

**Special Use Permit Application**

from



for

**Moose Glades Backcountry Ski Area**

to

**Superior National Forest**



**Superior Highland Backcountry**

**P.O. Box 270 / Lutsen, MN 55612**

Dear Constance Cummins,

January 3rd, 2018

Please find enclosed an application for a special use permit, being submitted by Superior Highland Backcountry, a Minnesota non-profit in good standing, to the Tofte Ranger District of the Superior National Forest (SNF).

Superior Highland Backcountry (SHB) was founded in 2016 by Rory Scoles, with the mission of promoting and expanding backcountry skiing opportunities in and along the highlands of Lake Superior. Mr. Scoles is an avid backcountry enthusiast as well as the current owner of Lutsen Recreation, Inc. (LRI), the ski pro shop located at 245 Ski Hill Rd., in Lutsen, MN. Mr. Scoles has owned LRI since 2011. Prior to ownership he worked there as an employee from 2005 until 2011.

Backcountry skiing, (defined as off-piste and off-trail), and especially sidecountry, (defined as backcountry terrain accessible by the chairlifts of an adjacent alpine resort), is currently seeing a steady and noticeable increase in popularity in places such as Colorado, Montana, Vermont and Maine. Superior Highland Backcountry would like to introduce this opportunity regionally, to that part of our user group who resides in Minnesota and the greater Midwest. Mr. Scoles has explored the acreage on the portion of Moose Mountain which lies on SNF land, and has found it to be ideal for backcountry skiing, due to its unmatched elevation, forest type, and intermediate pitch.

We are therefore requesting permission to lightly thin (glade) this acreage as described within, which is consistent with the 2004 SNF Land and Resource Management Plan. We believe that backcountry skiing is an ideal activity for a special use permit due to its minimal alteration of the existing environment, compatibility with other user groups, and seasonal use. Further, Moose Mountain is an ideal place to introduce backcountry in the Superior Highlands due to its unparalleled physical features and its proximity to Lutsen Mountain Resort.

Enclosed you will find our biography, project description, environmental, social and economic assessments, industry trend reports, and a full business plan. We greatly appreciate your time, and your consideration of our application.

Sincerely,

Rory Scoles, President, SHB

Eleanor King-Gallagher, Vice-president, SHB



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# Moose Glades Project Overview

Highlights

Maps

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## **Alternative #1 (A1): Stand-Alone Remote Backcountry Skiing**

### **Backcountry Ski Features**

- 8 large interconnected backcountry glades through scenic mature sugar maple and boreal forest.
- Remote, scenic, and low noise skiing experience ensured by minimum 700-foot buffer from existing LMC Alpine Ski runs.
- Average slopes between 14.5 to 16.5 degrees with maximum slopes of 20 to 26 degrees.
- Nearly level return trail at base connects to switch back return trail.
- Switch-back return trail for self-powered cross-country ski return.
- Access via existing trails from Oberg Mountain Trailhead.

### **Economic Features**

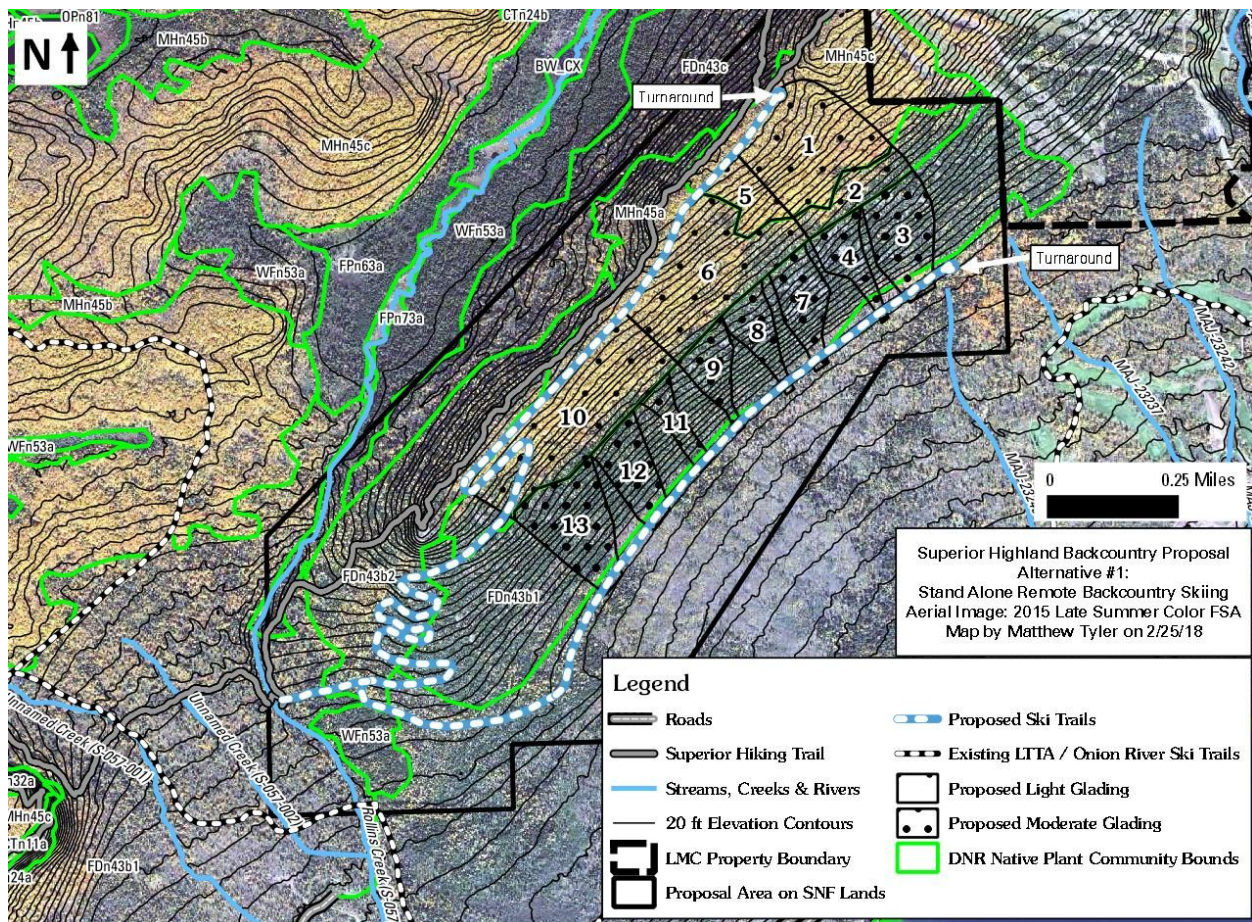
- Backcountry skiing is the fastest growing segment of the outdoor winter recreation market.
- Low capital costs primarily related to trail and glade establishment and trail and glade maintenance. Trails and glades will be largely established by Superior Highlands Backcountry volunteers and other local conservation organizations.
- Enhancement of local existing economic infrastructure through the economic strategy of diversification.
- Complements and enhances current marketing strategy of Lutsen Mountain Resort as a comparable alternative to Mountain West destination resorts.

### **Social and Environmental Features**

- Nearly zero development footprint; no permanent facilities are required on National Forest land.
- Requires NO rerouting of the Superior Hiking Trail (SHT).
- Minimum 100-foot separation buffer between SHT and glades to preserve scenic character of the SHT and prevents trail user conflicts.
- Glading treatments preserve much of the existing vegetation. The “Light Glading” treatment applied to the sugar maple forest on top of Moose Mountain is an understory thinning treatment designed to remove understory obstacles, while retaining all canopy trees. The “Moderate Glading” treatment removes obstacles in the understory and lightly thins the canopy to 60-90% canopy closure.
- Limited canopy disturbance and absence of development footprint minimize conflict with local people who have hunted in this project area for generations.
- Safeguards hydrology of designated trout stream (Rollins Creek) and two intermittent streams (MAJ-23249 & MAJ-23237) that flow into Lake Superior by maintaining forest and conifer cover on steep slopes in their watersheds. Removal of forest and conifer cover in upstream watersheds is associated with elevated peak flows, sedimentation, bank erosion, and loss of water clarity.
- Minimizes fragmentation in Minnesota County Biological Survey (MCBS) Site of Outstanding Biodiversity (the “Onion River Hardwoods”) by retaining most of the canopy using “light” and “moderate” glading treatments and limiting complete canopy removal to narrow ski trails.

- Significantly prevents fragmentation of an 82 acre stand of Northern Mesic Hardwood (Cedar) Forest (MHn45c) on top of Moose Mountain ranked “S3- Vulnerable to Extirpation” by MCBS. The “Light Glading” prohibits canopy removal, and canopy removal is limited to less than 0.4 acres for ski trails. The LMC proposal would completely clear large swaths of vegetation in this stand for ski runs.
- Avoids ANY disturbance of a stand of “S3- Vulnerable to Extirpation” Upland White Cedar Forest (FDn43c) on the north slope of Moose Mountain. The LMC proposal would completely clear large swaths of vegetation in this stand for 12 alpine ski runs.
- Prevents soil erosion by retaining native ground cover on steep slopes.

