

Social and Economic Benefits of the Burns Lake Trails

Build Trails to Build Community

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Contents

- Introduction 6
- Methods 9
 - Community Consultations: Children and Youth..... 9
 - Who We Talked To 9
 - Data Collection 10
 - Data Analysis 10
- Interviews..... 12
 - Sampling Method..... 12
 - Data collection 12
 - Data Analysis 12
 - Limitations..... 13
- Survey..... 13
 - Survey Design 13
 - Survey Administration..... 14
 - Analysis 14
 - Response Rate/Non-Response..... 14
- Economics 14
 - Data Sources 14
 - Data Analysis..... 15
- Results..... 16
 - Children and Youth 16
 - Community and BLMBA Member In-depth Interviews 20
 - Burns Lake Trails are a source of community and individual health 20
 - The Burns Lake Trails are a place for families 22
 - Volunteers are the beating heart of the trails 26
 - Contributing to economy through outdoor recreation and tourism..... 28
 - Bike trails as a tourism draw 30
 - BLMBA Member’s Survey 32
 - Respondent Profile 32
 - Activity Participation..... 33

Frequency of Participation.....	36
Trail Use/Rider Experience.....	38
BLMBA Expenditures.....	39
Motivations	42
Important Trail Features	42
Additional Features or Services	43
Contribution of the Burns Lake Trails	44
Economics	45
Economic Contributions of Trail Construction and Maintenance.....	45
Volunteer Labour	46
Health Cost Savings.....	47
Discussion.....	49
Social and Economic Benefits of the Burns Lake Trails.....	49
Physical Health Benefits: Building an active community	49
Mental Health Benefits: Helping clear heads	49
Family Benefits: Family cohesion through happiness, fun, and independence	49
Community Development Benefits: Building trails to build community	50
Key Dimensions of the Development and Maintenance of the Trails	51
Volunteers: The beating heart of the Burns Lake Trails.....	51
Trail Maintenance	52
Conclusion.....	53
Appendix 1.	54
Appendix 2	68

Introduction

The community of Burns Lake is a small village of approximately 3.5 thousand residents within the Regional District of Bulkley-Nechako west of Prince George on Highway 16. Two of six local First Nations communities are located within the municipal boundary – evidence of strong cultural routes and a vibrant future.

Located within the heart of the Lakes District, fishing and hunting are year round activities. Economically, logging, saw-milling and mining have dominated in the past with tourism activities increasing in the area. The cyclical nature of the resource extraction industry lead community members to search for opportunities to both enhance opportunities for residents and to gain profile for a burgeoning outdoor recreation and adventure-tourism sectors.

In 2006, the Burns Lake Mountain Bike Association (BLMBA), a not-for-profit, was established by local mountain bike enthusiasts to advocate for trail users for locals, provide land management solutions and create and implement bicycling education and other opportunities. BLMBA is guided by a vision of making Burns Lake a vibrant mountain biking community and world class destination.

BLMBA facilities are based around Boer Mountain located just 4 kilometers from town and consist of a mountain bike skills park, cross-country and downhill mountain bike trails, a 4-cross track and a jump park. Multi-access trails serve bikes (mountain, fat-tire and unicycle), snowshoers, hikers, runners and walkers and include the adjacent amenities of the camping, picnicking and lake activities associated with Kager Lake. The volunteer-based BLMBA organization fund-raises, designs, builds and maintains trails, teaches clinics and skills camps and hosts the annual Big Pig mountain biking festival. A strong membership and volunteer corps are involved in trail design, construction and maintenance aided by other organizations including Recreation Sites and Trails BC and the Fire Attack Base Crew.

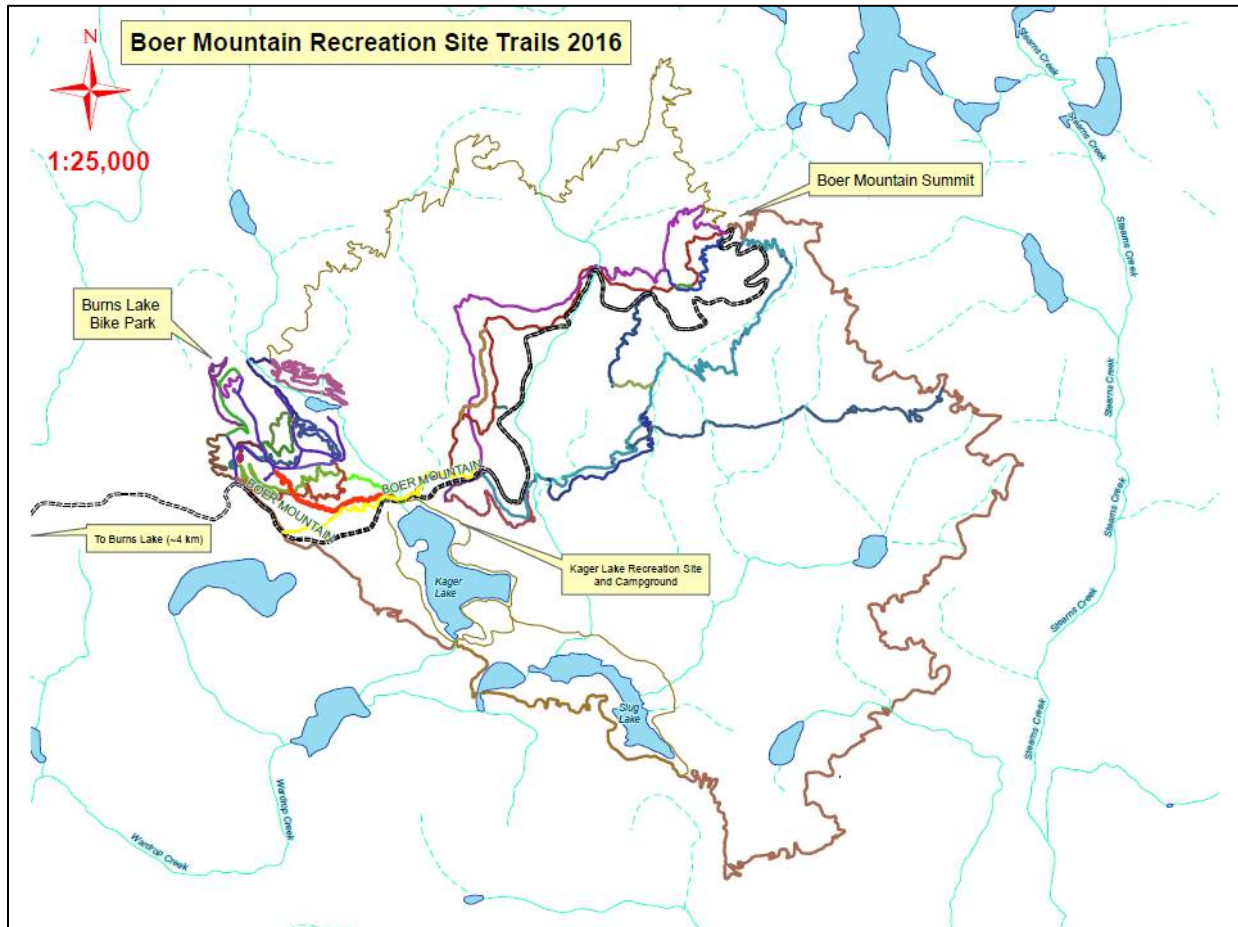


Figure 1. 2016 Trail Map of the Boer Mountain Recreation Site Trails

The Burns Lake trails have received international media exposure with a cover and 8-page feature on BIKE Magazine, the RIDE GUIDE on TV and the PINKBIKE website. Fall 2013 issue of “Explore Magazine” included the Burns Lake trails as one of the 25 essential All-Canadian bucket list activities and it has also been featured in Reader’s Digest.

In fall of 2016, BLMBA volunteer directors approached UNBC’s Outdoor Recreation and Tourism Management (ORTM) program to ask for help in conducting an Economic and Social Benefit Assessment of the Burns Lake trails. From January – April of 2017, 12 undergraduate students and three graduate students in ORTM 310 Research Methods and the graduate equivalent conducted Phase 1 of the Economic and Social Benefit Assessment. In Phase 1, students conducted in-depth community interviews, held community consultations with children, surveyed BLMBA members to identify the key features, benefits and contributions of the Burns Lake bike trails and conducted an economic analysis of trail expenditures. Phase 2, an

assessment of non-resident visitors to the trails is planned for summer of 2017. Funding support was provided by a UNBC Undergraduate Research Experience grant and the Burns Lake Mountain Bike Association.

The BLMBA study was the central focus of an experiential teaching class on research methods in outdoor recreation and tourism for upper level students in ORTM. As such, students were involved in all phases of the project from conception through data collection through analysis and report writing. This report represents the compiled efforts of the fifteen students. **The purpose of the study was to identify the social and economic values of the trails to the surrounding community.**

Methods

The research approach included four main methods: community consultation with children and youth; in-depth qualitative interviews with key BLMBA and community members; a comprehensive survey of BLMBA members; and economic analysis of expenditure data. Specific methods for each aspect of the study are as follows.

Community Consultations: Children and Youth

BLMBA executives stressed the importance of the trail network to children and youth not simply as a place to recreate but as a place to help create a sense of place for communities that retains young families. In addition to direct recreation benefits, children and youth are involved in all aspects of design, construction and maintenance actively participating through evening work bees and school classes in building and maintenance. Additionally, bike camps and skills training are widely attended building confidence and teaching direct mountain biking skills, persistence, independency and healthy nature-based lifestyles to youth. The close proximity of the trails to the community and the multi-purpose nature of the trails also means that other organizations involving youth (from school groups to girl guides) also frequent the trail network for their activities.

The intent of this method was to provide children and youth under the age of 18 – prime users of the BLMBA trail network – to voice their opinion on the value and benefits of the trails.

Who We Talked To

Over the course of a weekend field trip to Burns Lake, we solicited drawings and engaged in casual conversations with youth aged 6-18 years who were residents of Burns Lake and participated in various activities at the Boer Mountain Recreation Site. The parents of the participants were contacted by email (when possible) and/or through an advertisement in the local newspaper. The emails and the newspaper advertisement were distributed two weeks prior to the event by the Burns Lake Mountain Bike Association (BLMBA). The email and advertisement outlined the details for the event including the date, time and location. The event was scheduled to be approximately two hours on one of the two days in which the researchers were in Burns Lake. Children who were unable to participate during this time were

encouraged to contact BLMBA to try to arrange another time over the two days the researchers were in Burns Lake.

Data Collection

Upon arrival, consent forms were given to the parents/guardians of the youth to be signed on their behalf. If consent was not given, the drawings and conversation notes were discounted from data. Once consent was given, the children (those under 12 years of age) were directed to a table where paper, crayons, pens and markers were available. The children were asked by one of the researchers to draw their favorite activity they participate in at the Boer Mountain Recreation Site. Children had the option to draw on regular-sized construction paper (8x11 inches) or on a large paper mural taped on the wall. On the paper mural three questions were asked:

- What are your favorite things to do on Boer Mountain?
- How does being on the trails make you feel? and
- What do you like about the Boer Mountain trails?

The children provided answers by drawing or through casual conversation with one of the student researchers drawing and chatting with the children. As children were drawing the researchers also encouraged discussion about the content of their drawings and then took notes about the conversations. After the drop-in time had concluded the drawings were collected for analysis. Some of the older youth (aged 13 and up) who chose not to participate in the drawing option had informal discussions with student researchers. Notes were taken during these interviews but there were no audio recordings.

Data Analysis

A total of 17 individual drawings were collected and 1 large paper mural which was divided into 5 separate drawings (labelled 18-22). There were also notes from 2 informal interviews that were collected.

Data was analyzed using semiotic analysis. Semiotic analysis is a common method chosen when evaluating qualitative data. Semiotics is the science of signs and allows for analysis of symbols

through interpretation and context that is based on language (Manning & Cullum-Swan, 1994). As defined by Manning and Cullum-Swan (1994) a sign is “something that represents or stands for something else in the mind of someone” (p.466). This leaves the interpretation of symbols up to individuals although the context behind many signs is governed by culture (Manning & Cullum-Swan, 1994).

Codes were developed by the researchers and verified using inter-related reliability where multiple researchers interpreted the same drawings and then compared their codes to ensure similarity (see Table 1). Codes, such as trees, the sun and mountain bikes, were created when the same symbols appeared in multiple drawings. Reoccurring emotions and colors found in the drawings were also interpreted and turned into codes. Two rounds of coding were completed and then on the third round the codes were interpreted into themes. Triangulation was also used to further confirm the interpretations. This was done by comparing the notes from the casual conversations with the written answers found on the paper mural. This confirmed the larger themes that were created from the codes, thus confirming the results.

Geographic features	Colours	Emotions	Activities
<ul style="list-style-type: none"> · Lake · Mountain · Trees (/stump) · Trail (dirt/gravel) · Bike features (jumps/berms) · The sun · Insects/animals 	<ul style="list-style-type: none"> · Brown · Green · Yellow 	<ul style="list-style-type: none"> · Happiness · Excitement · Isolation · Freedom · Focus · Fear (scary things/risks) 	<ul style="list-style-type: none"> · Mushroom picking · Forts · Biking · Fishing · Canoeing · Socializing (friends/family) · Getting ice cream

Table 1. Coding guide used when analyzing the children’s drawings.

