progress of the Simpow partnership concepts, environmental work contracts, and overall Memorandum of Understading.
- 95. On July 2, 2014, Oberto Oberti and James Foster exchanged a final draft of a Memorandum of Understanding between the Simpcw First Nation and the VGD company for review and approval by the Simpcw First Nation's Chief and Council.
- 96. On July 15, 2014, conference call with Oberto and Tom Oberti, Steve and Mike Leahy, and Jill Bodkin in Vancouver, and Hunter Milborne and Greg Marchant in Toronto, discussing a site visit and the expansion of the VGD company group with new investors to complete project financing up to the construction stage.
- 97. On August 13, 2014, James Foster forwarded the final draft of the Memorandum of Understanding between the Simpow First Nation and the VGD company as approved by Chief and Council.
- 98. On August 18th, 2014, the Memorandum of Understanding between the Simpcw First Nation and Valemount Glacier Destinations Ltd. was executed by both parties. The purpose of the MOU is to facilitate dialogue and establish general principles to govern the relationship between Simpcw and VGD.
- 99. On September 22, 2014, Oberto and Tom Oberti, Steve and Mike Leahy and Greg and Morgan Marchant met in Valemount with Fred Fortier, Councillor of the Simpow First Nation, and with the Valemount Ski Society and with Silvio Gislimberti, Economic Development Officer of the Village of Valemount,.
- 100. On September 23, 2014, Oberto and Tom Oberti, Steve and Mike Leahy and Greg and Morgan Marchant visited the mountain and the project site.
- 101. On September 23, 2014, Oberto and Tom Oberti, Steve and Mike Leahy and Greg and Morgan Marchant met with Psyche Brown and Bill Hunter of the provincial Mountain Resort Branch in Kamloops, then travelled to Whistler on the occasion of the UBCM convention and met with Minister Shirley Bond and associate Deputy Minister Tim McEachen and with the Mayor and Council of the Village of Valemount.
- 102. On September 24, 2014, Oberto and Tom Oberti, Steve and Mike Leahy and Greg and Morgan Marchant met with Jim Martin, Chief Executive Administrator and with Terry McEwan, General Manager of Development Services of the Regional District

of Fraser Fort George, with the Mayor and Council members of Village of Valemount, and with Tim McEachen, provincial Associate Deputy Minister for Minister Bond and Chris Gardner, Principal Secretary of the Premier. The main subject of the conversation was the harmonized process of the provincial and local government reviews leading to the target of a concurrent successful conclusion of the Master Plan process and of the rezoning process. The intent was to see a complete process done in year 2015, with a tentative start of construction in 2016 to try to meet the investors' target of a project opening at Christmas 2016.

- 103. On December 16, 2014, Tom Oberti, Stephen Leahy and Mike Leahy met with Riette Kenkel of the Valemount Learning Centre to discuss the centre's possible role in the project.
- 104. On December 16, 2014, Tom Oberti presented the project in Valemount to the newly elected Mayor and Council. The meeting was attended also by Councillor Fred Fortier and by James Foster, Simpcw First Nation's representatives, by Jim Martin, Chief Executive Administrator, and by Terry McEachen, General Manager of Development Services of the Regional District of Fraser Fort-Worth, by provincial representatives, and by local stakeholders.
- 105. On December 16, 2014, Oberto Oberti met privately with Simpcw First Nation representatives (Councillor Fred Fortier and James Forster), and discussed in particular the Simpcw preferences regarding a future boundary expansion for the Village of Valemount.
- 106. On December 16, 2014, Oberto Oberti met with regional district representatives (Terry McEwan and Jim Martin), discussing the progress of the harmonized approval process and the OCP amendment and rezoning timetable.
- 107. On December 16, 2014, Oberto and Tom Oberti, and Mike Leahy met with the Valemount Ski Society and local stakeholders and discussed the project and community suggestions, with the intent to address them in the Master Plan submission. Issues addressed included: staff housing in town and at the resort; public transportation to gondola base; discounts for local residents; equipment/training to create a ski culture/legacy; local procurement; medical and social services programs; education/training for hospitality, safety/avalanche/first aid/SAR; a ski patrol school; and the sufficiency of electrical supply.
- 108. VGD and Simpcw entered into a Letter Agreement on January 26, 2015 to commence confidential, without prejudice and off-the-record negotiations towards an Impacts Management and Benefits Agreement.