## Map of Superior Highland Backcountry Proposal A1: Stand Alone Backcountry



### **Component Table - A1**

ID	Name	NPC	NPC Conservation Ranking	Acres	Phase
1	Light Glading	MHn45c	S3 - Vulnerable to Extirpation	30.1	1
2	Light Glading	MHn45a	S4 - Apparently Secure; Uncommon but not Rare	8.9	1
3	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	16.1	1
4	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	8.1	1
5	Light Glading	MHn45c	S3 - Vulnerable to Extirpation	8.3	2
6	Light Glading	MHn45a	S4 - Apparently Secure; Uncommon but not Rare	35.9	2
7	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	10.5	2
8	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	7.7	2
9	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	7.9	2
10	Light Glading	MHn45a	S4 - Apparently Secure; Uncommon but not Rare	40.5	3
11	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	5	3
12	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	11	3
13	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	19.3	3

#### **Trails, cleared to 10' wide:**

Base Trail: 1.2 miles

Switchback Trail: 1.9 miles

Ridgetop Trail: 1.0 miles

Access Trail: 910 feet



## **Alternative #2(A2): “Side Country” Collaboration with LMC**

### **Backcountry Ski Features**

- 8 large interconnected backcountry glades through scenic mature sugar maple and boreal forest.
- Average slopes between 14.5 to 16.5 degrees with maximum slopes of 20 to 26 degrees.
- Access to glades from ridgetop trail connected to adjacent LMC ski lift.
- Return trail at the base gently sloping towards adjacent LMC ski lift for cross country or cat rides.
- Alternate switch-back return trail for self-powered cross-country ski return or cat ride to ridge top.

### **Economic Features**

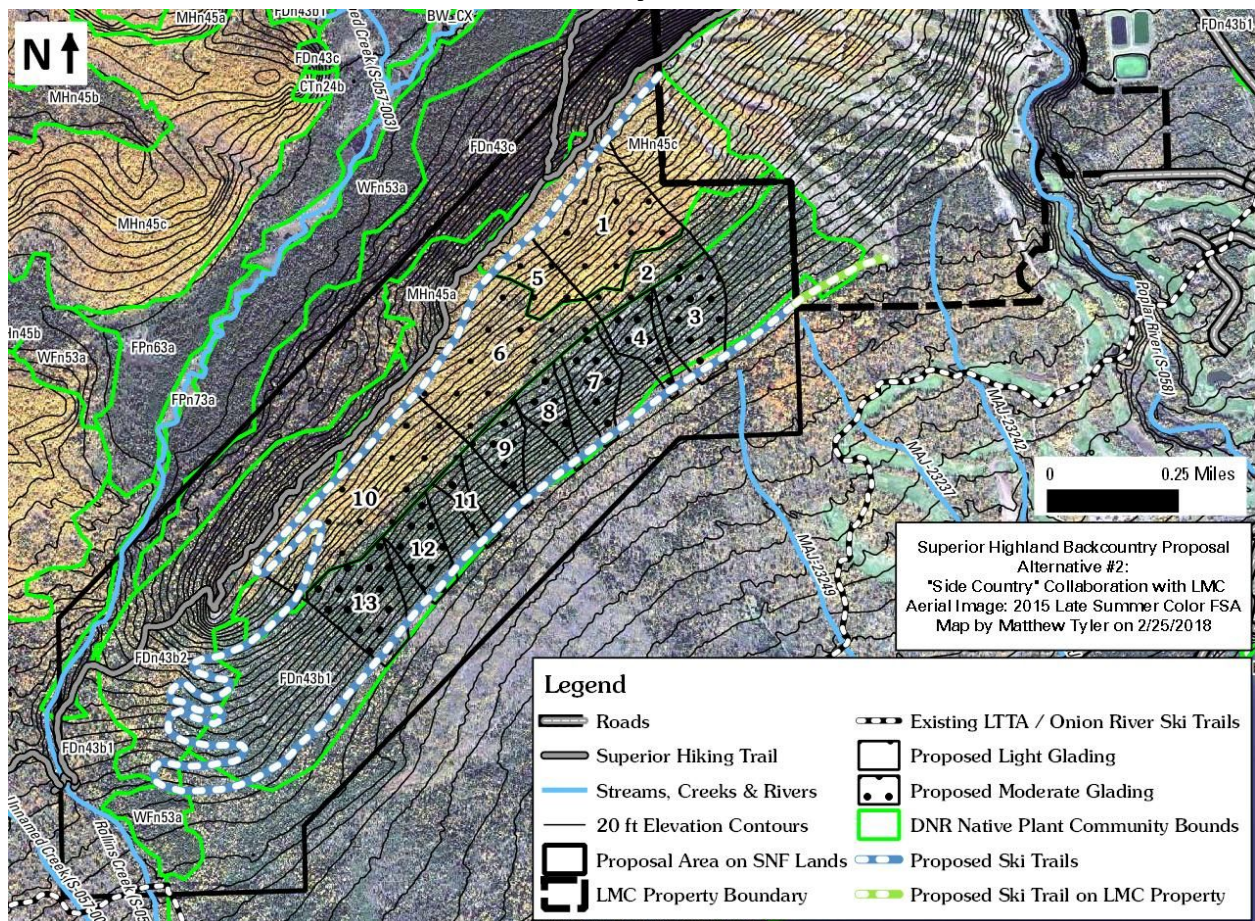
- Backcountry skiing is the fastest growing segment of the outdoor winter recreation market.
- Low capital costs primarily related to trail and glade establishment and trail and glade maintenance. Trails and glades will be largely established by Superior Highlands Backcountry volunteers and other local conservation organizations.
- Enhancement of local existing economic infrastructure through the economic strategy of diversification.
- Complements and enhances current marketing strategy of Lutsen Mountain Resort as a comparable alternative to Mountain West destination resorts.
- LMC could pursue permission to establish cat transport service to further enhance and diversify their customers’ options.

### **Social and Environmental Features**

- Nearly zero development footprint; no permanent facilities are required on National Forest land.
- Requires NO rerouting of the Superior Hiking Trail (SHT).
- Minimum 100-foot separation buffer between SHT and glades to preserve scenic character of the SHT and prevents trail user conflicts.
- Glading treatments preserve much of the existing vegetation. The “Light Glading” treatment applied to the sugar maple forest on top of Moose Mountain is an understory thinning treatment designed to remove understory obstacles, while retaining all canopy trees. The “Moderate Glading” treatment removes obstacles in the understory and lightly thins the canopy to 60-90% canopy closure.
- Limited canopy disturbance and absence of development footprint minimize conflict with local people who have hunted in this project area for generations.
- Safeguards hydrology of designated trout stream (Rollins Creek) and two intermittent streams (MAJ-23249 & MAJ-23237) that flow into Lake Superior by maintaining forest and conifer cover on steep slopes in their watersheds. Removal of forest and conifer cover in upstream watersheds is associated with elevated peak flows, sedimentation, bank erosion, and loss of water clarity.

- Minimizes fragmentation in Minnesota County Biological Survey (MCBS) Site of Outstanding Biodiversity (the “Onion River Hardwoods”) by retaining most of the canopy using “light” and “moderate” glading treatments and limiting complete canopy removal to narrow ski trails.
- Significantly prevents fragmentation of an 82 acre stand of Northern Mesic Hardwood (Cedar) Forest (MHn45c) on top of Moose Mountain ranked “S3- Vulnerable to Extirpation” by MCBS. The “Light Glading” prohibits canopy removal, and canopy removal is limited to less than 0.7 acres for ski trails. The LMC proposal would completely clear large swaths of vegetation in this stand for ski runs.
- Avoids ANY disturbance of an stand of “S3- Vulnerable to Extirpation” Upland White Cedar Forest (FDn43c) on the north slope of Moose Mountain. The LMC proposal would completely clear large swaths of vegetation in this stand for 12 alpine ski runs.
- Prevents soil erosion by retaining native ground cover on steep slopes.

## Map of Superior Highland Backcountry Proposal Alternative #2(A2): “Side Country” Collaboration



## Component Table - A2

ID	Name	NPC	NPC Rank	Acres	Phase
1	Light Glading	MHn45c	S3 - Vulnerable to Extirpation	30.3	1
2	Light Glading	MHn45a	S4 - Apparently Secure; Uncommon but not Rare	8.9	1
3	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	16.1	1
4	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	8	1
5	Light Glading	MHn45c	S3 - Vulnerable to Extirpation	8.1	2
6	Light Glading	MHn45a	S4 - Apparently Secure; Uncommon but not Rare	35.9	2
7	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	10.3	2
8	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	7.6	2
9	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	7.7	2
10	Light Glading	MHn45a	S4 - Apparently Secure; Uncommon but not Rare	40.5	3
11	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	4.7	3
12	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	10.1	3
13	Moderate Glading	FDn43b1	S5 - Secure, Common, Widespread, and Abundant	18	3

### **Trails, cleared to 10' wide:**

Lower Trail: 1.3 miles

Switchback Trail: 1.9 miles

Ridge top Trail: 1.3 miles

Return Trail on LMC Property, to Timberwolf Chair Lift: 1,063 feet

## **Introduction:**

### **Superior Highland Backcountry, the Backcountry Ski Community, and Current Trends**

Superior Highland Backcountry (SHB) was founded in 2016 by Rory Scoles. Mr. Scoles is an avid backcountry ski enthusiast as well as the current owner and general manager of Lutsen Recreation, Inc. (LRI) (see Appendices D and F:1). The mission of SHB is to advocate for backcountry skiing and work to expand and protect human powered skiing opportunities in Northeastern Minnesota. SHB is a member of Winter Wildlands Alliance (WWA), an Idaho-based non-profit; they are also currently serving as SHB's fiscal sponsor. SHB was founded on the basis of personal customer interaction at LRI, observation of the role of the Midwest Skiing community in industry trends, and specific study of the current industry trends of backcountry and sidecountry.

SHB has a large untapped user group which consists of 1.38 million skiers and boarders in the upper Midwest who identified as backcountry skiers or boarders in 2017 (see Appendix G, pg. 42, 44) most of whom currently travel out west each season to ski backcountry or sidecountry (defined as backcountry terrain accessible by the chairlifts of an adjacent alpine resort). Just as avid skiers choose Lutsen Mountain as a closer alternative to Mountain West destinations, we believe many of these backcountry skiers would choose the North Shore as a backcountry destination if the opportunity was presented to them.