Interviews

In-depth, qualitative interviews were held with BLMBA members and key community members to help provide a depth of understanding about the value and nature of benefits received from the trail network and the relationship to the community. In addition to the meaning of the value of the trails that emerged from these experiences the information was also used to help finalize the development of the survey.

Sampling Method

We accessed individuals to interview through the Burns Lake Mountain Biking Association (BLMBA) who acted as gatekeepers between our research team and sample population. With the help of the mountain bike association's president, we gathered BLMBA's board members and invited all other members of the association to have interviews with our research team. We also invited business owners, town officials, and government workers involved in the management of the recreation site. In addition to personal and email invitations leveraged by BLMBA, BLMBA placed an ad in the local newspaper, inviting members of the local community to be interviewed by UNBC students.

Data collection

Semi structured, in-depth, qualitative interviews were conducted using a common set of questions and prompts regarding personal and community benefits, impacts and challenges. UNBC students carried out these interviews over the course of two days, collecting approximately forty-five individual interviews. Interviews were recorded with consent so that they could later be transcribed and coded. Additionally, field notes were taken during and after the interviews to supplement the interview data.

Data Analysis

After the researchers transcribed the participants' interviews, each researcher coded their interviews looking for words and phrases that later help to identify themes. All researchers compiled their codes as a group by highlighting and comparing the most important points in each individual interview to identify common or powerful ideas. The codes were written on small post-it notes and added to a communal poster, with each poster representing a broader theme. The researchers then regrouped the post-it notes with more specific codes on smaller

pieces of paper. New, more refined codes were assigned to the small pieces of paper. Finally, a sub-group of researchers filed all specific codes into broad categories including:

- Community;
- Health;
- Economy and tourism; and
- Family and youth.

Limitations

Most of the sample population we interviewed had an affiliation with the trails, possibly resulting in interviewees being more inclined to say positive things about the BLMBA. Self-selection bias is another limitation that might have occurred during the interview process. People who had a negative or neutral stance on BLMBA may not have wanted to put in the effort to attend the interview, whereas people and members who had positive things to say would be more inclined to attend.

Survey

This survey was designed in order to assess the social and economic values of the Boer Mountain Recreation Site and trails. The survey was developed to help analyze how the trails were being used, the benefits received, and suggestions for trail improvement. The survey included; economics affiliated with trail use, social and individual health and well-being, and the environmental stewardship of the trails and surrounding areas.

Survey Design

The draft survey was designed in class at UNBC by the ORTM 310 research methods and analysis class. It then underwent a review by BLMBA executive members. The survey was pre-tested twice by BLMBA executives and the ORTM class and changes were made. The order and wording of some questions were changed to promote a better flow of questions. Important questions for analysis were placed first, to ensure responses even if the full survey was not completed by the respondent. The survey was also shortened by removing redundant questions to ensure a high rate of completion by respondents.

Survey Administration

The survey was sent by BLMBA to members on February 10, 2017, and ran for a three-week period, until March 6th (see appendix 1). It was administered using online FluidSurveys software which automates data entry. The starting time, finishing time and non-completion rates of survey respondents were also reported by the software. In total, the survey was sent to 131 BLMBA members. Two reminders were sent by the BLMBA executive during the survey period. The survey was designed so that more than one member in a household could take the survey, as long as they were above the age of 18. Upon survey completion participants also became eligible for entry into a prize draw of one of three gift certificates to the local bike store.

Analysis

The survey was analyzed using descriptive and inferential statistics using Statistical Package for the Social Sciences Version 24.

Response Rate/Non-Response

The survey was sent out to 131 potential participants' email. Nine responses denied consent, however, that may have been due to testing procedures within the program. Thirteen responses were left blank and 6 were deemed too incomplete to be useful within this analysis. In total we received 106 valid responses for an 81% response rate.

Economics

The final method employed involved generation of the economic impact associated with BLMBA expenditures on trail planning, design, maintenance and operations. In addition to direct expenditures from the BLMBA association we also examined individual expenditures from BLMBA members, the contributions of volunteer labour and health savings associated with outdoor recreation participation.

Data Sources

A spreadsheet listing all cash and in-kind donations that BLMBA has received from 2006-2016 was supplied, stating exactly what each donation was used for in regards to the development and maintenance of the mountain biking trails at the Boer Mountain Recreation Site. Volunteer hours from both the BLMBA and Fire Attack crew were recorded and then assigned a monetary value of \$15/hr. In addition, a survey was developed by the class and administered to all

BLMBA members. Participants of the survey were given the option to disclose their mountain biking related expenses on both a local and provincial scale. The survey question regarding economic expenditures was designed to determine the economic benefits that mountain biking has on the Burns Lake community and also the province of British Columbia. However approximately 50% of respondents out of the total of 106 did not disclose any information regarding their mountain biking expenses.

Data Analysis

The STEAM model is designed to be used to assess economic values of sport tourism events, however it was the only model available to use based on the limitations of the data. Due to lack of specific details and the limited number of responses by BLMBA members on the survey, only the expenditures and contributions associated with building and maintaining the mountain biking trails at the Boer Mountain Recreation Site were analyzed using the STEAM model. Although most of the expenditures were listed by date, all expenses were treated as if they had occurred in 2016 as it gave a greater coarse estimate due to the programming of the STEAM model. All expenses were originally divided by operating or capital expenses, however many operating and capital expenses overlapped and so therefore they were all grouped into capital expenses.

Results

The results are organized in sections associated with the research methods. As topics and themes cross between these results sections, the next chapter – the discussion – will synthesize the findings across the larger themes.

Children and Youth

Approximately twenty youngsters joined us for an evening of art and stories about the Burns Lake trails. We asked them simply to draw what they liked about the trail network and through their drawings and the stories that accompanied them we learned about how important the trails were to youth and families.

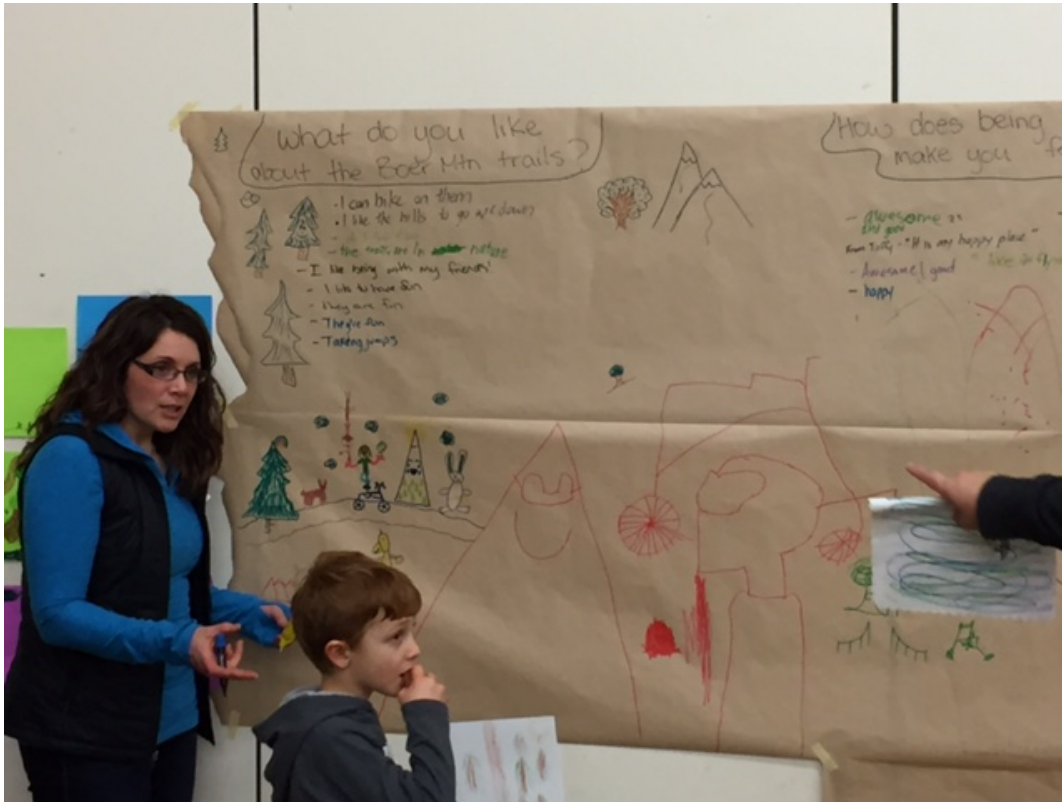


Figure 2. Fantastic tales about amazing trails

The stories youth told about what they liked about the trails highlighted how fun they were and the adventures on the hills, over jumps and being with friends in nature.

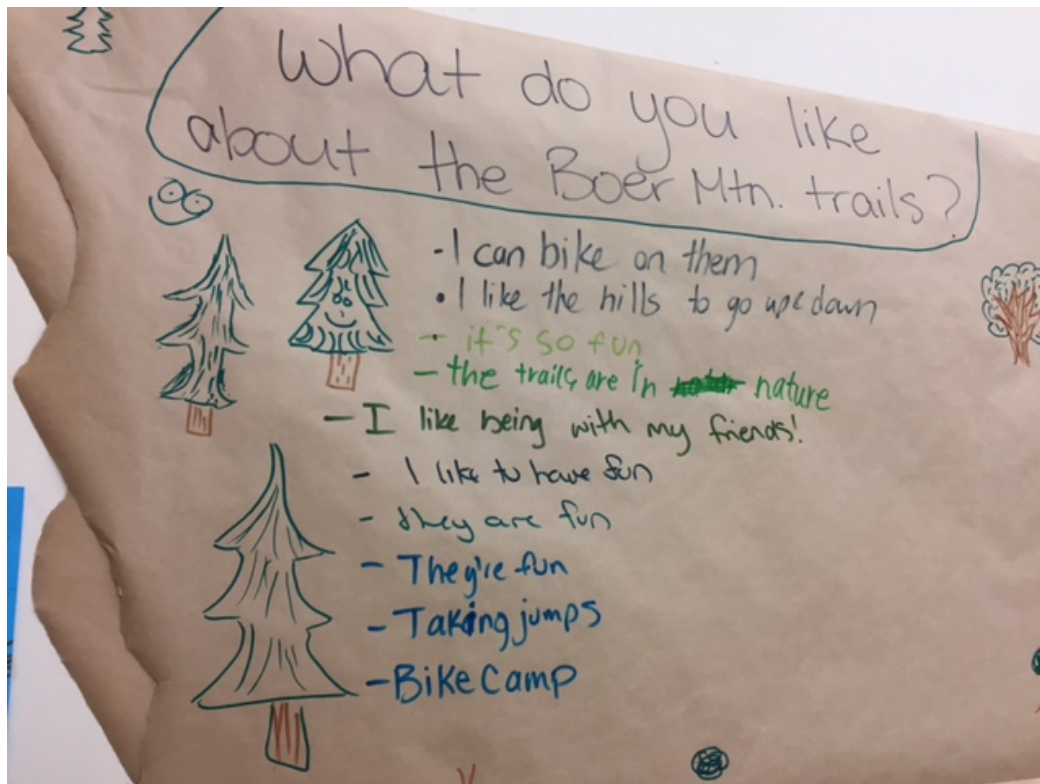


Figure 3. What do you like about the trails?

When we examined the content across all the drawings, natural features such as trees, mountains and lakes were present in 21 of the 22 drawings (95%).



Figure 4. Tephilla riding the trails through trees and mountains with mud puddles, rocks, flowers and, our favourite, bumblebees.

Positive emotions such as happiness, excitement and freedom were depicted in 16 of the 22 drawings (73%).

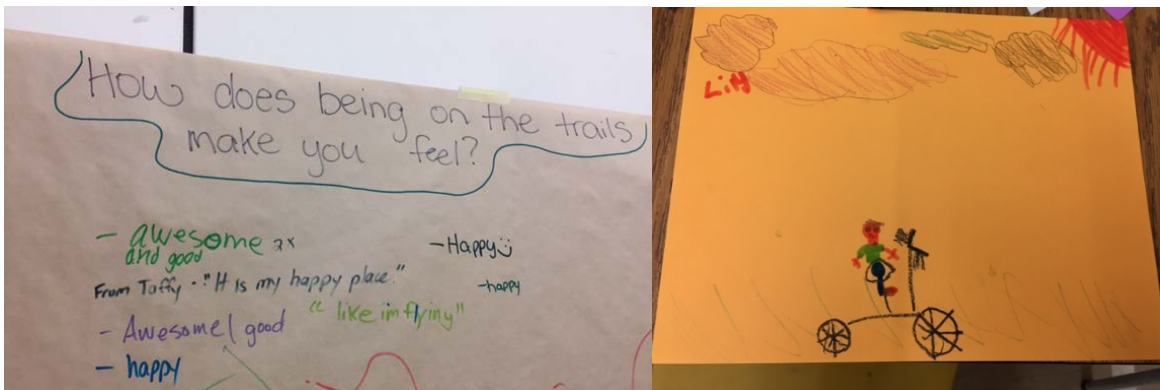


Figure 5. Lily's smiling face was just one of the many happy youth pictured in the drawings.

There was particular emphasis on trails and other bike park features in 16 of the 22 drawings (73%). Socialization with family and/or friends was observed in 3 of the 22 drawings (14%), whereas solitude and independence was depicted in 10 of the 22 drawings (45%).