- 109. VGD and Simpcw entered into a Regulatory Process Agreement on February 9, 2015 to facilitate Simpcw's participation in the Master Plan review process.
- 110. On March 13, 2015 the Draft Master Plan was submitted to the Mountain Resorts Branch and posted to the project web site.
- 111. On March 18 2015, Oberto Oberti, Tom Oberti, Steve Leahy, Mike Leahy and Jill Bodkin met with the Simpcw Council at Chu Chua and gave an update on the progress of the master plan and of the approval process with the Province and with the Regional District of Fraser Fort George.
- 112. On March 19, 2015, a delegation representing the Valemount Glacier Destinations project was invited to address the Board of Directors of the Regional District of Fraser Fort George in Prince George. Oberto Oberti presented the updated master plan to the Directors. Steve Leahy, Mike Leahy, Jill Bodkin, Tom Oberti, Greg Marchant and Morgan Marchant also attended the meeting. Mayor Townsend expressed the support of the Village of Valemount for the proponent and for the project, and there was unanimous support by the Directors.
- 113. On March 20, 2015, at the invitation of the Valemount Ski Society, Tom Oberti presented a master plan project update to the Mayor and Council and to the community of the Village of Valemount. The meeting was attended also by Director of Area H, Robson Valley Canoe, Dannielle Alan, and by Terry McEachen, General Manager of Development Services, representing the Regional District of Fraser Fort George.
- 114. On April 16, 2015, following meetings between Jill Bodkin and Joe Flannery, Oberto Oberti and Jill Bodkin met in Banff with Joe Flannery, Ron Rhon and Dave Butler. The meeting went very well and was followed by a positive public press release under the title: Canadian Mountain Holidays Not Opposed To Valemount Ski Area Proposal.
- 115. On June 18, 2015 Oberto Oberti and Tom Oberti met in Kamloops with Chief Fred Fortier and James Foster of the Simpcw First Nation and with Sam Phillips of the Simpcw Resources Company group for a wide ranging project review, including master plan progress, studies and Impact Management and Benefits Agreement progress.
- 116. On July 2, 2015, at the invitation of Minister Shirley Bond, a meeting was held in Valemount including all levels of government, First Nations representatives, and the proponents' representatives. The meeting included, in addition to Minister Bond, the Mayor and Council of the Village of Valemount, the Chief of the Simpcw First Nation, the Director of Area H and the General Manager of Development Services representing the Regional District of Fraser Fort George, the two Members of

Parliament representing the electoral areas to the south and to the north of the project and all the directors of Valemount Glacier Destinations Ltd. The meeting was a general update on the project, and it confirmed the planned approval process timetable and the general support of all levels of government. The meeting was followed by a barbecue lunch event with all the community.

- 117. On July 2, in Valemount, in the evening, a project Open House was held to update the community on the master plan progress, on the approval process and to discuss the project. The Open House was a "meet and greet" format including a large number of project consultants. The evening included a brief presentation on the approval process and its expected timetable and a formal question and answer period. The Open House was attended by the Mayor and Council of the Village of Valemount, by the Director of Area H and the General Manager of Development Services representing the Regional District of Fraser Fort George and by all the directors of Valemount Glacier Destinations Ltd. Bruce Wilkinson and Silvio Gislimberti facilitated the discussion and Tom Oberti answered questions for the Pheidias design group. The meeting confirmed the widespread community support for the project.
- 118. On August 31 the final Draft Master Plan including all of its appendices was submitted to the Mountain Resorts Branch and posted to the project website.
- 119. Following a request for more information the Master Plan was resubmitted on October 8, 2015, and formally accepted as complete for final review by the Province on October 19<sup>th</sup>, 2015.
- 120. On November 4, 2015 the Master Plan was formally presented for comment to the public in Valemount.
- 121. On December 9, 2015, a list of preliminary comments from agencies' review was given by the Mountain Resorts Branch to the Pheidias Group.
- 122. On January 14, 2016, Oberto Oberti and Tommaso Oberti met with Norman Lee and Bill Hunter reviewing the issues tracking sheets and discussing final responses and final public hearings timetable.
- 123. On February 26, 2016, there was the first of two formal Open Houses arranged by the Mountain Resorts Branch for the provincial Master Plan review process, for final public input, attended also by regional district staff.
- 124. On March 16, 2016, there was the final formal Open Houses arranged by the Mountain Resorts Branch for the provincial Master Plan review process, attended also by regional district staff. The purpose of this public meeting was to convey to the public the response by the proponent to all comments received from the public

- and from government agencies.
- 125. On April 6, 2016, the Regional District of Fraser Fort-George held the Public Hearing for the Official Community Plan amendment that will incorporate the Master Plan prepared under the provincial process.

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