Interest in this sport is growing steadily and noticeably. Considering the timeline of the growth of the backcountry ski community, relative to the Midwest skiing community's niche in the national skiing community, we believe this initiative is timely for this region, and will therefore be successful, both in the immediate and in the long-term sustainable future. This project will be in the public's interest, by making an outdoor winter recreational activity available to an under-served user group (O-SE-3), and by boosting the local economy by adding a distinct, environmentally sustainable attraction to the region of Northeastern Minnesota (D-SE-1).

Due to the timeline of the public process surrounding Lutsen Mountain Corporation's (LMC) special use permit application, for the unmatched backcountry terrain on Moose Mountain, SHB has had about ten weeks to prepare our application. In founding SHB, and in envisioning the Moose Glades Ski Area, we had a general pulse on the industry trends surrounding backcountry skiing, as well as the growing interest in our state, but we had not yet identified our key core allies, be they individuals, businesses, or organizations. In this short time period, along with the actual preparation of our permit application, we have solidified a basic framework of committed volunteers, with experience in all aspects of our project, as well as several promising collaborative possibilities with regional businesses, and encouraging leads on dependable funding. We are interpreting this as confirmation of our sense of

the skiing and outdoor communities of Northeastern and greater Minnesota; the time is right to introduce backcountry skiing to northern Minnesota!

Throughout this document, we repeatedly site the Snowsports Industries of America (SIA) 2017 Participation Report. This report is widely considered to be the leading source of outdoor winter sports market participation and statistical data, nationwide. In addition, we have looked to area businesses for their personal experiences with their customer bases in recent years. As mentioned, the founders of SHB also own LRI, and it is largely through their intimacy with the industry and their customer experience that they have initiated this organization and this project proposal. Additionally, SHB has been well-received at Ski Hut, Continental Ski and Bike, Frost River, and Stone Harbor Wilderness Supply locally, and Midwest Mountaineering, REI, and Patagonia nationally. We plan to continue developing our market research with the help of these and other relevant businesses, as our initiatives move forward.

**Cross-reference Table of Special Use Screening Criteria**

To address the first level screening criteria of six through eight, SHB has no outstanding debt to the Forest Service, and our proposed use does not involve gambling or military or paramilitary training of any kind.

First Level, 1	Pgs. 6-11, pg. 24-26
2	Pgs. 6-11 pg. 24-26
3	Pg. 21 para. 3-5
4	Pg. 21 para. 2
5	Pg. 21 para. 2, App. F, LOS 4 and 5
9	Pg. 27 para. 3
Second Level, 1	Pgs. 14-15, App. B
2	Pgs. 14-17, App. B
3	App D
4	Pgs. 21-22, Pg. 23 para. 1, App A
5	Pg 17 para 1

## **Why Moose Mountain?**

When looking at locations along the Superior Highlands for a successful introduction of backcountry skiing to Northern Minnesota, we considered several factors: vertical ski-able feet, total acreage, overall terrain, forest type, accessibility, and proximity to existing infrastructure. Appendix B includes a comparative table of the 5 sites we considered, and a short description of each site. The alternate sites surveyed are sites that we could envision glading, to include in our long-term hut-to-hut complex. However, in our overall analysis of our long-term vision, which is to establish backcountry skiing on the North Shore that is relevant to the greater Midwestern skiing community, we concluded that securing the use of Moose Mountain is critical to our success. Additionally, it is the best place to introduce our long-term initiative. Therefore, we conclude that Moose Mountain is the only site that would serve either A1 or A2.

In serving A1, there are two deciding factors, that led us to determine that Moose Mountain is the only location that will serve our project successfully: continuous ski-able vertical feet and proximity to amenities. Either one of these factors alone may not be conclusive, but together, the factors of ski-able feet and location, along with the secondary factors of total acreage and overall terrain, determine that the recreational use of Moose Mountain is critical to addressing the under-served needs of the backcountry skiing community of the upper Midwest.

In surveying vertical feet, Moose Mountain stands out as being the most unbroken skiable vertical feet in Minnesota, by far, at approximately 750'. This provides a rare and unique benefit to the public, not available elsewhere (D-SE-3 of the 2004 SNF Forest Land and Resource Plan), which we are very lucky to have, and very grateful for. In skiing culture, The difference between 450' and 750' is very significant, and will most assuredly be influential in a Midwest backcountry glade skier's decision to consider a regional site in comparison with a Mountain West one. 750' will also be competitive with our closest competition, Mt. Bohemia, which offers 900', while 450' would not. While local residents may enjoy the lesser glades, the glades would be unlikely to attract anyone living further away than Duluth. Therefore, the alternate sites surveyed, alone, would not serve the greater Midwest backcountry user group, who desires to have more, worthwhile, destination backcountry opportunities available in the region. The limited projected attendance of these lesser glades alone would also make the necessary related funding more difficult, if not altogether prohibitive, to obtain.

When surveying proximity to infrastructure, it was observed that the alternative sites surveyed do have lodging and amenities nearby, and, if a skier was willing to travel to those sites for the vertical feet of skiing that they offered, they could serve a small percentage of our user group. However, the existing infrastructure surrounding Moose Mountain is skier-specific. In the destination ski resort industry, visiting groups and families of skiers are often varied in their interest and skill level. For example, some members of a group will choose alpine skiing while others will choose cross-country skiing, or try out snowshoeing. We extrapolate from this, as well as from the market research indicating that sidecountry ski areas are used at a rate twice that of pure backcountry, that some people in a group may utilize backcountry terrain while others would not. Due to this dynamic, only a multi-use recreational area would fully serve the backcountry skiing community, by a significant margin. Similarly

to the analysis of a glade network with maximum vertical feet of 450', designing our initiative to include only backcountry-specific destination ski areas would result in estimates of limited projected attendance, to provide when approaching funding sources.

The secondary factors of total acreage and overall terrain are worth mentioning, to further illustrate the excellence of Moose Mountain as a backcountry ski area. The overall acreage is 209 acres, which is sufficient to host hundreds of skiers per snowfall, as indicated later in our projections of public use. This acreage is incredibly consistent geographically; the distance and grade from the top of the mountain at the western most end is near identical to that of any point along the mountain, all the way to the mid-point, being the boundary with LMC's property, and beyond. The slope is divided neatly, for most of its duration, roughly top to bottom, by a small shoulder. Uphill of this shoulder, the terrain is excellent for beginners and intermediates, while downhill of the shoulder lies advanced intermediate and expert terrain. To enhance this clear natural division, an old mountain bike trail traverses the entire length of the mountain, running above or along the shoulder for its duration. This established trail will be cleared and included in our signage, and will provide a traverse and return trail for beginning and intermediate skiers, who are not able or wishing to drop the steeper slopes.

In conclusion, establishing a network of backcountry glade skiing areas that did not include Moose Mountain would effectively limit the vertical ski-able feet of any one location to 450', as well as necessitating backcountry-specific destination trip planning for visiting skiers. These two factors would result in backcountry skiing on the North Shore being unattractive to the majority of the backcountry user group residing further away than Duluth. Further, we are not confident that the percentage of our user group that would choose a backcountry-specific destination in Northern Minnesota, of nominal vertical feet, distanced from other recreational activities, would prove substantial enough, through market research, to make the acquisition of necessary funding possible.

Moose Mountain is the only site of the four surveyed that would serve A2, because it is the only site that is adjacent to an existing ski resort.

For these reasons the alternative sites considered would not be adequate for our purposes, and it is necessary for us to seek permission to use the proposed project area, on Superior National Forest public land, to serve the needs of our user group.

## **1. Project Details**

### **1.1. ALTERNATIVES (A1 and A2)**

### **1.2. RESPONSIBLE PARTIES**

### **1.3. PROJECT DESCRIPTION AND EXECUTION**

### **1.4. ACCESS**

### **1.5. PUBLIC USE AND AREA MAINTENANCE**

### **1.6. SAFETY**

#### **1.1. Alternatives (A1 and A2)**

A1 is our preferred alternative. A1 and A2 are the same excepting that A2 has access and return trails running up to Lutsen Mountain Corporation (LMC)'s property boundaries and includes an additional glade within the 700' LMC property boundary buffer found in A1. A2 would work best with LMC's collaboration, although neither proposal requires LMC's participation, and lack of participation on LMC's part would not diminish the service provided to SHB's user group, or the project's enhancement of public recreation opportunities on Moose Mountain.

It is worth noting that industry trend reports show that of the 1.38 million Midwest Backcountry Skiers and Snowboarders, 847,000 identified as using chairlift-served sidecountry terrain (site pg.). In this respect, A2 with LMC's collaboration would serve the largest segment of the skiing public, which is why we chose to include it as an alternative. However, A1, as it would establish the first backcountry glade skiing in Minnesota, at this far unparalleled site, would be a landmark contribution to the backcountry skiing communities of Minnesota and the greater Midwest.

#### **1.2. Responsible Parties**

Superior Highland Backcountry(SHB) would be responsible for all planning, oversight, and execution of all aspects of the proposed project, including, but not limited to, all initial glading and trail clearing, all ongoing glade and trail maintenance, promotional campaigns including safety campaigns, and public relations, in perpetuity.



### **1.3. Project Description and Execution**

#### **1.3.1. Overview**

#### **1.3.2. Components 1, 2, 5, 6, and 10 (Upper Glade Treatments)**

#### **1.3.3. Components 3, 4, 7-9, and 11-13 (Lower Glade Treatments)**

#### **1.3.4. Trail Establishment**

#### **1.3.5. Signage**

#### **1.3.1. Overview**

SHB would commence to execute the project, (either A1 or A2, based on SNF decision), as described in the project overview, upon its approval. Work will be done in part by insured contract workers, and in part by trail crews of volunteers, under the supervision and guidance of a qualified crew leader, on foot, using hand held tools. SHB will be consulting with various persons, as referenced in Appendix D, throughout the execution of the project, to ensure that all ground work performed properly enacts the project design. Upon approval and receipt of the special use permit, work would commence within six months, according to the following template.