Figure 6. Even the mountains and rabbits are smiling

The major themes that appeared throughout the drawings after two rounds of coding were focused around an interaction with nature and experiences within nature, independence and solitude, positive emotions including happiness, freedom and excitement, physical activities such as biking and hiking, trails and other bike park features, and connection to place.



Figure 7. The bike trails are about nature, trails and independence.

Community and BLMBA Member In-depth Interviews

One of the key pieces of research that the students engaged in was conducting almost fifty in-depth interviews with key community members, BLMBA allies and BLMBA executive members. Interviews ranged in time from 20 minutes to over 1 hour. Interviews were recorded, transcribed and topical and thematic analysis was conducted first by the full student group and then by the interview task team. The results are organized by major topic using the inclusion of quotes from interviewees (thick description) to illustrate the findings. The reader should recognize that spoken English has a different syntax than written English and thus the quotes are not grammatically correct. However, the quotes are included in their original format in order to represent what the speaker is saying accurately. To preserve anonymity, interviewees are not identified in the document but rather a notation system of letters and numbers that anonymizes this information is used to record the source information. The range of interview sources will give the reader an indication of the breadth and depth of the ideas held by interviewees.

Burns Lake Trails are a source of community and individual health

Health is a critical driving force for the community and the further development and maintenance of the Burns Lake Trails. The physical side of health for the community came in the significant increase in the activity within the community, which leads to healthier lifestyles. The mental health side of the benefits primarily comes from key socialization time, and the connectedness with nature that users feel whilst on the trails. These two elements combined make up the key role that the community feels health plays in this site.

Physical Health

One of the most notable themes that came from the community was the significant increase in the amount of people that are active. One interviewee stated that it (JA 3 – 103) “*Really made the community a more active place*”. This is in part due to the proximity of the trails to the

town. One interviewee said, *“So it’s like not very far to go and yeah you can get outside and recreate and it’s great for the youth”* (JO 2 – 16). This proximity contributes to a more active and healthier lifestyle for the residents of Burns Lake (HO 2 – 69, HO 2 – 56). From this, some trail users report that they are frequenting the trails three to four times a week (AS 3 – 17). In addition to use by the abled bodied members of the community, those that are recovering from operations or have joint issues find that the site provides a location which is accessible to them and allows them to get good exercises which does not stress their joints (SI 1 – 111). As an overall result in the sense of physical health for both individuals and for the entire community having the presence of the recreation site increases the communities activity levels which increase both individual and the community overall health.

Mental Health

The mental health dimension of our findings was summarized very nicely by an interviewee in the following quote *“It’s a healing spot even if you just go for a walk there it’s really nice”* (CH 2 – 106). The personal mental health benefits to individuals accrue from what people feel like while they are biking on the trails. Trails give them a space to clear their head and get out of the day to day struggles of life (OD 2- 14). For the individual, there is a very strong sense of freedom, which helps people maintain a more balanced life and a positive state of mind (JO 1 – 138). These positive impacts on individuals are aided significantly by the greater connectivity to nature that the recreation site provides to users. One user specifically noted the natural beauty of the site and its importance to them: *“the beautiful nature all around us, so why not go out and enjoy it while it’s still here.”* (JA 2 – 73). The trails also provide an opportunity for people who use them to gain a feeling of solitude which is of course heavily connected with all the

afore mentioned concepts but is key component to the development of feelings like finding the sense of peace and a clear head (JO 1 – 8).

There are also significant socialization impacts on the community that allow people the opportunity to interact with each other. These impacts cross several different demographics but are most notable in youth and children's social interactions and ensure that they are spending time outside (KE 3 – 26). Across the community, people have become interested in the sport of mountain biking because friends have been making use of the area and wish to become a part of the mountain biking community (JS 1 – 17). Members of the community also feel like this increased socialization and social interactions between people within the community helps build and further strengthen the community of Burns Lake. (JO 1 – 115, 117).

The Burns Lake Trails are a place for families

Citizens of Burns Lake who were users of the bike park and the surrounding facilities, noted that the family and youth opportunities the area provides are crucial components to their community. The main themes citizens discussed regarding youth and family activities at the bike park were: having family inclusive activities; feeling a family orientated atmosphere; providing activities to youth; and encouraging youth involvement.

Throughout the interviews, many citizens explained the importance of using the biking facilities with their families as there are activities for everyone to participate in. While many of the families all had members that biked, some other families noted that they used it for ice fishing (RA 1-66). Along with doing the actual activity - whether it be biking, walking, or fishing – families also discussed that using the trail system and facilities together provided a bonding

opportunity and a chance for *“family cohesion”* (ST 3-43, ST 1-58, ST 3-125/126, ST 2-40). One example of this is a family that *“really enjoys the trail system and the walk around Kaeger Lake as they always take their friends and family”* (JA 3-13). Not only do families with young children recreate here, but also extended families and families with older parents. One citizen explained that they *“took their mom out to the trails every day in the summer as she winters in Florida”* (RA 1-109).

Another prominent theme was that the bike park contains a family oriented atmosphere. Due to the closely-knit community, one resident described the organization and the members as *“one big family”* (JS 1-166). This resident also felt like the cohesion extended further than just the bike part and described Burns Lake as *“a family community”* (JS 1-55). They exclaimed that it was *“welcoming for families”* and that they *“could see it staying as a family first type of place”* (JS 1-95, JS 1-102).

In such a small town, it can be hard for youth to find activities to keep busy. The Burns Lake bike trails have had a positive influence by providing activities for youth. From *“bike club”* to *“bike camp”* to *“coaching camps”* and *“youth programs”*, there are many options of activities that youth can participate in (CH 1-7,8,112; CH 1-60, 62; RA 3-18; OD 2-116). The trails are a healthy way to *“get youth active”* (SI 2-128). Furthermore, they act as a long term plan to *“encourage the youth to stay interactive and physically fit”* (JA 2-10). Youth do not only visit in their leisure time, they also attend the bike park with some of their school classes. One *“high school life skills class visits several times a year”* (RA 1-24).

Having activities for youth of all ages to enjoy and take part in, provides opportunities for them to also get involved. This phenomenon is seen throughout the community as a positive change (CO 1-84, 112, 146, 154; SI 3-52; CH 1-65, 66). Some of the activities youth are involved in include *“maintenance, volunteering, and bike camps”* (JO 1-2). To add to this, it also provides youth with the opportunity for *“cross-generational learning”* (JO 1-2). Many of the youth who have been students in bike camps, are now taking on the roles of leading the programs and becoming mentors to other youth and children (JS 1-27). Finally, youth are also encouraged to get involved with their school classes. One teacher *“takes her class of youth to the bike park to pick-up the garbage”* (SI 1-91). While this helps with the maintenance of the area, the children also really enjoy being outdoors and having an opportunity to help their community (SI 1-91).

Community: Social Benefits

A majority of interviewees found many social benefits associated with the BLMBA and the Bike Park. The main social benefits expressed include: pride, cohesion, accessibility, variety of activities, inclusiveness, and meeting new people.

One of the main ideas raised by many people was the notion of community pride. Many users and members are incredibly proud of the area that they created as a community. This theme was supported many times over several different ways. A common theme among people who spoke about pride was the fact that biking in general has exploded across Burns Lake and there is a large amount of passion and drive with many members (CH 1-44, 45), (JO 1-2). Many interviewees had a large amount of pride with the quality of the bike park: *“Personally, I would like Burns Lake to be known as the mountain bike hub of the north”* (KE 2-59). Another quote sums up many views nicely: *“the bike park is a feather in the cap for the community. The park is a piece of that puzzle that I think really helps the community”* (SI 3-100). The social benefits of pride are quite straightforward. Having community pride appears to have increased happiness across the board for many members of the community.

Another social benefit raised many times throughout the interviews is the notion of community cohesiveness. Community cohesion essentially means the community uniting or forming together to do something. Based on the interviews, the bike trails have helped community cohesiveness develop within Burns Lake (CO 2-37), (RA 1-67), (CO 1-34, 80, 90), (AS 3-237), (HO 1-58). Supporting the notion of community cohesion one interviewee stated: *“Everyone in the*

community seems to [support it and is] involved in some way [in] contrast to city parks” (SI 2-250).

Something raised frequently in interviews is the fact that the bike park is more than just a bike park. While the park is world class for bikers, it also supports a wide variety of activities; and is accessible for all walks of people (CO 3-14, 104, 50), (JO 2-31, 54), (CO 2-20, 41, 44), (JE 1-117), (RA 3-9, 129), (SI 3-21), (OD 2-34). As mentioned in one of the interviews, there are a myriad of activities to do for all age levels and skill levels.

As a social benefit, the benefit of meeting new people was raised numerous times. (AS 2-87), (SI 2-148), (JO 1-26, 2-81, 3-56), (CO 1-38, 75, 145, 156), (OD 2-74). There were several mentions of the work bees as a social benefit to the community, owing to the fact many people made new friends and fostered new relationships while participating in them (SI 2-148).

In summary, there is substantial support to confirm the fact that many interviewees experience at least some level of social benefit, whether it be through community pride, community cohesion, the accessibility of the park for all ages and skill levels, the fact that the park is used for so much more than mountain biking, the feeling of inclusiveness or part of something larger, or meeting new people through the park, Work Bees, or BLMBA.

Volunteers are the beating heart of the trails

As a volunteer organization, BLMBA relies entirely on community engagement and dedication.

“If we don’t have volunteers it doesn’t happen... they are the beating heart of our organization”

(JA 1-57, 3-24). With the help of BLMBA's work bees, the Burns Lake fire crew and local school involvement, the recreation site has been able to thrive and the community has come together. Through personal investment, many citizens of Burns Lake have developed skills, a sense of ownership as well as stewardship towards Boer Mountain and their community.

The degree of skill development that has resulted from the creation of the trail system was raised on several occasions by interviewees. *"BLMBA encourages volunteering and community engagement, and provides many opportunities to do so"* (JO 3-84). The trails have given community members the opportunity to learn about trail building and maintenance. Local fire crews use the site for tree falling certifications as well as helping with overall maintenance and clearing. As stated by a BC wildfire service volunteer *"They like to bicycle and we need areas to practice. It's a good relationship we have"* (JE 1-79).

Skill development through volunteer work, mountain biking camps, competitions, and certified coaching are a huge part of community skill development. The accessibility and inclusiveness of the Boer Mountain Recreation Site sets Burns Lake apart from other mountain biking destinations. The camps with certified coaches are offered at a low fee and are open to all ages and experience levels with the enrollment for bike camps increasing every year. *"When we first started [bike camps] there were 20 youth that came out and now we have to cap the camp at 100... Then we thought well let's open it up to adults, and last year we had 35 adults sign up for the camp...I can't believe how busy it is"* (JE 2-40).

As the community has become increasingly more involved with the recreation site, a sense of ownership and pride has emerged. *“The Kager lake trails are almost as important to me as my own home”* (HO2-139). BLMBA has encouraged volunteering and community engagement from the start, providing countless opportunities for the citizens of Burns Lake. *“Every year they’re adding more, and I don’t see that stopping”* (JS 1-148).

The pride and ownership that has developed from personal investment has created a culture of stewardship within the community: *“People respect the trails as they have ownership towards them”* (SI 1-33). Multiple interviewees noticed that there is less vandalism and crime around the recreation site because so many community members are involved in some way (CO 1-87, 3-98, AS 3-91). As the number of trail users is continually increasing it is anticipated that more community members will want to take part in trail management (OD 1-26). *“Riding the trails makes you want to help maintain them”* (JS 1-40). Overall, through various means of personal investment, many Burns Lake community members have developed skills, a sense of ownership as well as a sense of stewardship towards Boer Mountain and their community.

Contributing to economy through outdoor recreation and tourism

Since the creation of the recreation site, the Burns Lake community has noticed changes in the economy and tourism activity specifically new business opportunities, tourist spending money in town, and the grant funding for BLMBA.

Since the creation of the trails new business opportunities have been created (CO 3-18, AS2-145, JO 1-87). The most prominent new business and a direct result of the mountain bike trails, is Burnt Bikes. Before the mountain bike trails existed, mountain bikers would have to purchase their gear online or get it from another location outside of Burns Lake. Burnt Bikes has been open for ten years and sells everything that would be needed to mountain bike, including top of the line mountain bikes. According to the shop owner, without the bike trails there wouldn't be a need for a bike shop in Burns Lake (CH 1-78). BLMBA members believed with increased use of the trails especially during the summer might spark other business opportunities such as accommodation and restaurants. Some BLMBA members have expressed interest in building cabins at the recreation site, to provide a bigger variety of accommodation for more tourists (CH 1-223, KE 2 -50).

In terms of the amount of money that is being spent in Burns Lakes by tourists, interviewees think that it isn't a large amount but does contribute to making the economy more sustainable (KE3, 31). Community members do believe that with the creation of the bike trails there has been an economic impact from the increase of tourism. One community member expressed "*if you go sit down at Alternative Grounds coffeeshop, you notice people in there that have come to Burns specifically for the mountain biking*" (AS1-142). The mountain biking demographic that is visiting Burns is spending money in the community (CO3,93). In the summer with people coming into Burns Lake to use the trails, small businesses do well because of their close proximity to the trails (JS1,33). Tourists are spending money in Burns Lake by, filling up their gas tanks, buying groceries, and eating at local restaurants (RA3,41). Every dollar spent helps make

the Burns Lake economy sustainable. More businesses in the community are open to the idea of Burns Lake as a tourist destination and recognizing the potential profit tourism could bring (AS 1-139). BLMBA members mentioned that an increase in advertising and marketing around the town would help continue the flow of tourists into to Burns Lake (OD 1-350, KE 2-57).

BLMBA has been able to receive a substantial amount of grant money to create the recreation site and continue to develop trails. One interviewee stated that *“the club gets an insane amount of donations for building new trail”* (RA 2- 105). People outside of the Burns Lake community have invested money and provided help through grant writing (JO 3-104).

Bike trails as a tourism draw

Since the creation of the mountain bike trails, the community believes that more people are being drawn to Burns Lake as a tourist destination. People are no longer just passing through, *“the community captures tourists for longer exposing them to sites around the area”* (JO 3-67,CO 3-20,60). The trails provide for a variety of different accessible activities such as mountain biking, fish, camping, snowshoeing, cross country skiing, and hiking (SI 2-26). One member of the community believed the bike trails have put Burns Lake on the map, developing a larger reputation throughout the region (KE3-24). Besides local surrounding areas like Smithers, tourists are coming from the lower mainland, United States, and even Europe (RA 3-23, TA2-42). The mountain bike trails are internationally recognized amongst the mountain bike community, making Burns Lake a desirable place to visit for people outside of the community. Mountain bike races like the Big Pig event have also provided incentive for mountain bikers to come test their skills on the trails (TA1-30).

Tourists are staying in Burns Lake because of the accessible camping near the recreation site. Campgrounds have been continuing to bring people to Burns Lake and in the summertime and the campgrounds are full (KE 2-25, JS 3-4747). However, there has been concern expressed that with the increase of tourist coming through Burns Lake, the community is worried about the respect that tourists will have for the camp sites and bike trails (JS 1-81, HO 2-90). BLMBA is working to ensure the longevity of the park by making sure the recreation site is constantly maintained.

BLMBA Member's Survey

The BLMBA member's survey administered electronically in February was sent to 131 individuals with an 81% response rate.

Respondent Profile

Thirty-two percent were male and 62% female. Ages were well distributed with the largest group of respondents between 36 and 45.

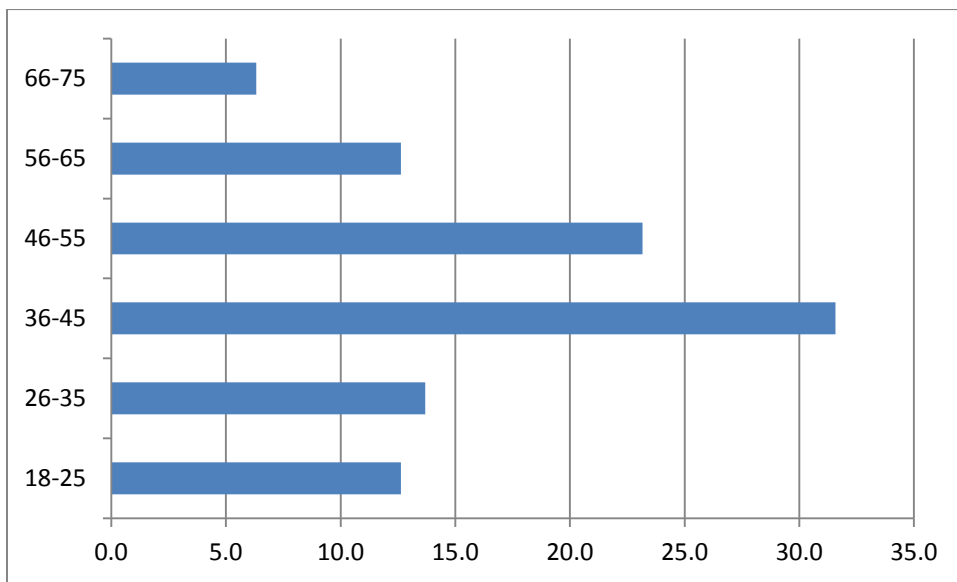


Figure 8. Percent (x axis) of respondents in age groups (y axis)

The majority (70%) of survey respondents reported living with another adult who also uses the trail system and many also reported having children who use the trails, indicating that trail use is a family activity.

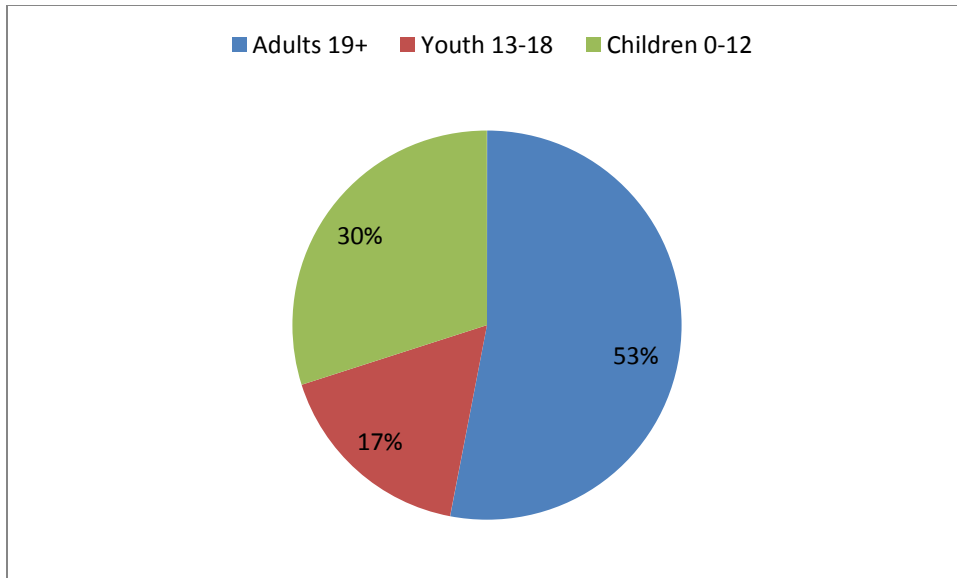


Figure 9. Composition of family members in respondents households

The overwhelming majority (86%) live in Burns Lake with the remaining few reporting residents in the region (e.g., rural Burns Lake properties, Smithers or Terrace) and a few living in Prince George (typically part time). Respondents had lived in Burns Lake for an average of 18 years with many living in the area in excess of 30 years. However, there was also a smaller proportion of new residents to the community (less than 3 years).

Removing the few non-residents, the average resident (Burns Lake and immediate surrounding community) lived 9.4 km from the trails, however 5 km was the most typical distance to the trails.

Activity Participation

Respondents were asked a series of questions to help determine the ways in which the Burns Lake Trails were being used. The questions asked them to identify their favorite activity (for both the summer and winter seasons), the frequency they participated in other activities, whom they used the trails with, and how frequently they visited the trails.

The favorite summer activities were mountain biking, hiking and walking/running. In the winter, snowshoeing, walking and hiking dominated.

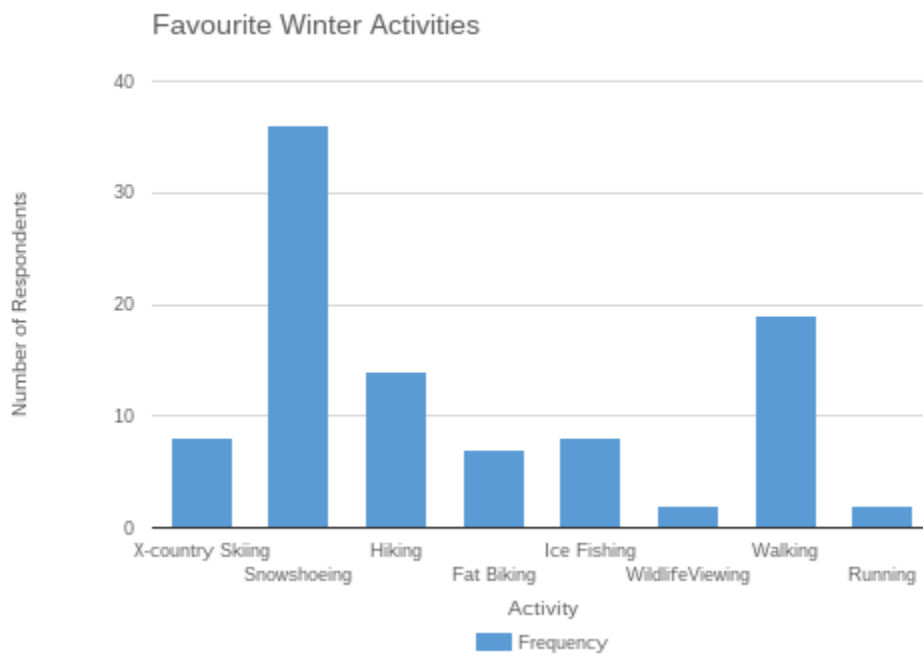
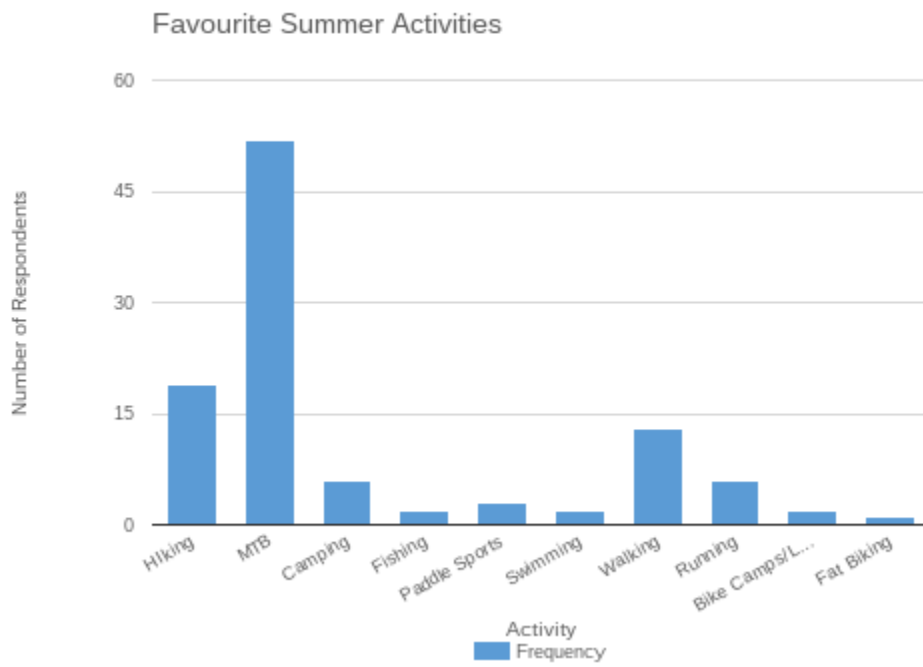


Figure 10. Percent (y axis) of respondents favorite summer and winter activities

The frequency with which respondents participate in all activities provides a more detailed look at the breadth and depth of outdoor recreation participation. Ranging on a scale from 0 (never) to 5 (very frequently) respondents indicated walking, hiking and mountain biking as the most frequently participated in activities.

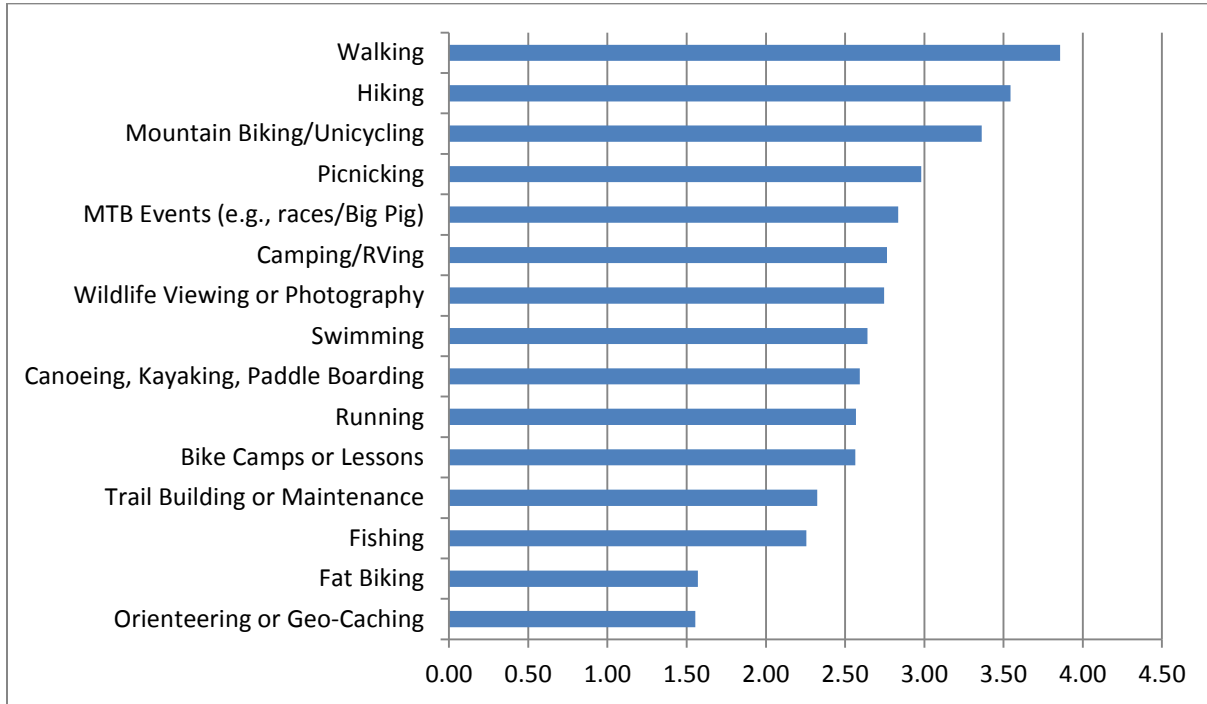


Figure 11. Mean score of participation in all activities on a scale where 0 = never and 5 = very frequently.