The project will be split into three phases: Phase 1 will be the completion of all trails and Components 1-4, Phase 2, the completion of Components 5-9, and Phase 3, the completion of Components 10-13. Within each phase, the work will be enacted as follows.

Firstly, using the GPS coordinates interpolated from the project overview map, we will temporarily flag the relevant components and/or trails. Trails will be flagged so as to be ten feet wide. Next, we will perform glade treatments and/or trail clearing. When all glade treatments and trails are completed, permanent signage for trails, trail and run intersections, and center boundaries of moderate glade components (components 3, 4, 7-9 and 11-13) will be posted, along with signs indicating adjacent property boundaries, and the assumed risks of backcountry skiing (see section on Signage, below).

We will complete Phase 1 within three years of permit approval, and allow two years for each consecutive phase, for a total of seven years to project completion. This time line estimate is based on our current available resources, and projections based on a continued, seasonally adjusted inflow of these resources at their current observed rate, since January 1<sup>st</sup>, 2018, to date (see Revenue Assumptions in Appendix A). We expect that growing interest will cause available resources to exceed our current estimates, and if this happens, we will utilize available resources to accelerate project completion. Field work will occur each year between the months of May and December, with sensitivity to area plant communities and their windows of vulnerability. The individual areas within each phase of the project will be pronounced open to the public upon their individual completion.

### ***1.3.2. Components 1, 2, 5, 6, and 10 (Upper Glade Treatments)***

Components 1, 2, 5, 6, and 10 will have their perimeters flagged but no individual 'runs' will be flagged within these components. The light glading in these components will clear small saplings and brush from the understory that would otherwise inhibit a skier's fall line (direction of travel down a slope). Tree diameter will be measured at the height of four feet. All slash will be dispersed and laid flat and no piles will be made.

All glade treatments will be done with the utmost discretion, with the end goal of preservation of natural appearance being always forefront in our mind. We have a "minimal impact" approach inherent in our design, and we will carry that approach over into the execution of our work. When glading is completed, the casual skier should not be able to easily observe signs of human alteration.

Glade treatments in these components will consist of thinning and clearing of all brush and saplings up to 6" in diameter, with three exceptions: 1) no cedar or white pine saplings of any size will be cut; 2) no overstory/canopy trees of any type, of any diameter, will be cut, and; 3) a small island of saplings and brush will be left on the downhill side of mature trees (trees with a diameter of 6" or larger). This island would be between two and four feet long, beginning at the tree and running directly down the slope, and would be as wide as the tree at the tree's base, tapering in width to a point as it runs downhill.

On trees of 6" and larger, all branches, from the ground to a height of 12', which are judged to inhibit downhill skier traffic, will be removed at the collar. Fallen trees that protrude taller than 1', that can be moved by hand, will be cut and removed, so as to lay naturally on the ground and no longer protrude above 1'. All dead standing trees 6" or more in diameter will be left intact. Snags and windfalls that are deemed to either be a danger to skiers or to seriously inhibit downhill travel will be felled and laid out in a similar manner as to deadfalls on the ground.

### ***1.3.3. Components 3, 4, 7-9, and 11-13 (Lower Glade Treatments)***

Flagging of components 3, 4, 7-9, and 11-13 will be done with attention to the naturally existing rocky openings in the upper half of that area; only the glading treatment that is necessary to connect these natural openings, as they run down the fall line of each individual glade, will be flagged and thus treated. These openings are absent on the lower half of the slope, and the forest density is thicker. The individual glades have a funnel-like shape to reflect this, because the glade treatment for the lower half of the slope of these components will be the heaviest, and we wish to minimize the total area where this glade treatment is necessary.

Treatment of these components will be identical to the treatment of components 1, 2, 5, 6, and 10, with the following two additions/amendments: 1) Select overstory trees seen as necessary to remove to allow safe downhill skier travel will be cut, and 2) Select cedar and white pine of less than 6" in diameter, which will be unavoidable due to the denser population of cedar and white pine in these components, will be cut.

As seen on the project description map, the individual glades in these components funnel skiers towards points of intersection with the base/return trail. Each glade will include a safe “run out” (flat section of a ski run at the bottom of a hill) 10-20’ long and 12’ wide for skiers to safely maneuver as they transition from the mountain terrain to the base/return trail. Run out width and length will be determined by on-the-ground observations during initial flagging, as many local factors (trees, rocks, cliffs, etc.) will dictate the safest and best run out.

#### **1.3.4. Trail Establishment**

Trail establishment will be completed during phase 1. As described earlier this portion of the project will commence with GPS based flagging of the trails as laid out on the project description maps. On the ground observations will lead to some changes in actual trail placement and these changes will be recorded in the field for future map publications and recording with the Forest Service. The 10’ width of the trail is the maximum width and we expect that the vast majority of the trail system to be more along the order of 4’-6’ wide on average. As the trails are winter use trails, there will be no grading or ground disturbance of any kind excepting possible large boulders or stones that are found to inhibit winter traffic that may need to be moved. Treatment of brush and cut timber will be treated in the same manner as the glade component work, strewn randomly and not piled.

#### **1.3.5. Signage**

Descriptive signs accompanied by a map will be posted at the Oberg trailhead kiosk for A1 or A2. For A2, a backcountry gate with signs and a map will be posted at the intersection of the ridge trail and LMC’s property boundary, along with signs at the intersection of the return trail and LMC’s property boundary, the latter indicating the requirement of a valid lift ticket for entry onto LMC’s property and/or use of LMC’s lifts and facilities. For both A1 or A2, these descriptive signs will denote the project area as a “Ski at Your Own Risk” ski area, detailing the risks involved and recommended safety practices, and, for A2, specifically detail the risks involved with skiing out of the bounds of Lutsen Mountain resort, as compared with skiing in bounds.

Signs indicating the transition into the eight lower glades will be posted at their respective centers at the boundary between the upper and lower glade components, such that they are visible to the approaching skier, from a significant distance, as determined by observation of terrain upon completion of glade and trail work establishment. The purpose of these signs will be to guide the skier into the gladed fall line of the lower glade component.

Signs indicating the mid-mountain traverse trail (the old mountain bike trail) will be posted, such that approaching skiers in the upper glade components can be alerted to the approaching advanced intermediate and expert terrain of the lower glade components, and thus decide whether they will continue down the slope, or utilize the mid-mountain traverse trail to lap or exit the upper glades.

Additional signs may also be posted, as needed, throughout the upper portion of the lower glades, to guide the skier into the treated access corridors that will connect the natural rocky openings in that component.

Signs indicating the intersection of each glade run out with the base return trail will be established, to warn skiers of the approaching intersection, and to guide the skier to the return switchback trail for A1 And A2, and to LMC's Timberwolf Chairlift for A2.

#### **1.4. Access**

Work access to the area will be on foot from the Oberg Mountain Trailhead, via the Oberg Lake Loop and the Superior Hiking Trail, or from the disused Lutsen Ski Through Trail. Skiers would access the area either through LMC's property, with a paid lift ticket, or from the Oberg Mountain Trailhead via a combination of the Oberg Lake Loop, the Superior Hiking Trail, and/or the Lutsen Ski Through Trail. Please see Appendix C: 4 and 5, for the to-date communications between SHB and relevant trail associations.

#### **1.5. Public Use and SHB Maintenance of the Project Area**

Once initial work is completed, public use of the area for backcountry skiing will be announced and thoroughly advertised and promoted. Use of the project area will vary greatly depending on several factors. Backcountry skiing has a finite season of use, as defined by the weather and snowfall, in each particular year. Intervals between snowfalls, snowfall amounts, and ambient temperatures, over time, all affect the snowpack and its desirability as a skiing base. Thus the season of use and the number of users will vary widely. The unpredictable winters of recent years compound the difficulty of accurately projecting use year-to-year. SHB is entertaining further research, in the form of compiling historical snow and temperature data, to obtain a more accurate estimate of the likely range of users. That said, the approximate length of the backcountry ski season on the North Shore will range from two to five months, and the approximate weekly skier capacity of the project area can be expected to range from 10 to 50 for A1, and 10 to 300 for A2, once all phases of the project is complete and promotional efforts are at their fullest.

It is worth mentioning that the length of the season on the short end of our estimation will not at all diminish the value of Moose Mountain to the backcountry ski community of the Midwest. Backcountry skiers are very passionate about their experience, and will go to great lengths to access desirable skiing. Planning around the weather is an inherent part of the sport, more so than alpine or cross-country skiing, due to the continually changing snow conditions. For A1, in a year with a shorter season, our core skiers would simply come more often within a shorter period of time. For A2, the shorter season would span the peak season of Lutsen Mountain Resort, with the potential exception of the holiday season, so the sidecountry area would still serve its main purposes to LMC, namely the addition of an excellent Mountain West amenity and the release of congestion on their existing terrain.

We don't anticipate any significant change in off-season recreational use. There will be approximately 80 hours of maintenance work done annually, performed in the same manner as the initial work, as mentioned, between the months of May and December.

As noted in the overview, our project proposal does not interfere with any known current use of the acreage, nor does it require exclusive or perpetual right of use. This project promotes the ideal, multi-use state of federal public lands, and does not result in the monopoly of a finite natural resource, specifically the 750' of vertical, ski-able slope of Moose Mountain. (D-SE-3.)

## **1.6. Safety**

SHB will employ best practices in the execution of this project. We will abide by all current existing protocol of the SNF, and we will use the Superior Hiking Trail Association's volunteer process as a template to abide by. (See section on Technical and Financial Capabilities for further detail.)

For the safety of the general public, we will develop a vigorous campaign for informing individual users of the risks and best practices associated with backcountry skiing. For A2, we will emphasize the significance of the Moose Glades Ski Area being an out-of-bounds, backcountry ski area, that will not be patrolled by Ski Patrol, and the subsequent, utmost importance of preparedness and caution. These messages will be communicated via trailhead and/or property boundary signage, educational events and campaigns sponsored by SHB, brochures at businesses that serve our user group, and social media campaigns.

We will also acquire several first aid kits and transport sleds to be staged at the bottom of Moose Mountain, in an obvious manner, so as to be available for the average skier to use if needed. This is as recommended by Granite Backcountry Alliance, as it is their practice. We have left several messages with Lutsen Fire and EMT, but have not received a return phone call. We will continue to reach out to them, until contact is established, in order to discuss our proposal and its implications for their institution.

## **2. Technical and Financial Capability**

Due to the low overhead cost of both the initial glading and trail work and the ongoing maintenance, Superior Highland Backcountry is confident in our ability to cover these costs. Although we are a fledgling organization, we have had an excellent reception in the local, regional, state-wide, and industry-wide communities. On February 1<sup>st</sup> and 2<sup>nd</sup>, 2018, we hosted our first annual fundraisers, raising a total of \$1864.08, and acquiring 33 new email newsletter subscribers and six same-day members. Since this excellent debut we have acquired five more members, and our email subscribers now number 69. At the events, and to-date, we have fielded great interest and excitement about our organizational mission, including during initial contact with several interested local and regional businesses. Overall, we believe that our member base and investment will continue to grow as word of our initiative spreads. Lastly, we have done preliminary research on grants available for recreational trail

work on public lands, which we plan on applying for as they become available. As mentioned, we are a member of the national non-profit Winter Wildlands Alliance, and they stand ready to assist us in this project with fundraising and administrative consultation.

Due to the timeliness required regarding the submission of our permit, in relation to LMC's requested use of Moose Mountain, which would preempt our usage, we are still in our initial phases of outreach and fundraising. Our business plan has been developed to extend our current assets, on an even, conservative trajectory, into the future years. We will continue to pursue grant funding and utilize organizational fundraising means while our project application is being processed. With the welcoming reception that we have received thus far, as a fledgling organization, from individuals, communities, industry representatives, relevant businesses, and funders, we are confident in our ability to secure these resources with the timeliness necessary to implement the proposal.

**Please find attached a business plan (Appendix A), which includes details on our preliminary grant research, current business relationships, and initial contact made for future business relationships, as well as a statement of current assets, a year-to-date profit and loss statement and a projected income and expense worksheet for the Moose Glades Project Proposal.**

Similarly, the technical skills associated with this project are achievable for SHB volunteers and staff. To date, we have commitments for volunteer work including professional project layout, professional trail planning, and actual trail and glade development, as well as consultation for all aspects of design and implementation. We also have qualified staff and consultants for the administrative aspects of the project, such as networking, member outreach and fundraising, as is evidenced by the substantial strides made in organizational and project development in a very short time. Please reference Appendix D, a roster of these individuals, and Appendix A, the section on "Team", which includes a short biography on each person.

All felling of timber will be done by insured contract workers, which will be bid out upon approval of our permit. SHB is committed to care and safety during all phases of planning and field work. We will use best trail work procedural and safety practices for all work done by our staff and volunteers, using the Superior Hiking Trail Association's existing volunteer protocol as a template for volunteer workers, and developing a Volunteer Services Agreement and Job Hazard Analysis for all project volunteers, in cooperation with the SNF. In compliance with Forest Service policy, any volunteer who is using a chainsaw will hold current certification in chainsaw safety, and will not fell any standing timber or snags.

Please reference our business plan (Appendix A, Revenue and Expense) for an estimate of volunteer work as it relates to overall work, timeline for completion, and current and projected volunteer commitments.

### **3. Environment**

#### **3.1. AIR QUALITY**

#### **3.2. VISUAL IMPACT**

#### **3.3. WETLANDS AND SURFACE WATER**

#### **3.4. NOISE IMPACTS**

#### **3.5. WILDLIFE**

#### **3.6. VEGETATION AND SOIL**

#### **3.7. CLIMATE CHANGE**

#### **3.8. HAZARDOUS MATERIAL**

#### **3.9. TRAFFIC**

#### **3.1. Air Quality**

Air quality impacts would be solely attributed to chainsaw and brushsaw use during initial trail and glade establishment, and during annual trail and glade maintenance. Trail and glade crews will be on foot, using both hand-held gas-powered tools and hand tools that have no emissions. Due to the low-impact nature of glading, and the relatively small acreage in question, we believe that air quality impacts are very negligible.

#### **3.2. Visual Impacts**

Maintaining the scenic quality of Moose Mountain as a High Scenic Objective Area will be a priority for Superior Highland Backcountry. We will minimize visual impacts of the glade work (D-SC-1), with an end goal of providing as natural and untouched of a skiable landscape as possible. Only that felling and clearing that is necessary for a safe, enjoyable skiing experience will be done, and brush and branches that are cut will be dispersed randomly and not piled. Therefore, when completed, the project will have almost no perceptible visual impact to the casual observer from any of the following local

observation points: Highway 61, the Ski Hill Road, the Superior Hiking Trail, the Oberg Lake Loop Ski Trail, the Picnic Loop Ski Trail and the Eastern Vistas on Oberg Mountain.

### **3.3. Wetlands and Surface Water**

There is no known, inventoried surface water or wetlands in the project area, due to its mountainous nature. However, SHB is aware of a number of naturally occurring springs and related riparian zones that are not found on state or federal maps. These will be identified when encountered, marked with a 50' buffer and excluded from any treatments. This project safeguards the hydrology of a Minnesota DNR designated trout stream (Rollins Creek), and two intermittent streams (MAJ-23249 & MAJ-23237), that flow into Lake Superior, by maintaining forest and conifer cover on steep slopes in the watersheds of these creeks. Removal of forest and conifer cover in upstream watersheds is associated with elevated peak flows, sedimentation, bank erosion, and loss of water clarity. Additionally, backcountry ski areas do not use artificial snow making technologies, which result in the above-mentioned effects on waterways.

### **3.4. Noise Impacts**

The only noise impacts that are anticipated are the use of chainsaws and hand held brushcutters, each emitting noise levels of approximately 110 db. The use of these will be during daylight hours only during the construction phase of the project which will occur intermittently during the nine year projected timeline of the project. Therefore, the cumulative effect on local noise impacts is quite negligible, as there is no use of heavy machinery, generators or any other type of noise-emitting power and construction equipment needed. After the initial project is completed, maintenance of the glades and trails will necessitate the continued intermittent use of chainsaws and brushcutters, but again, this will be negligible, at an estimated 80 hours annually for the entire project area.

Backcountry skiing is a silent sport, requiring no lifts, snowmobiles or other machinery to enjoy. As such, the only anticipated noise impacts from public usage of the completed project may be the occasional hollers and shouts of joy from elated skiers, which could reach upwards of 80 db if standing within 100'.

### **3.5. Wildlife**

A variety of wildlife inhabit and use the SUA, including three endangered species known to either currently or historically inhabit and utilize the SUA: the Gray Wolf (*Canis lupus*) the Canada Lynx (*Lynx canadensis*) and the Northern Long-Eared Bat (*Myotis septentrionalis*). Also present is the Moose



(*Alces alces*), a species most likely to have its status changed in the near future, possibly even to endangered status, as it continues its precipitous decline in the region.

The project as proposed stands to have an extremely small and negligible effect on all wildlife in the SUA. The species composition and structure of the affected forested native plant communities will be left largely intact, resulting in very little habitat change and therefore a negligible impact on resident wildlife. In particular, the retention of all large canopy trees will benefit the Northern Long-Eared Bat, which has been shown to use such trees for maternal roosts during the breeding season. Furthermore, the retention of high levels of canopy cover will also benefit Moose, which use mature conifer and maple hardwood forests for thermal cooling cover during the summer heat.

Furthermore, the public use will be seasonal, non-motorized and transitory in nature, resulting in a low to moderate amount of low-level disturbance, due to human traffic, in the winter months. Chainsaw and other hand held tool use may have isolated impacts on wildlife movement but these times will be limited and very occasional.

The backcountry season being from November to April puts the peak usage of the glades outside of the fall bird migrations and the spring nesting season. Much of the initial trail and glade establishment, as well as trail and glade maintenance, will also likely be scheduled outside of the late spring/early summer breeding bird nesting and brood rearing season. This is largely because the best times for this type of work are generally in the early spring before leaf out and late fall after leaf drop. Avoidance of glade and trail work during leaf-on conditions will also avoid disruption of the Northern Long Eared Bat pup rearing season in June and July.

### **3.6. Vegetation and Soil**

We consider our project to be extremely low-impact in the spectrum of forestry projects. Volunteers will be trained to make proper cuts to living tree branches, that promote quick healing of the scar, and to cut brush as low as possible. Only in the construction of the access and return trails, and as minimally as possible to allow for a safe, enjoyable skiing experience in component 5, will any overstory trees be removed, avoiding any White Pine or White Cedars wider than 6" in diameter. The moderate glading in project component 5 will be sensitive to the preservation of the older upland White Pine and White Cedars, including any trees above 6" in diameter ( O-VG-6, O-VG-2, O-VG-14, G-VG-1, G-VG-2, O-VG-23, G-VG-23).

All proposed work will be done by work crews operating on foot with hand tools, eliminating any machine like soil compaction and erosion. Return and access trails are utilized only in the winter months, and thus do not require any leveling or ground disturbance, with the exception of the removal of select large stones and boulders.

This project minimizes fragmentation of a Minnesota County Biological Survey (MCBS) Site of Outstanding Biodiversity (the "Onion River Hardwoods") by retaining most of the canopy using "light" and "moderate" glading treatments. It also significantly prevents fragmentation of an 82-acre stand of Northern Mesic Hardwood (Cedar) Forest (MHn45c), at the summit of Moose Mountain, ranked "S3-

Vulnerable to Extirpation” by MCBS. It additionally avoids any disturbance of a stand of “S3- Vulnerable to Extirpation” Upland White Cedar Forest (FDn43c) on the north slope of Moose Mountain.