When asked who they go on the trails with, almost half of respondents indicated with family and the next largest proportion indicated with friends.

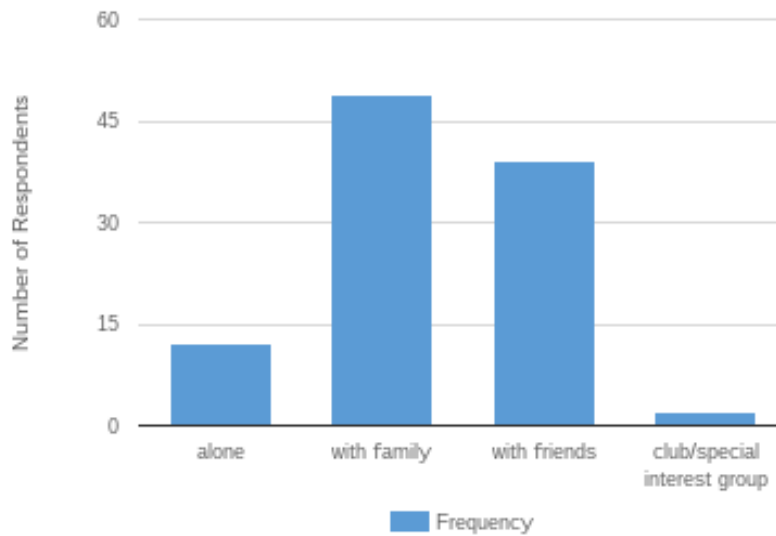


Figure 12. Who do you most often go to the trails with?

Many participants also noted that they take their pet with them on the trails. On a four point scale from 0=never to 4=always, respondents had a mean score of 2.3.

Frequency of Participation

When asked about how frequently they went to the Burns Lake Trails not surprisingly the frequency of participation in summer was higher. Approximately 75% of BL MBA members frequented the trails more than two times per week in the summer. In comments, quite a number of members indicated that they actually frequented the trails more than once a day.

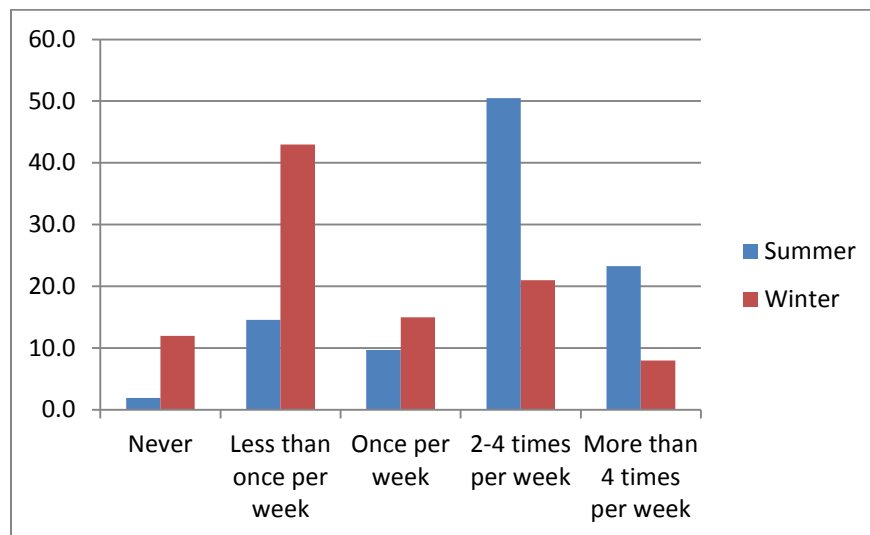


Figure 13. Frequency of participation (y axis) in summer and winter

We examined the relationship between distance participants live from the trails and time spent on the trails. Although there was no significant relationship between how far participants lived from the trails and the duration of their visits there was a significant relationship between distance and frequency of visits. Not surprisingly, those who lived further away visited less frequently in both summer and winter.

After omitting a few members who come from out of town and camp for the weekend (20-30 hours at a time, the average visit length by BLMBA members was 2 hours. There are two major peaks at 2 hours and a lower peak of about 15% of BLMBA members at 3 hours.

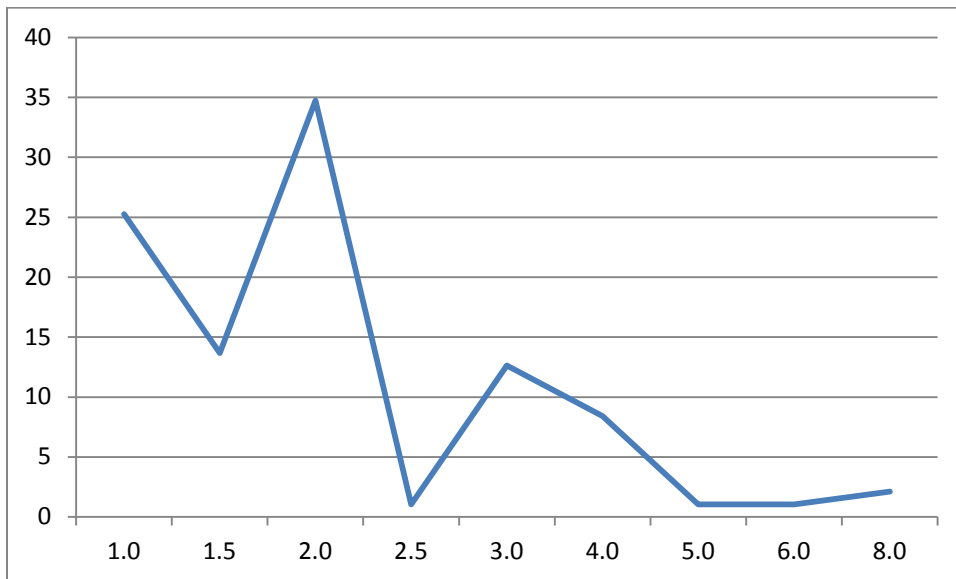


Figure 14. Percent of respondents (y axis) average length, in hours, (x axis) of a typical visit to the trails.

Volunteer Involvement

We asked BLMBA members to provide an estimate of the number of hours they volunteered in 2016 in a series of categories. Respondents reported a total contribution of just under 4000 hours volunteered in 2016 with the majority contributed to trail maintenance. The average number of hours contributed in 2016 was 16.4 hours to trail maintenance, 4.7 hours to special events, 4.5 hours to camps and trainings, 4.3 hours for BLMBA executive, 3.4 hours to other and 3.1 hours to trail design.

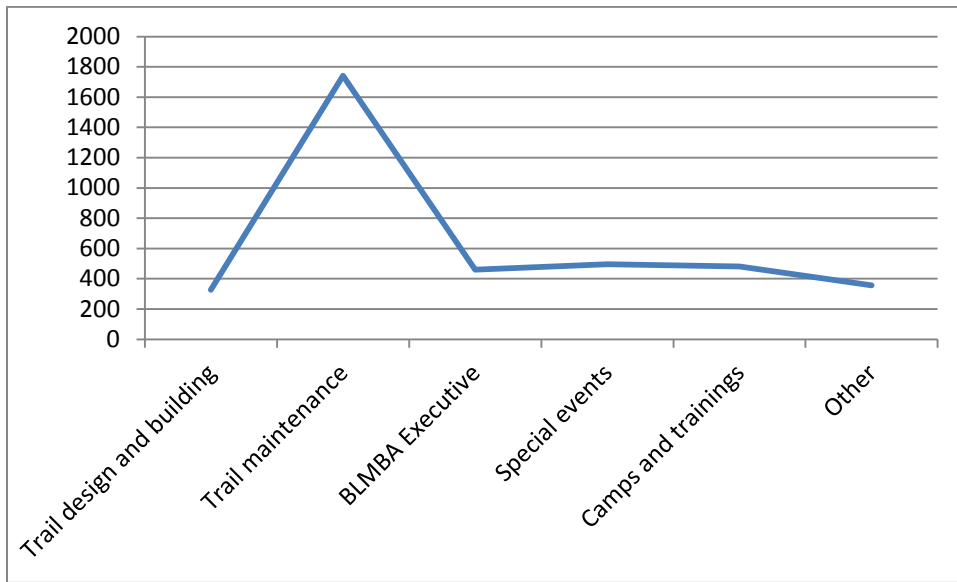


Figure 15. Total hours (y axis) volunteered reported by respondents for 2016

Trail Use/Rider Experience

Respondents covered the spectrum of rider skill levels with a smaller percent self-identifying as expert riders.

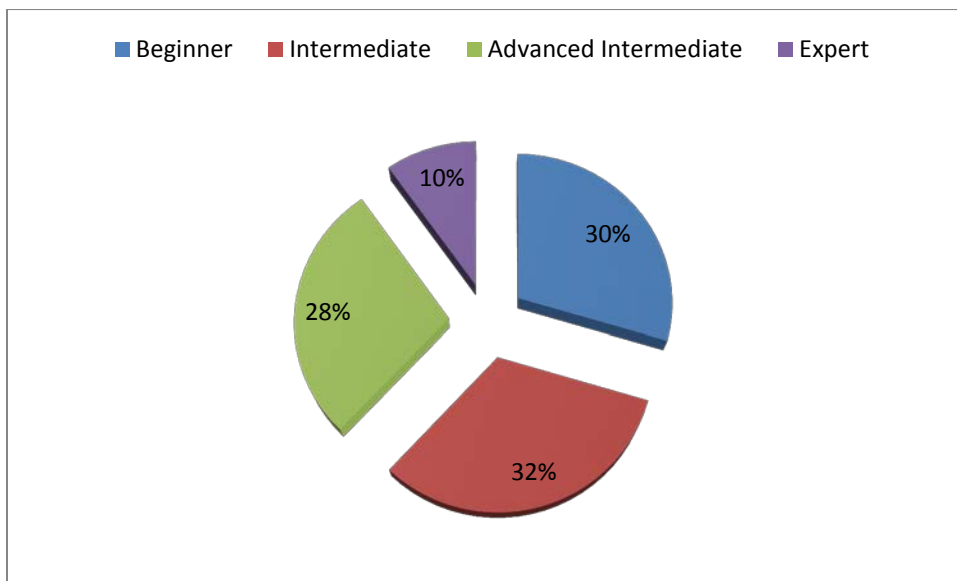


Figure 16. Skill level of respondents.

Types of bikes ridden was dominated by 'all mountain' bikes (35%), followed by 'hardtail' (23%). Downhill (11%) and cross country (10%) followed. Few owned fat bikes (5%) or unicycles (2%).

BLMBA Expenditures

We asked BLMBA members a suite of questions regarding the economic value and contributions of their trail use.

With respect to their expenditures, we asked BLMBA members to estimate their annual household expenses related to the Burns Lake Trails. The expenses were divided into six different categories: equipment, equipment maintenance, BLMBA membership fees, shuttle fees, bike camps/training costs and other miscellaneous or unknown expenses. Estimating expenses is difficult and just under half of the respondents answered this question. Of those who did, equipment costs were the highest amongst the varying mountain biking related expenses, with equipment being purchased within Burns Lake, regionally (Prince George, Terrace, Smithers, Prince Rupert), as well as online (see figure 17). A total of \$79,270 spent on equipment was recorded by 65 respondents with an average of \$1,234.10, ranging from \$0 to \$8,000.

A total of \$18,390 was spent on equipment maintenance and repairs, with the average person spending \$317.10 annually (from 58 respondents). For BLMBA membership fees, a total of \$5,520 was spent with an average yearly membership contribution of \$96.03 (from 59 respondents). Annual expenses related to bike camps and training totaled \$3,310 with an average of \$72.00 (46 respondents). An average of \$101 was spent on shuttle expenses, totaling \$5,335 (50 respondents). Other miscellaneous expenses were totaled at \$3,235 and included expenses such as walking poles, bear spray, gas, and groceries for their time spent at the Boer Mountain Recreation Site.