A prerequisite for backcountry skiing is, at the minimum, complete snow cover. Thus, this activity, and the increased traffic resulting from it, will not result in any significant soil compaction. Soil erosion will be prevented by the retention of native ground cover on steep slopes.

### **3.7. Climate Change**

Our proposal has a clear, inherent advantage, in light of our changing climate. We understand the main driver of climate change to be a combination of anthropocentric carbon emissions, and loss of carbon stocks in plant communities (including forests) and soils. A forest's biomass and its' carbon stock are closely related. The 'no-harvest' option for forest management often produces the highest amount of forest carbon stock (Creutzburg et al. 2010), although it can often also decrease the rate of carbon sequestration. Old growth forest conditions are known to store some of the largest quantities of above-ground biomass, and therefore carbon stocks in the terrestrial biosphere (USDA General Technical Report WO-95). The large stands of mostly intact old sugar maple forest (MHn45c) and old upland white cedar forest (FDn43c) in the SUA have significant carbon stocks. Alternative uses of the SUA that would convert large portions of these stands into open grassy areas would reduce carbon stocks and sequester carbon at a lower rates than forested cover types. Our proposal will keep these large stocks of carbon intact while still providing for an excellent public recreational use, namely backcountry skiing. It is in the best environmental interest of the public to allow for this proposed use of public Forest Service land.

Inherent in the joy of backcountry skiing is the use of human power. Our proposal has no operational carbon emissions beyond routine maintenance of glades and trails, and no carbon emissions in the form of lifts, grooming, snow making, or employee transportation. It will produce no soil disturbance carbon losses from initial construction, and no soil disturbance carbon losses from ongoing erosion, which could otherwise occur if a project necessitated the removal of an intact, non-fragmented forest on a significantly steep slope. Losses to carbon stock can also be reduced by limiting or eliminating common causes of ground disturbance in forest management activities, such as avoiding conversion of forest to non-forest use (USDA General Technical Report WO-95) and the use of heavy machinery. The total carbon emissions of the work associated with the building and maintaining of the proposed trails and glades will be negligible at best, and certainly far less, than any other possible uses of the SUA besides the No Action option.

As the general public is becoming more aware of our changing climate, activities that are more sensitive to carbon output are more in the forefront of the public eye, especially amongst the younger population, who are more keenly aware of the possibilities of how a changing climate will affect their future. This awareness has driven many popular trends, including outdoor recreation, towards activities

that are closer to home and have less impact, including impact from carbon emissions, on our world. The Moose Glades proposal is squarely in line with these trends in climate awareness.

Furthermore, as the documented trend towards shorter winters and warmer winter temperatures in Minnesota continues, outdoor winter recreation areas will need to be designed in climate resilient ways that keep future options open. Large, expensive, dedicated facilities designed for only one winter recreation use - such as downhill skiing - are highly financially vulnerable to the effects of short winter seasons with little snowfall or temperatures that are too warm. In contrast, general-purpose low-cost trail systems can also be easily used for winter activities with broader weather tolerances (such as snowshoeing), or even repurposed for summer recreation activities such as mountain biking or hiking. Our low-impact, low cost proposal keeps USFS's options open for future climate adaptation by avoiding irrevocably committing public property to a single private land use.

### **3.8. Hazardous Material**

There are no known hazardous materials that will be used, produced, transported or stored on or within the project area or used in the construction, operation, maintenance or termination of the project area.

### **3.9. Traffic**

We do expect an increase in traffic when the project is complete, on the Onion River Road for A1, on the Ski Hill Road for A2, and on Interstate 61 for either alternative.

To review, our estimates of public use are 10-50 people weekly for A1, and 10-300 people weekly for A2.

For A1, and the Onion River Road and Onion River Trailhead Parking Area, the estimate of public use can be expected to be somewhat of a pure increase in traffic, although there may be a portion of cross-over in traffic analysis, due to current users of the Oberg Ski Trail System who choose to access Moose Glades. The increased traffic on Onion River Road (#) and the Onion River Trailhead can be expected to be offset somewhat due to the overall lack of growth of XC skiing participation in the region (2017 SIA Participation Report, Page ). We project that backcountry skier visitation will supplement current cross-country attendance of the Onion River Road, to approximately replicate the former height of cross-country attendance in the late 1990s, when cross-country participation was at its height. Thus, we do not anticipate insufficient facilities or overly burdensome road maintenance due to this increase. However, if interest exceeds our estimates over time, we will consider other trailhead access points and parking options as necessary.

For A2, we would anticipate a notable increase in visitor traffic on the Ski Hill Rd. and to LMC's facilities, but this would be difficult to quantify, and address, until a collaborative project becomes established with LMC.

### **3.10. Other Environmental Concerns**

The issue of snow compaction and its effects on the sub-nivean environment has been raised in the mountain west in relation to heavy winter recreation activities on public lands, though it has mostly been attributed to snow machine use, not skiing. In the event that skiing in the permit area is found to be negatively impacting any species dependent on the sub-nivean environment in any way that is inconsistent or counter to SNF policies, State or Federal laws, SHB will act accordingly and close off any area the SNF deems necessary and educate the skiing public as to its purpose for closure. As backcountry skiing inherently draws a segment of the public that is sensitive to environmental issues and as a group is unusually active in various environmental causes and careers, we anticipate no issues in regards to this user group and protection of the natural environment in the project area.

## **4. Social and Economic Aspects**

In considering social and economic aspects, there are three areas to highlight: service to SHB's current user group, service to the general public, and enhancement of the local and regional economy.

### ***Our User Group***

As mentioned throughout this application, Superior Highland Backcountry has a significant user group of 1.38 million people, residing throughout the upper Midwest, who identify as backcountry skiers and snowboarders. Acquiring permission to glade Moose Mountain, the only site comparable to both the nearest competition, Mt. Bohemia, and mountain west backcountry destinations, will allow Superior Highland Backcountry to facilitate this public acreage being available to this significant sector of the general public, for a purpose that is not currently available to them in Minnesota. This will be an excellent, invaluable, well-appreciated use, and the best use, of this unique, limited public land.

To illustrate the long-term social and economic investment of this project, it is necessary to explore the demographic of our user group. As reported by the SIA participation report, the cross section of backcountry skiers is a younger and more economically diverse user group. This can be evidenced within the mainstream ski culture, by the abundance of backcountry skiing movies, photos in ski magazines and product offerings by major ski manufacturers. While investing in the younger generation is generally both socially and economically sound, in addition, both the Norpine Trail Association and the Sugarbush Trail Association have personally confirmed the continuing lack of participation of people aged 35 and under, in their organizations and on their trails. This is creating a concern over the long-term ability of an aging core user group to maintain their trail systems into the future. Establishing backcountry ski glades on the North Shore will help to revitalize and maintain the overall recreation and industry of skiing in our local and state wide communities.

### ***The General Public***

In considering service to the general public, the successful introduction of regionally and nationally relevant backcountry skiing glades in the Superior Highlands, which as described earlier is dependent on the inclusion of Moose Mountain, will be an excellent addition to the available public land recreational use offerings of the Superior National Forest. Compared to alpine skiing, backcountry skiing has a significantly lower cost barrier for participation, giving access to a wider range of the public(O-SE-3). The health benefits of outdoor winter recreation are widely known, and any diversification of the options for it brings with it an inherent service to the general public. This initiative being held in trust by a single-issue non-profit, Superior Highland Backcountry, is an excellent way to ensure the integrity of its public service into the perpetual future.

A stand-alone social highlight of our proposal lies in its low environmental impact; our proposal will be in line with environmental concerns of other groups and individuals regarding the use of this public acreage. The relatively low impact to the existing forests, non-existent visual impact, and lack of the use of artificial snow, makes our proposal appealing to environmentalists and their respective organizations.

### ***The Local Economy***

To project the impact of the Moose Glades project on the local economy, we refer in depth to the industry trends of the last ten years, as well as to current broader cultural trends. It is important to consider both the initial and long-term economics of this initiative.

Looking at the increasing interest in backcountry and sidecountry skiing, one can understand why the timing is right for an introduction of backcountry skiing in the Midwest. The Midwest skiing community tends to trend about ten years behind the Mountain West, and five years behind the east coast. (It is entirely due to this national dynamic that Superior Highland Backcountry is currently in its beginning stages as an organization.) A backcountry glade initiative will be initially successful in the Midwest, if introduced now, because the timing is right within the industry as a whole.

Bringing this popular activity to the Lutsen area will enhance the business of every local enterprise, through an overall increase in visitation. This activity dovetails into the very marketing strategy used by LMC, the comparison of a Lutsen destination trip with a mountain west one. Backcountry or sidecountry glade skiing will appeal to the Midwesterner, as they consider their vacation, as a Mountain West amenity that can now be accessed right here in their backyard. When one considers the relatively low project overhead, SHB's commitment, and the initial contacts we have established, the long-term economics look quite promising for the community as a whole. For A2, we believe that the sidecountry ski area would significantly relieve alpine skier congestion at Lutsen Mountain, which is one of LMC's stated concerns regarding their long-term viability.

In considering the economics of the long-term, it is important to reference current and projected trends, and to discard aging models if they are no longer relevant. Here, the youthful demographic of the backcountry skier is important to note, (SIA 2017, pg 45), as the interests of the younger generation will develop along a trajectory into the future, with the exception of short-term, whimsical trends. When viewed within the following described broader cultural trend, we believe that backcountry skiing will establish itself as a significant, permanent segment of the greater market of skiing.

Across the country, there is an overall trend growing in the mainstream, towards outdoor recreation, as it relates to the value of nature in human health. This trend has been a result of a surge in personal technology; as the trajectory of technology is almost certain to stay on course, so is the trajectory of outdoor recreation. Investing now in the infrastructure necessary to make these opportunities available in our communities will prove sustaining in the long-term. Establishing relevant backcountry ski opportunities in Northern Minnesota will add to the long-term financial stability of our local tourist-based economies, and the overall economy of the State of Minnesota, by keeping the dollars of our current residents here, and attracting visitation from the greater Midwest.

Our local economy in Cook County also suffers from an inability to retain young talent and young families in the area, exemplified by the need of local resorts to import labor. This problem is vast in scope but local amenities and activities that are appealing to younger people are certainly a factor in many young peoples' decision to live and work here. A large backcountry glade complex on Moose Mountain will offer a regional draw, not only for tourist visitation, but also as an amenity for those considering local residence to factor into their comparisons.

**Please reference Appendix A for a full overview of Market Segmentation.**

## **Appendix A**

## Executive Summary

### Opportunity

#### Problem

The diverse user group of 1.38 million backcountry skiers residing in the Midwest needs to have access to the nationally relevant backcountry skiing opportunities that exist in the region where they live, work, and play. Currently, these avid skiers have only a few limited options in the midwest for accessing their preferred skiing experience; the two main limitations are expert-only terrain and nominal vertical feet. Consequently, when seeking backcountry experiences outside of the limited current Midwestern options, only those skiers who have the financial means and time to travel to Mountain West locations are able to enjoy their preferred type of backcountry skiing.

In addition, North Shore communities and the state of Minnesota need to maintain a vibrant state-wide recreation economy, by keeping their recreational opportunities in line with current industry trends. Currently, there are no established, advertised backcountry ski areas in the state of Minnesota, although both the opportunities for and the nation-wide interest in this sport are easily observed.

#### Solution

There are excellent backcountry ski opportunities, for a wide range of skier abilities and interests, available on public lands along the Highlands of the North Shore of Lake Superior. These areas would take only slight forest management to establish into safe, enjoyable backcountry ski areas. They offer sufficient terrain to serve as a quality alternative to Mountain West backcountry destinations, relative to the travel distance and associated costs from the Twin Cities Metro Area and urban and rural communities of greater Minnesota and the greater Midwest. Our user group will welcome this new opportunity as they plan their ski season each year.

#### Market

Our primary target market consists of the 1.38 million skiers and snowboarders residing in the Midwest who identified as using backcountry or sidecountry ski areas in 2016

(SIA 2017 Participation Report). These break down into four recognizable types: 1) the core skier, who is apt to ski anything, anywhere, and often prefers skiing on ungroomed snow; 2) the casual skier, who enjoys skiing most years as a part of their winter vacation; 3) the outdoor wilderness recreation enthusiast, who seeks out remote wilderness experiences; and 4) the adventure sport enthusiast, who seeks out athletic outdoor adventure experiences.

## **Competition**

Currently, our user group can choose between several backcountry ski opportunities in the U.P. of Michigan, and the opportunities available in the Mountain West or the Northeastern U.S.. The Superior Highlands combines three aspects of prime backcountry terrain: 1) a wide spectrum of terrain, from beginner to expert level, 2) substantial vertical feet, and 3) dependable snowfall. For those wishing, or needing, to stay within the Midwest, any single backcountry location in the U.P. of Michigan will offer only two of these three aspects. Our initiative will offer a quality skiing experience for those who are not drawn by the opportunities of the U.P. of Michigan, but don't have or wish to extend the financial resources required to travel outside of the Midwest.

## **Why Us?**

Superior Highland Backcountry is well-positioned to execute this project. Our founders are long-term residents of the North Shore, with an intimate knowledge of the expanse of public lands that offer backcountry ski opportunities. They also own and operate the local ski and snowboard pro shop, giving them an intimate knowledge of the ski industry as well.

We have acquired an impressive array of advocates and advisors, given the short tenure of our outreach. We have secured one or more quality consultants for all aspects of our project, all on at least a partial volunteer basis.



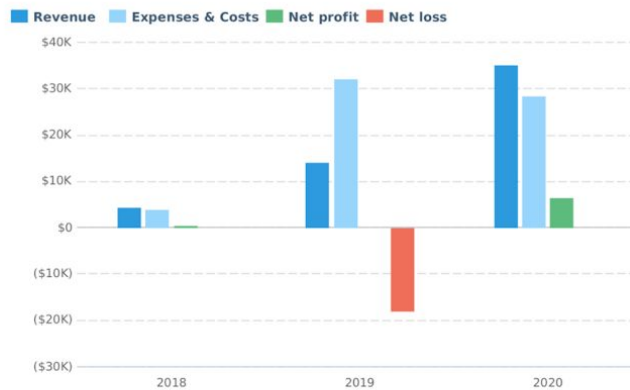
## Expectations

### Forecast

Our project is in line with current trends, has an established user group, and is being initiated in an area that is ideal, yet untapped. For these reasons, as well as the initial reception we have had, we expect interest in our initiatives to grow, year over year, resulting in the availability of funding for the Moose Glades project, and other projects into the future. Our financial goal will be simply to meet the expenses necessary to implement our projects at a steady, reasonable pace, and maintain them once established.

The relatively low costs of the development, and especially the maintenance, of backcountry ski areas will work in our favor as we approach potential funders. Available public funding along with the sponsorship of major industry businesses will be forthcoming for this popular activity, and will enable us to achieve our goals in an efficient, straightforward manner.

### Financial Highlights by Year



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### **Financing Needed**

Our proposal is moderate in comparison to other ski initiatives, both alpine and cross-country. We will pursue our necessary funding through public and private grantors, as well as fundraising through our membership base and seeking sponsorship from related industry businesses.

## Opportunity

### Problem & Solution

#### Problem Worth Solving

Currently, there are no designated sidecountry or backcountry ski areas in Minnesota. North Shore area businesses report hearing consistent, increasing interest in backcountry skiing from their customers. Customers relate their regular trips to other areas of the country, and their excitement and desire for backcountry glade skiing closer to home. Minnesota and midwestern backcountry skiers want and deserve to know about these untapped opportunities. Further, outdoor winter recreation has multiple health benefits. Having an added local opportunity for outdoor winter recreation will benefit the local and regional population at large. Establishing this activity within a few hours drive of the Twin Cities Metro Area is necessary to make this outdoor winter recreation experience more accessible to a wider demographic of our population, across the various market segments that we have identified.

#### Our solution

Superior Highland Backcountry will network with local and regional businesses to raise awareness of the backcountry ski opportunities along the North Shore of Lake Superior. We will identify and lightly modify ideal backcountry glade ski areas and access trails to them, to establish safe, accessible backcountry ski opportunities for the local and regional ski and outdoor recreating community.

Our first initiative is to apply for the Moose Glades Project permit. This is the logical place to start due to the greater usage of sidecountry areas relative to backcountry areas, and the much greater travel distance to the nearest sidecountry competition relative to the nearest backcountry competition. Moose Mountain will also be an excellent place to introduce backcountry to the North Shore due to the firmly established core and casual skier customer base of Lutsen Mountain Resort. We will seek to complete the Moose Glades Ski Area within eight years of the date of approval of our permit.

The Moose Glades project is a piece of a greater vision. Upon completion of the Moose Glades Ski Area, or sooner if resources allow, Superior Highland Backcountry will seek

to establish several designated backcountry ski areas between Lutsen and Finland, connect them with backcountry ski trails, and erect one or more small huts at each one. This will increase the overall attraction and attendance of the Moose Glades Ski Area.

## Target Market

### Market Size & Segments

Our target market includes four types of customers: the core skier, the casual alpine skier, the outdoor wilderness recreation enthusiast, and the adventure sport enthusiast.

*Core Skier:* Core skiers most often explore all kinds of skiing, and are often familiar with, skilled at, and even prefer, backcountry glade skiing.

*Casual Alpine Skier:* . The casual alpine skier skis most often at established resorts, and is often of intermediate skill level. If athletic, a percentage of the casual alpine ski market may be interested to try ungroomed glade skiing, if provided the opportunity. They would be unlikely to seek out backcountry glade skiing if it were not adjacent to an existing resort.

*Outdoor Wilderness Recreation Enthusiast:* For our purposes, this market is defined as the person who enjoys exploring and accessing wilderness areas, usually by non-motorized means. A percentage of this market already uses backcountry ski equipment to access wilderness areas in the winter, in particular the Boundary Waters Canoe Area Wilderness. This sector would enjoy having new areas made accessible for their winter recreation. If athletic, they may enjoy learning the skills necessary to ski gladed areas. However, they may still enjoy the hut-to-hut skiing experience without partaking in the glade skiing in particular. A further sector of this market may be interested to try out backcountry skiing, if they have not already, as a result of the newly established areas and the promotional programming of Superior Highland Backcountry.

*Adventure Sport Enthusiast:* For our purposes, this market is defined as the person who enjoys using a multitude of athletic means and equipment to access new, interesting

places. This market is somewhat smaller than the other three mentioned, and is often organized into groups and clubs at colleges or other institutions.

The geography of our target market segments consists of local, state-wide, and greater midwestern communities. Local communities include the north shore communities of Grand Portage, Grand Marais, Lutsen, Tofte, Schroeder, Little Marais, Finland, and Two Harbors, as well as the communities of the Iron Range and Ely, and the large urban center of Duluth. Greater Minnesota communities include the Twin Cities Metro Area and rural communities all across the state. Greater midwestern communities include urban centers such as Milwaukee and Chicago, as well as urban and rural communities of North Dakota, South Dakota, Iowa, Wisconsin, Illinois, Indiana and Ohio.

## Competition

### Current alternatives

Currently, the closest available relevant, established backcountry or sidecountry glade skiing is in the Upper Peninsula of Michigan. Listed below are Mount Bohemia, Red Lodge, Beartooth Pass, and the proposed Moose Mountain Glades, along with their vertical feet, total acreage, annual snowfall, services, and distance, in hours and miles, from the urban centers of the Twin Cities Metro Area, Chicago, and Duluth.