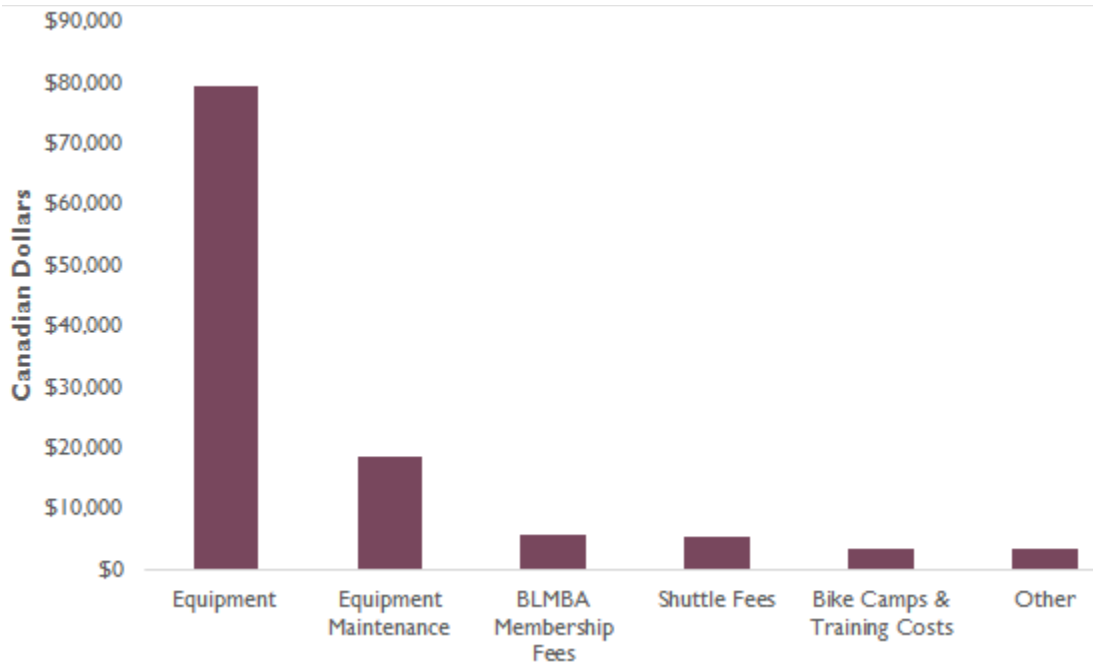


Figure 17. Average trail related expenditures

Just over half of respondents had purchased a new bike in the past five years with the majority (38%) indicating a purchase under \$1000. However, 22% had purchased a bike over \$3000.

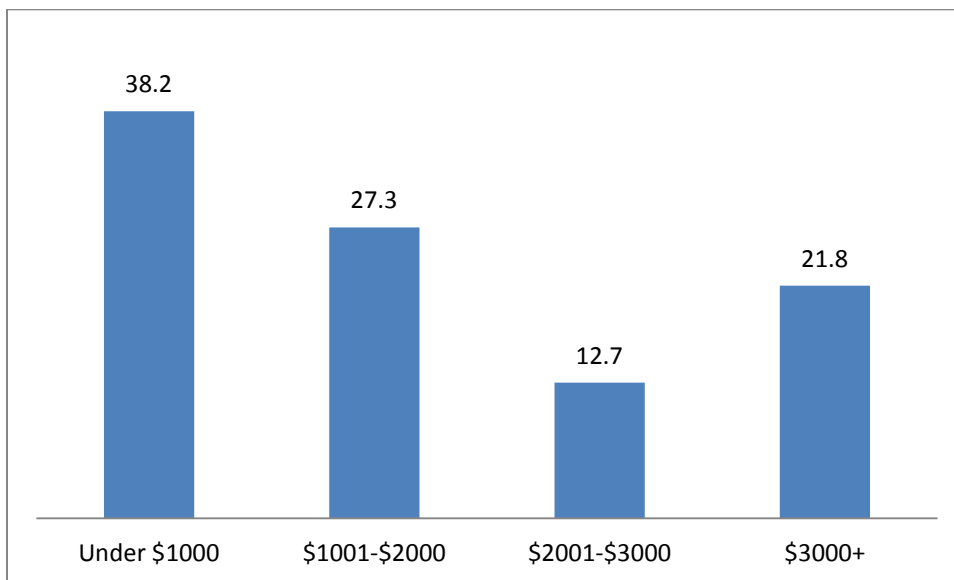


Figure 18. Percent of respondents (y axis) who purchased a bike (and price) in the past five years

Just under half of respondents indicated that they planned to purchase a bike in the next five years with the majority (45%) indicating a purchase between \$1000-\$2000 and the number of respondents indicating purchase of higher priced bicycles.

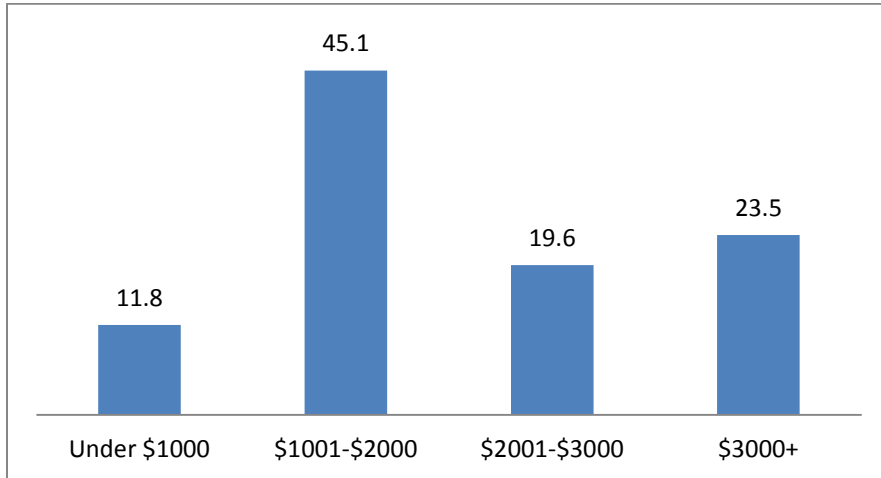


Figure 20. Percent of respondents (y axis) potential bike purchase (and cost) in the next five years.

We also asked if BLMBA members were bike tourists – traveling to other communities for mountain biking and making expenditures in those areas. Not surprising, given its proximity, the most commonly visited place for mountain biking outside of Burns Lake was Smithers (14) followed by Williams Lake (11) and Prince George (9). The average number of days for these trips ranged from a high of 11.5 to just 1 day. Some of the other places visited for mountain biking included Whistler, Terrace, and Kelowna.

	Smithers	Prince George	Golden	Jasper	Williams Lake	Other
Number of Participants:	14	9	3	1	11	18
Days on Average:	11.5	9.8	2.3	1	4.3	8.5

Table 2. Travel to other communities for mountain biking adventures.

Motivations

Respondents were asked to identify how important various reasons were for recreating on the Burns Lake trails. BLMBA respondents were highly motivated by a wide range of rationale from environmental to physical. Time outdoors, followed by a suite of physical/mental health reasons dominated the motivations. A sense of self-reliance, reduction in illnesses and higher self-esteem were less important.

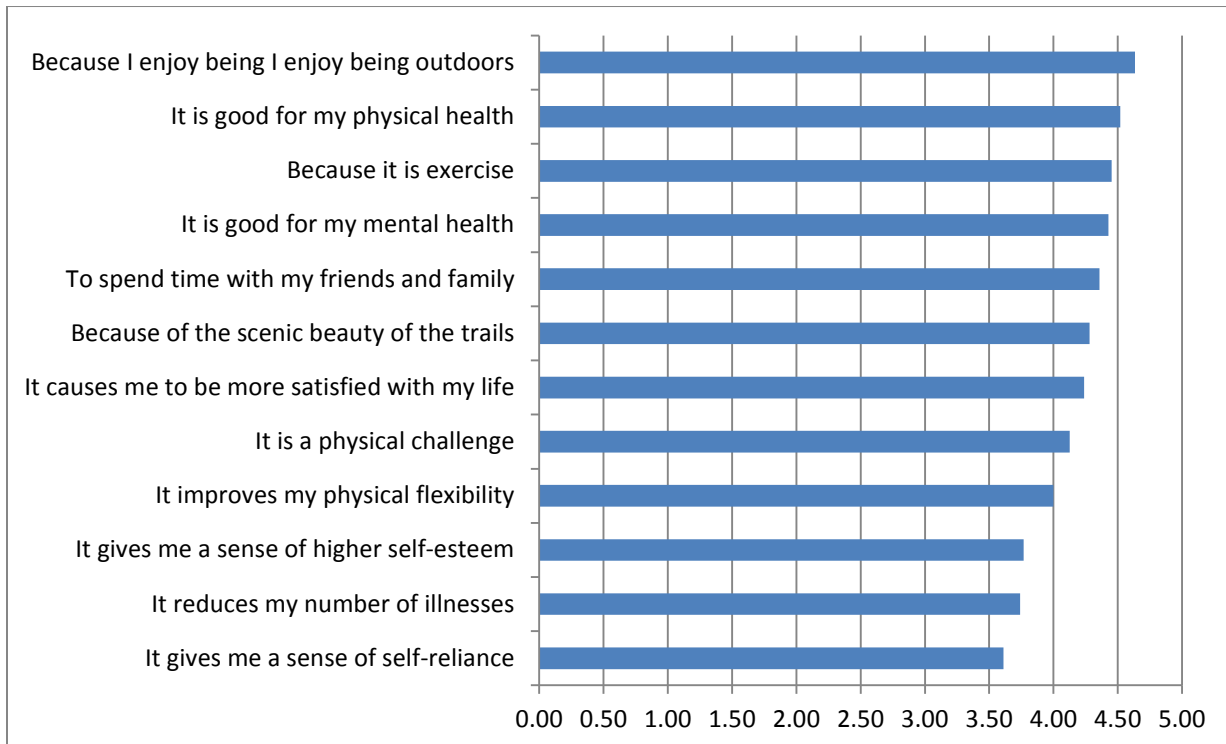


Figure 21. Motivations for recreating on the Burns Lake trails on a 5 point scale (see Appendix 1).

Important Trail Features

Respondents were asked to identify aspects of the Burns Lake trails they found important to their experience. All the features ranked as somewhat to very important. The most important feature was trail maintenance followed by ease of getting to the trails, the trail variety and the natural setting of the trails. The overall value for price paid was the least important aspect according to respondents. Trail difficulty and number of trails were also less important to respondents.

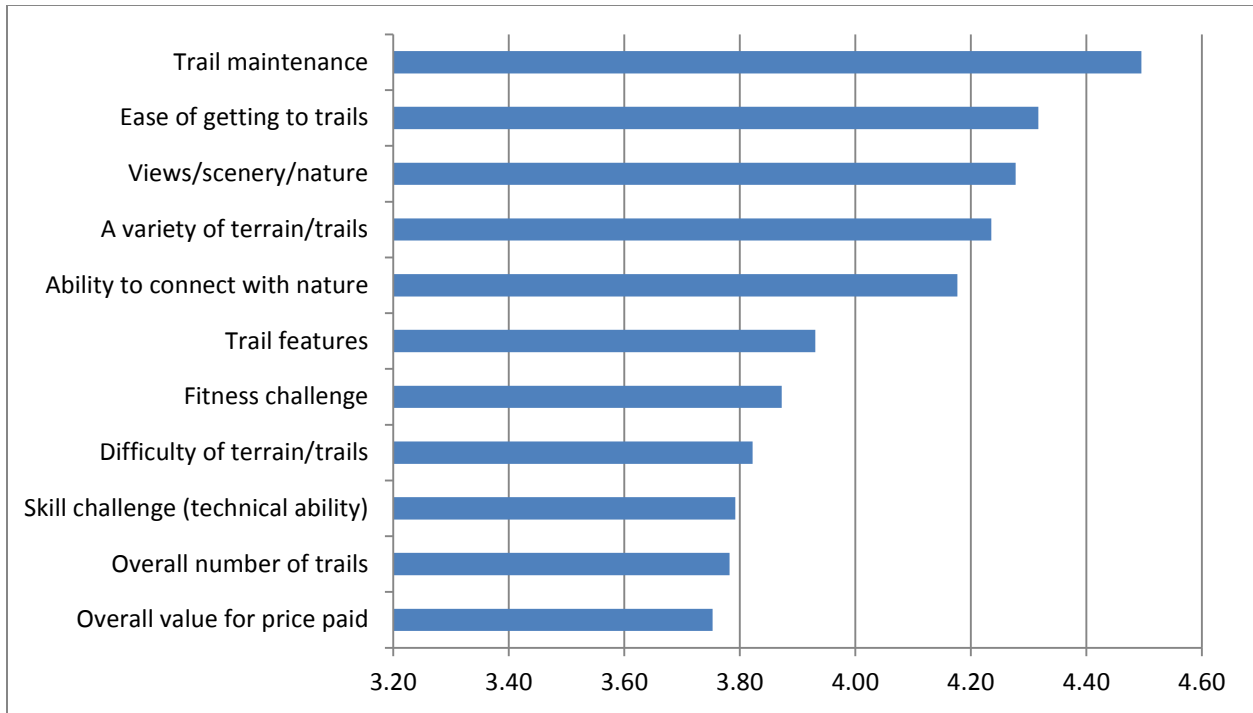


Figure 22. Trail features important to users on a 5 point scale (see Appendix 1)

We examined the relationship between favourite activities and trails features and found a few important relationships. Cyclists (mountain bikers, fat bikers and lesson and event participants) were significantly more likely to find trail features and trail variety important. Pedestrians (hikers, geocachers, wildlife viewers) were more likely to find environmental features and number of trails to be important. Interestingly, those participating in aquatic activities were also more likely to find number of trails to be important, perhaps because they were also likely to participate in the ‘pedestrian’ activities.

Additional Features or Services

Respondents were asked to list three ideas for additional features or services they would like to see in the future on the Burns Lake trails. Suggestions involving road maintenance recurred most often. This included widening and/or grading the road to Kager Lake and/or the road to the summit. Expanding the campground in various ways (additional sites, sites around the lake, remote sites on long-distance trails) was also popular. In terms of trail improvements, comments involved better/more cross-country ski trails with smoother grade changes and more focus on hiking and walking trails. More and or improved signage was also a recurring

suggestion. Finally, respondents also suggested improving the shuttle service either by increasing it and/or offering it from downtown in the summer. Other suggestions are listed in Appendix 2.

Table 3. Suggestions for improved features/services for the Burns Lake trails

Feature/Service	# of Responses
Road maintenance	20
Campground expansion	13
Trail improvements	11
Signage improvements	9
Shuttle service	7

Contribution of the Burns Lake Trails

Respondents were asked to rate the role of the trail network on a number of attributes. All potential roles rated strongly (4-5 on a 5 point scale). The most important contributions noted were the importance to the community with respect to health and wellbeing ($\bar{x}=4.73$), livability ($\bar{x}=4.69$) and community identity ($\bar{x}=4.61$).

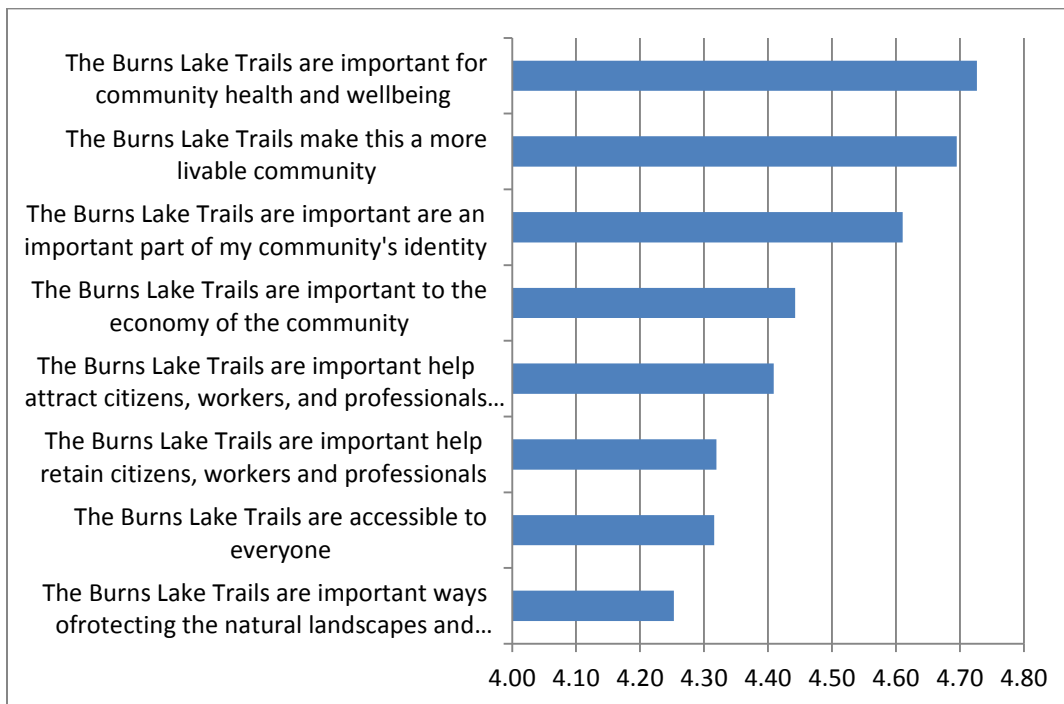


Figure 24. Mean scores related to the role of the Burns Lake Trails on a 5 point scale

Economics

One part of the research focused specifically on the economic impacts generated from the Burns Lake trails through a number of mechanisms. Direct, indirect and induced impacts of grant expenditures, contributions of volunteer labour, and health savings associated with outdoor recreation participation were the major dimensions investigated.

Economic Contributions of Trail Construction and Maintenance

The single largest economic contribution to the trail system is the expenditures associated with design, construction and maintenance of the trail network. Over the course of the development of the mountain biking trails, BLMBA has received \$1,998,037 in both cash and in-kind donations from various stakeholders (See Figure 25). The majority of the donations came from local, or regional, businesses and organizations. Total monetary donations are recorded at \$1,102,428 and in-kind donations including volunteer hours (assigned a monetary value of \$15/hour) from BLMBA members and the Fire Attack crew as well as donations of materials, supplies and free services were valued at \$895,608 over the 10 years¹.

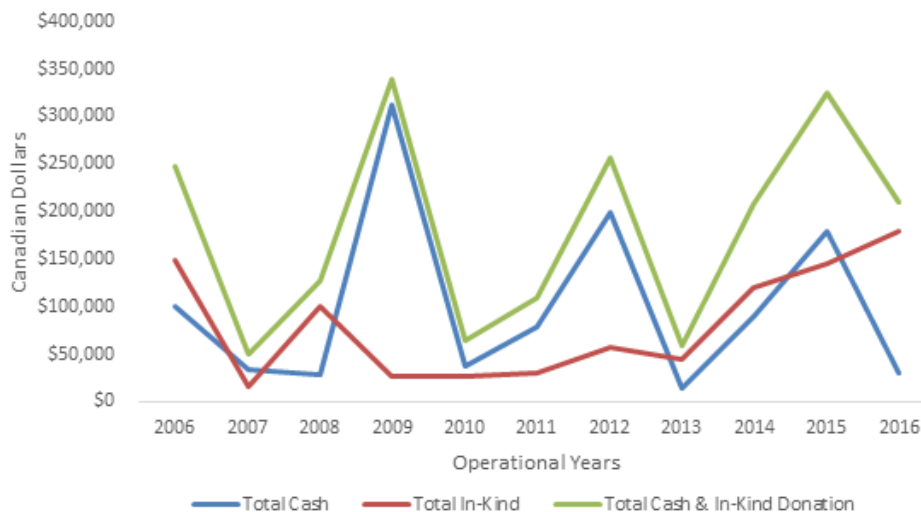


Figure 25. Cash and in-kind donations received by BLMBA

¹ The use of the mini-excavator from the Burns Lake Community Forest or donations from Recreation Sites and Trails British Columbia (formerly named the Ministry of Tourism, Sport and the Arts) prior to 2010 were not included.

Using only the cash contributions of \$1,102,428 over the ten year period we ran a conservation economic input-output model. The combined direct, indirect and induced impacts generated from the STEAM model based on multipliers developed for Northern British Columbia estimated a total impact of \$2,150,565.00 (see Figure 26).

The STEAM model estimated that from 2006-2016 the development of the trails at the Boer Mountain Recreation Site has generated the equivalent of 11 full-time, 1 year jobs (3.6 directly, 4.6 indirectly, and 2.8 induced).

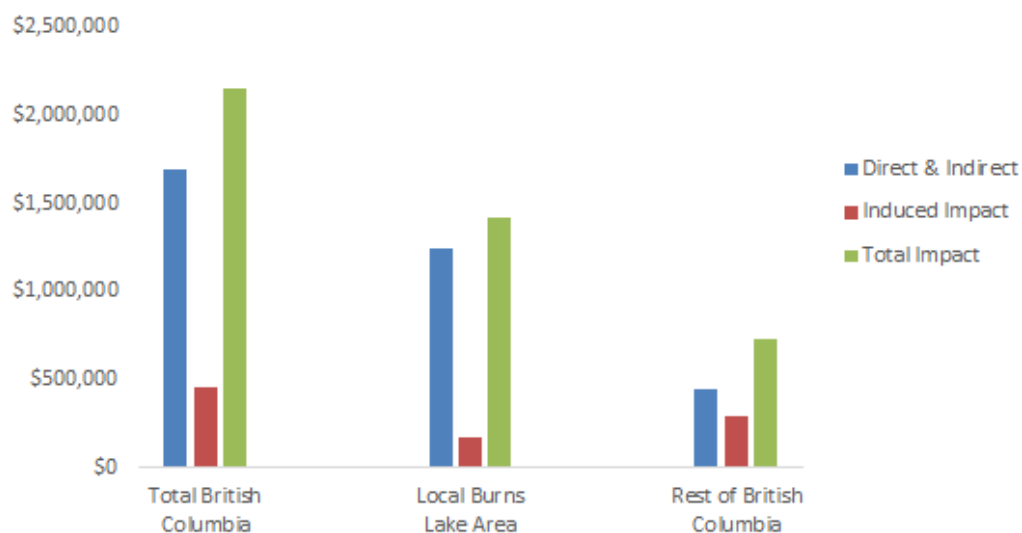


Figure 1. The economic benefits that the construction and maintenance of the Boer Mountain trail network from 2006-2016 has had on the local community of Burns Lake and province of British Columbia as analysed with the Sports Tourism Event Assessment Mode

Figure 26. The economic benefits that the construction and maintenance of the trail network from 2006-2016 has had on the local community of Burns Lake and the province of BC.

Volunteer Labour

Calculating the economic contribution of volunteer labour is an emerging area. The reality is counting hours and assigning a wage to them undervalues the important contributions of volunteering to communities. We hope, however, that some of those other contributions (to the social fabric of communities as well as the benefits that accrue to the individual) are reported on elsewhere in this study. Although some think that calculating an economic contribution of volunteer hours belittles the contributions of volunteers we think it provides a

useful signal that funders may particularly be interested in, in community investment in a facility.

Tracking volunteer hours has been done more informally by BLMBA until recently and thus the data used for volunteer hours is based on estimates until 2013 when formal tracking was introduced.

	Volunteer Hours	\$15/hr	\$24/hr
2006	1000	15000	24000
2007	1000	15000	24000
2008	1500	22500	36000
2009	1500	22500	36000
2010	2000	30000	48000
2011	2000	30000	48000
2012	2000	30000	48000
2013	2000	30000	48000
2014	2069	31035	49656
2015	1526	22890	36624
2016	2569	38535	61656
TOTAL	19164	\$287,460	\$459,936

Table 4. Volunteer hours and valuation

Although internally BLMBA has normally used a unskilled labour wage of \$15 to assign economic value much of the literature uses an average hourly wage rate (\$24.25). The total estimated volunteer hours in the ten years of BLMBA is just under 20,000 hours. Using a conservative wage estimate at \$15/hr results in a valuation of \$287,460 contribution in social cohesion.

Health Cost Savings

Outdoor recreation facilities such as the trail network also make a significant contribution to health cost savings. In the US, the Centre for Disease Control (CDC) recognizes that physical activity helps improve overall health and reduces the risk for chronic diseases². As such, the CDC promotes physical activity guidelines, defining sufficient activity as at least 150 minutes of moderate-intensity activity per week or at least 75 minutes of vigorous-intensity activity per week, along with muscle-strengthening activities at least two days per week. Vigorous intensity

² Centers for Disease Control and Prevention, "Adult Obesity Causes and Consequences" (accessed March 14, 2017, <http://www.cdc.gov/obesity/adult/causes.html>).

activities include running and bicycling while moderate intensity activities include walking and hiking. The annual medical cost savings are estimated as \$1500 CAD for those who exercise regularly, doubling that amount for those over the age of 65.

Given that we have frequency, intensity and length of average recreation activity information for BLMBA members we estimate that approximately 75% of BLMBA members who were surveyed (98 individuals) met the minimum threshold for regular exercise just with their time on the Burns Lake trails. This results in an estimation of total health care cost savings for BLMBA members of \$147,375.00. Given that the trail network serves many more community members as well as tourists this number would in reality be significantly higher.

Discussion

Across all methods and populations studied the Burns Lake Trails were viewed very favourably, providing numerous benefits at an individual, family and community level. These benefits covered the range of physical and mental health, individual and community development, and social and economic. The trails are well regarded and community members were quick to identify key dimensions of the development and maintenance of the trails that were critical to their continued success.

Social and Economic Benefits of the Burns Lake Trails

Physical Health Benefits: Building an active community

The physical health benefits of outdoor activity and time in nature are widely recognized. More than just providing health cost saving, however, the trails are helping individuals and families develop active lifestyles and helping Burns Lake build an active community.

Mental Health Benefits: Helping clear heads

Time in nature and active involvement outdoors also provides a number of mental health benefits widely recognized by study participants. Destressing thru exercise was widely noted as helping clear heads and the natural settings were recognized as a '*healing spot*'. Participants recognized the benefits for individual health benefits and also the benefits from the socialization through rides with family and friends or volunteer activities with others. The trails helped contribute to building a balanced life.

Family Benefits: Family cohesion through happiness, fun, and independence

Trail use, and perhaps more specifically mountain biking, can be either a social group activity or an individual activity. The Burns Lake Trail network appears to achieve both simultaneously. For the individual motivated by skill development, exercise and the desire to escape, the trails provide great, accessible opportunities for freedom and independence and to clear heads and achieve a more balanced life. At the same time the trails are a fantastic opportunity for families and friends to grow, develop, give and have fun together. Work bees that involve entire families, trails of multiple lengths and levels of difficulty, coaching camps and training to improve skills were just some of the benefits attributed to aid in family cohesion. The youth

were best able to explain that the trails simultaneously provide benefits of growth and development that come from encouraging independence and solitude in nature within an environment surrounded by family and friends.

Community Development Benefits: Building trails to build community

The community aspect of the trails was something that came up in almost every area that was analyzed. It is important for BLMBA, and the Boer Mountain recreation site to continue to provide a strong platform for community experiences. By providing trails and activities for participants of any skill levels, the recreation site will remain welcoming to anyone. It is also important for the trails to continue to be operated and maintained through community members and volunteers, as it functions as a community gathering point where everyone comes together to work on a project which in the end, everyone is able to reap benefits.

Sense of Ownership and Pride

One of the major findings from this research was the sense of ownership that the community has regarding the mountain biking trails at the Boer Mountain Recreation Site. This is because many community members and businesses have invested volunteer time and money (through donations) into the creation and maintenance of the trails. This feeling of ownership and pride is also suspected to be related to the reduction in vandalism at the Boer Mountain Recreation Site and awareness of the usage impacts. An overall sense of ownership is important because it also suggests that the community feels as though they have directly contributed to and participated in the development and continued maintenance of the mountain biking trails at the Boer Mountain Recreation Site.

Economic Benefits

Community members are quick to recognize some of the direct economic benefits of the trails including the opening of Burnt Bikes and the increased clientele for restaurants, grocery stores, hotels and gas stations from visitors coming to the trails. They also recognize the direct benefit of the grant money raised by BLMBA to support the trail construction. Most see the potential for the trails to increase in profile and build the potential to attract tourists to the community. They see this as an opportunity to encourage folks to stop and not just pass on through.

Lesser known is the direct and indirect economic contribution of the trail development and maintenance to the community. Independent of the economic benefits from tourism, the direct and indirect economic benefits of just trail development and maintenance is over 2 million dollars, or the equivalent of 11 full-time, 1 year jobs, over the trails lifespan.

It's important to note, however, that there are other economic benefits from the Burns Lake trails that are equally, if not more important, than the injection of cash into the economy. The benefits of community cohesion as measured by volunteer hours can be conservatively valued at \$300,000. The annual health benefit savings, just to BLMBA measures is conservatively valued at \$150,000 (annual). The trails are also noted as being a key attractant for individuals to stay in the community and the energy and community pride they build encourages a sense of community and business optimism that while harder to value economically leads businesses to expand and grow.

Key Dimensions of the Development and Maintenance of the Trails

Volunteers: The beating heart of the Burns Lake Trails

The volunteer hours that have been contributed to the building and maintenance of the mountain biking trails at the Boer Mountain Recreation Site by the Burns Lake Mountain Biking Association (BLMBA) members has played a critical role in its success. Without their dedication and hard work the trails would not be what they are today. Since their inception a total of almost 20,000 volunteer hours have been recorded for BLMBA members equating to a value just under of \$300,000. Other organizations such as the Burns Lake Fire Attack crew have also donated a substantial amount of labour to the development of the trail network. Future maintenance and upkeep of the trail system will strongly depend on the continued support of these many volunteers. Study participants recognized how critical volunteers and volunteering was. The benefits were noted not just in the tangible result of building and maintaining the trails but perhaps more importantly in building pride, community cohesion, developing new friendships and a sense of ownership. Initiatives that were strongly praised were those that encourage the younger generations to get more involved to maintain a sense of ownership of the mountain biking trails and to lead both the preservation and further development of BLMBA and mountain biking trails at the Boer Mountain Recreation Site. Incentives (such as a

monthly raffle or discounts on bike camps) to volunteers could help to encourage continued support and even grow the number of volunteers for maintenance and development of the trails.

Trail Maintenance

The importance of trail maintenance was highlighted in our analysis. Trail maintenance was seen as the most important aspect of the Burns Lake Trails in the survey and interviewees had generally positive comments about how the trails were maintained. As such, continued trail management is important to maintain the popularity of the Burns Lake Trails.

Conclusion

Fun, freedom, family, independence, active community, balanced lifestyles, time in nature, pride, cohesion, inclusiveness, socializations and sense of ownership: These are just a few of the terms used to describe the benefits of the Burns Lake Trails. The development of the extensive network of multi-use trails on the Boer Mountain/Kager Lake Recreation Sites is testament to a community dedicated to rebrand itself: A community that *builds trails to build community*.

Appendix 1. Survey³

Burns Lake Trail Users

Kager and Boer Mountain Rec Site Trails and Burns Lake Bike Park

Hi BLMBA Member -- Thank you for agreeing to participate in a survey on the Kager and Boer Mountain Re Site Trails and Burns Lake Bike Park. We are very interested in your experiences, thoughts and ideas around this issue.

This research project is aimed at helping understand the economic and social benefits of the trail network to help contribute to ongoing activities to build, maintain and market the area. This is a research project conducted by Dr. Pamela Wright and the students of UNBC's Outdoor Recreation and Tourism Management research methods course (ORTM 310) and funded by BLMBA and a UNBC Experiential and Service Learning grant.

Whether or not you ride, walk, snowshoe, ski or just support a family member we are interested in your perspectives as a member of the BLMBA community and if you are over the age of 18. This survey will close on February 28, 2017.

Do you consent to participate in this survey?

- Yes
- No

³ This is a word copy of the survey and some of the formatting is necessarily different than the online version.

Throughout the survey we'll be asking about your participation in recreation activities on the Burns Lake Trails. When we use this term we are referring to the entire area on the map that includes the Burns Lake Bike Park, the Boer Mountain and Kager Lake Recreation Sites.

First we would like to ask you a few questions about your outdoor recreation activities on the Burns Lake Trails.

1. How often do you participate in the following outdoor activities on the Burns Lake Trails?

	Never	Infrequently	Occasionally	Frequently	Very Frequently
Cross Country Skiing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snowshoeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Orienteering or Geo-Caching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mountain Biking/Unicycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camping/RVing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fishing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Canoeing, Kayaking, Paddle Boarding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Swimming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Picnicking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wildlife Viewing or Photography	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Running	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fat Biking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trail Building or Maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bike Camps or Lessons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MTB Events (e.g., races/Big Pig)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Which of the above would you consider to be your favourite summer and winter activities on the Burns Lake Trails?

Please choose the name of the activity for 'Summer' and 'Winter' from the dropdown options below:

- Summer
- Hiking
 - Orienteering or Geo-Caching
 - Mountain Biking/Unicycling
 - Camping/RVing
 - Fishing
 - Canoeing, Kayaking, Paddle Boarding
 - Swimming
 - Picnicking
 - Wildlife Viewing or Photography
 - Walking
 - Running
 - Trail Building or Maintenance
 - Bike Camps or Lessons
 - MTB Events (e.g., races/Big Pig)
 - Fat Biking
 - Hiking
 - Orienteering or Geo-Caching
 - Mountain Biking/Unicycling
 - Camping/RVing
 - Fishing
 - Canoeing, Kayaking, Paddle Boarding
 - Swimming
 - Picnicking
 - Wildlife Viewing or Photography

- Walking
- Running
- Trail Building or Maintenance
- Bike Camps or Lessons
- MTB Events (e.g., races/Big Pig)
- Fat Biking
- Winter Cross Country Skiing
- Snowshoeing
- Hiking
- Orienteering or Geo-Caching
- Fat Biking
- Ice Fishing
- Wildlife Viewing or Photography
- Walking
- Running

3. Do you volunteer in building, maintaining, teaching or special events related to the Burns Lake Trails?

If yes, please provide an estimate of the number of hours you volunteered in 2016.

Trail design and building	<input type="text"/>
Trail maintenance	<input type="text"/>
BLMBA Executive	<input type="text"/>
Special events (e.g., Big Pig)	<input type="text"/>
Camps and trainings	<input type="text"/>
Other	<input type="text"/>

4. On average, in 2016, how often do you participate in outdoor recreation activities on the Burns Lake Trails? By recreation we are referring to all activities including mountain biking, camping, hiking, snowshoeing, paddling etc.

Summer (non-snow months) Season

Mark the most appropriate response.

- Never
- Less than once per week
- Once per week
- 2-4 times per week
- More than 4 times per week
- Not sure

Winter (snow months) Season

Mark the most appropriate response.

- Never
- Less than once per week
- Once per week
- 2-4 times per week
- More than 4 times per week
- Not sure

5. In 2016, how long, on average, was your typical visit to the Burns Lake Trails?

Please answer in hours, for example: 1 hour

6. How many kilometers is it from your home to the Burns Lake Trails?

Please answer in KM.

7. Overall, who do you most like to go to the trails with? (Please pick one only)

- Alone (just yourself)
- With family
- With friends
- With a club or special interest group

8. How frequently do you take a pet with you on the trails?

- Never
- Sometimes
- Frequently
- Always

9. From the table below, please consider:

A. How important are each of the following aspects about the Burns Lake Trails.

	Very unimportant	Unimportant	Neutral	Important	Very important
A variety of terrain/trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty of terrain/trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fitness challenge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall number of trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skill challenge (technical ability)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trail features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trail maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to connect with nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of getting to trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- Overall value for price paid
- Views/scenery/nature

10. What additional features and/or services would you like to see for the Burns Lake Trails?

Please list up to three.

1.

2.

3.

To help us calculate the economic value of the Burns Lake Trails to the community please help us estimate your household expenditures related to use of the Trails for 2016.

11. Are other people in your household BLMBA members or users of the trails and facilities?

- Yes
- No

12. Number of other household trail users

- Other adults (18+)
- Youth 13-17
- Children 0-12

13. For 2016, please provide your best estimate for you and all other members of your household for your total recreation related expenditures related to the Burns Lake Trails in the following categories. Please include all taxes and other fees.

IMPORTANT: If there is more than one adult age BLMBA member in your household who receives this survey please have only one individual fill out questions 13 and 14. Other adult household members who are trail users are encouraged to complete their own survey, however, skipping these two questions. The information you provide will be confidential and responses are not identified by individual.

Shuttle expenses on Boer Mountain

Equipment - bikes, snowshoes, helmet bike clothing etc

Equipment - repair/maintenance costs (including parts and labour)

BLMBA membership fees

Bike camps, training etc

Gear rentals

Other expenses related directly to Burns Lake Trail use. (Please provide \$ amount and details of expenses)

14. For 2016, please estimate the proportion (e.g., 25% or 100%) of your equipment (purchase and repair) costs that you spent:

Locally (within Burns Lake)

Regionally (from Prince George to Prince Rupert but excluding Burns Lake)

Elsewhere (including on-line purchases)

15. People participate in outdoor recreation for a wide range of reasons. While many of these reasons may be important to you we are interested in understanding what is most important. Please indicate the importance of each of the following statements along the scale from 1-5, with 1 being "not important" and 5 being "very important"

By 'recreating' we mean all activities you can do on the trails from MTB riding to walking to trail building.
I recreate on the Burns Lake Trails because...

	Not Important	Somewhat Important	Neutral	Important	Very Important
It is good for my physical health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It reduces my number of illnesses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It improves my physical flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It gives me a sense of self-reliance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It gives me a sense of higher self-esteem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It causes me to be more satisfied with my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is a physical challenge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because it is exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To spend time with my friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because of the scenic beauty of the trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because I enjoy being outdoors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is good for my mental health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Based on the outdoor recreation experiences offered by the Burns Lake Trails, please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
No other community can compare to the outdoor recreation opportunities available on the Burns Lake Trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This community has easy access to the Burns Lake Trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails are an important part of my community's identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails help attract citizens, workers, and professionals to this community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails are important for community health and wellbeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails make this a more livable community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails help this community retain citizens, workers and professionals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails are important ways of protecting the natural landscapes and features of this community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails are important to the economy of the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Burns Lake Trails are accessible to everyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Generally, I think people who participate in outdoor recreation on the Burns Lake Trails...

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Feel more at home in this community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Care more about what happens to our environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel more committed to this community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel more connected to the surroundings here	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value the ecological health of the surrounding area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Act to protect the ecological health of the surrounding area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel more committed to environmental protection generally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help build a sense of community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make this a healthier community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you are a mountain biker we'd like to know a little bit more about you.

If you are not a mountain biker please skip to the next page.

18. How would you classify your mountain biking ability?

Select one response only

- Beginner
- Intermediate
- Advanced intermediate
- Expert
- Professional

19. What type(s) of bikes do you currently own?

Please select all that apply.

- All mountain
- X-cross (Cyclocross)
- Downhill
- Hard Tail
- Fat bike
- Unicycle
- Other, please specify... _____

20. Have you purchased a new bike in the last five years? If so, please estimate the cost.

- Under \$1000
- \$1001-\$2000
- \$2001-\$3000
- \$3001 +

21. Do you plan to purchase a new bike in the next five years? If so, please estimate the cost.

- Under \$1000
- \$1001-\$2000
- \$2001-\$3000
- \$3001 +

22. Did you ride on any other regional MTB trails in 2016? If so, please estimate the number of days you spent riding in these locations.

Smithers

Prince George

Golden

Jasper

Williams Lake

Other

23. How many mountain bike specific trips did you take in 2016?

24. Please estimate your total expenditures (including travel costs) for these mountain bike trips.

About You

We'd like to know a little bit about you to help us understand your responses.

25. Do you live in Burns Lake?

- Yes
- No

26. If yes, how many years have you lived in Burns Lake?

27. If no, where do you live?

28. What gender do you identify with?

- Male
- Female
- Transgender/Two-Spirit
- Prefer not to say

29. What is your current age?

- 18-25
- 26-35
- 36-45
- 46-55
- 56-65
- 66-75
- 76+

Thank You!

Appendix 2.

Other suggestions for future development

A good pump track

Advertising to tourists

Alternative path to boardwalk when slippery

Dragon boat for Kager Lake

Drinking water source

Garbage can at bike park parking lot

Better parking organization at Kager Lake

More skills park features

Restock fish in Kager Lake

Walking and biking trails in/around Burns Lake

Gas station/store nearby

More involvement from village

Bike cleaning station

Bridges over water features

Dog park

Import sand for beach

Snow park with t-bar lift

Bike rentals

Fitness station on Kager Lake trail

Free canoe/kayak use

More picnic spaces

Power supply in shelter