Mt. Bohemia: 900 vertical feet, 575 total acres, 273" average annual snowfall

Services: Pure backcountry terrain, expert-only, 2 lifts and shuttle and cat service available

Chicago-8 hrs./455 mi. ~ Mpls.-7.5 hrs./ 365 mi. ~ Duluth-5 hrs./255 mi.

Red Lodge: 2000 vertical feet, 60 acres of gladed tree skiing, 250" average annual snowfall

Services: Full alpine resort, 60 acres of gladed tree skiing

Chicago-19.5 hrs./ 1305 mi. ~ Mpls.-13.5 hrs./ 900 mi. ~ Duluth-14.5 hrs./ 910 mi.

## Superior Highland Backcountry

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Beartooth Pass: 300 vertical feet, 400 acres of backcountry, 250" average annual snowfall

Services: Summer mountain basin skiing, limited lift service, backcountry, shuttle available

Chicago-19.5 hrs./ 1347 mi. ~ Mpls.-14.5 hrs./ 940 mi. ~ Duluth- 15 hrs./ 953 mi.

Moose Mountain Glades Area: 750 vertical feet, 209 total acres, 110" average annual snowfall

Services: Pure backcountry or sidecountry terrain, beginner through expert level

Chicago-9 hrs./ 560 mi. ~ Mpls.-4.5 hrs./ 246 mi. ~ Duluth-1.75 hrs/ 90 mi.

It is worth highlighting that none of these areas offer exactly what we will offer, and what we will offer will serve the widest market available in the Upper Midwest.

Then, there is big mountain skiing, which is available at many well-known locations in the western United States as well as around the world, for that segment of the market who has the means to travel to those locations.

### **Our advantages**

In developing sidecountry and backcountry ski opportunities, both on Moose Mountain and in the wider area of the Superior Highlands, Superior Highland Backcountry has the advantage of geographic location. The combination of terrain, snowfall, an existing alpine resort, and adjacent wilderness on public land make this area prime for backcountry skiing, and the North Shore's proximity to the Twin Cities Metro Area and greater Minnesota make it an excellent destination for visitors from these geographic markets. The advantage of sidecountry skiing on Moose Mountain is much more stark, relative to the advantage of proximity for backcountry, for instance the distance to the

nearest existing sidecountry skiing to Minneapolis is 1305 miles away, whereas the distance to the nearest existing backcountry is 365 Miles away.

Moose Mountain has a notable advantage over our closest geographical competition, Mt. Bohemia. While Mt. Bohemia is marketed as a 'no beginners' ski hill, Moose Mountain offers a wide range of terrain from, beginner to expert, layed out in such a way as to make glade skiing available to skiers of all abilities.

To understand the advantage of the naturally occurring terrain and snowfall of the Lake Superior Highlands, we took a general review of the same features of other ski resorts and other public lands throughout the greater Midwest. This easily revealed our advantage, with the exception of the Upper Peninsula of Michigan, as highlighted above. Again, this advantage is especially distinct to the Moose Glades sidecountry project, in that it as the combination of the vertical feet available, ideal slope, and annual snowfall is far above that of any other existing ski resort in the Midwest.

## Execution

### Marketing & Sales

#### Marketing Plan

Our major strategy for marketing will be to partner with established businesses whose customers want to know about and experience backcountry skiing on the North Shore. We will communicate with these customer bases through in-person tabling, information kiosks, through the employees, and through collaborative outdoor programming events.

We have our own website, logo, facebook page, and instagram account, which we will reference as often as possible, to create conversation on social media about our initiatives.

For the core skier market, we will simply spread the message that these backcountry opportunities exist on the North Shore. For the interested casual skier, we will use our personal passion to relate the joy of backcountry skiing. We will be inviting and inclusive in our messaging, and in the design of our promotional programs. We will have a goal of enabling the interested person to try out backcountry skiing, in the way that works for them. For the outdoor wilderness enthusiast and the extreme sport enthusiast markets, we will reach outside of our usual demographic to raise awareness around the backcountry opportunities of Minnesota. We will partner with clubs at colleges and other institutions to make these opportunities available to these target users.

The only foreseeable fee associated with the use of Moose Glades is the Minnesota State Ski Pass. We do not plan on charging any other fees. We may partner with businesses or groups in the Twin Cities Metro Area to offer promotional outdoor programming that could double as a fundraising effort for glade and trail construction and maintenance.

Our membership base will be a core resource for us. We expect to recruit much of our needed labor through member outreach.



## Operations

### Technology

We currently utilize the bookkeeping software GNU Cash, as well as the online services of Wordpress, Stripe, Google and Mailchimp. We also generate content via a digital video camera, which we use to post on our facebook page and in our email newsletter.

### Equipment & Tools

Our operational equipment will be mainly owned and operated by our staff and volunteers. Equipment needed consists of chainsaws, brushcutters, brushsaws, hand-held log moving devices, and other relevant hand-held forestry tools.

## Milestones & Metrics

### Milestones Table

Milestone	Due Date	Who's Responsible
Attend SBTA Meeting	Completed	Rory and Elli
Submit Permit	March 16, 2018	Rory and Elli
Meet with Frost River Staff	April 01, 2018	Elli
Meet with REI Staff	May 31, 2018	Rory and Elli
Host 2018 /2019 WWA Film Festival	January 31, 2019	Rory, Elli and Yoko
Secure Remaining Initial Funding for Phase 1 (Grant or Loan)	January 31, 2019	Elli
Submit DNR Trail Grant Application	February 28, 2019	Elli

### Key metrics

Our immediate metrics include acquiring email newsletter subscribers, acquiring members, and establishing relationships with industry businesses and other interested

institutions. Our mid-range metrics include securing grant funding, and initiating in-the-field work on trails and glades. Our long-term metrics include increasing the use of established backcountry ski areas, and increasing overall winter visitation of the North Shore.

## Company

### Overview

#### Ownership & Structure

Superior Highland Backcountry is a Minnesota Nonprofit Corporation. We are a member of Winter Wildlands Alliance, an Idaho-based non-profit, and they currently serve as our fiscal agent, while we are working towards federal 501(c)3 status.

#### Company history

Superior Highland Backcountry (SHB) was founded in 2016 by Rory Scoles, an avid backcountry ski enthusiast and fifteen-year resident of the North Shore. The mission of SHB is to advocate for backcountry skiing and work to expand and protect human powered skiing opportunities in Northeastern Minnesota. SHB was founded on the basis of personal customer interaction while working at, and subsequently acquiring ownership of, the local pro alpine ski shop, observation of the role of the Midwest Skiing community in industry trends, and specific study of the current industry trends of backcountry and sidecountry skiing.

## Team

#### Management team

Our management team consists of Rory Scoles and Eleanor King-Gallagher. A married couple, they have owned and operated Lutsen Recreation, Inc. for over six years. Rory has been the general manager, hard goods buyer, and head ski technician since 2011. In addition he has served customers for every weekend of the ski season throughout these years. Eleanor has been bookkeeper and soft goods buyer since 2012, along with light, mid-week customer service during each ski season.

The joint experience of Mr. Scoles and Mrs. King-Gallagher equip them well for the initiative of Superior Highland Backcountry. Their intimate knowledge of the industry,

including both current trends and inherent nature, will be invaluable in visioning for successful establishment of backcountry skiing on the North Shore. Their on-the-ground experience of managing a small business, especially one within the skiing industry, gives them a solid understanding of the steps necessary to turn SHB's initiatives into reality.

Additionally, Rory has been backcountry skiing for six years, and has extensive personal experience in what composes quality backcountry ski terrain. To complement this experience, Rory has fifteen years of personal forest management of his homesteaded 40 acres. These experiences couple to offer good clarity and on-the-ground vision of the work necessary to convert this area into an ideal backcountry ski area.

### **Advisors**

Superior Highland Backcountry has several key advisors, as follows:

Matt Tyler, who has committed to assist in project layout, has been a consulting forester and a DNR-approved forest stewardship plan writer for ten years,

Dave Clute, who has committed to assist in trail planning, has ten years of experience in recreational trail planning in the immediate area, preceded by 20 years of the same in the Mountain West,

Hilary Eisen, who has committed to assisting us with networking, outreach strategy, and public relations is the current Policy Director of the national non-profit Winter Wildlands Alliance, whose mission is to advocate for human-powered outdoor winter experiences,

Tyler Ray, who has committed to glade design consulting, is the CEO of the Granite Backcountry Alliance, a recently formed non-profit that advocates for the development of backcountry ski opportunities in New Hampshire, and

Gordon Thorne, who is a currently serving board member of Superior Highland Backcountry, did extensive cross-country ski trail maintenance in the Finland area from 1985-1995.

## Financial Plan

### Forecast

#### Key assumptions

We are basing our projections of financial resources on our current financial resources, current in-kind commitments, anticipated growth of our organization, and initial conversations with business partners and funding agencies.

We are basing our projection of expenses on estimates provided to us by Matt Tyler, Nadarra Forestry, after consultation with a spread of photos showing proposed glading treatments, in all areas of the SUA.

We developed our projections to reflect approval of our permit by early 2019.

Our current financial resources consist of a recent business donation, funds raised from attendance at our first annual Film Festival, and membership dues from our members to-date. Conservatively, we anticipate the annual fundraiser to produce a similar revenue each year, and our membership dues to go up slightly each year.

For current in-kind resources, we have 32 person-days to-date, where each person-day is a commitment of one person to work for one day. This is indicated as in-kind glade work on our revenue chart. We calculated the annual acreage that these volunteers will be able to do conservatively, as half the acreage that a contractor would complete in the same amount of time; we are personally familiar with most of our volunteers, and know them to be capable, hard-working individuals, albeit with varying levels of experience in timber stand improvement. We anticipate doubling our current in-kind resources by the end of 2018, from a combination of our growing membership base and partnership with volunteer organizations such as the Northwoods Volunteer Connection and the Minnesota Conservation Corps.

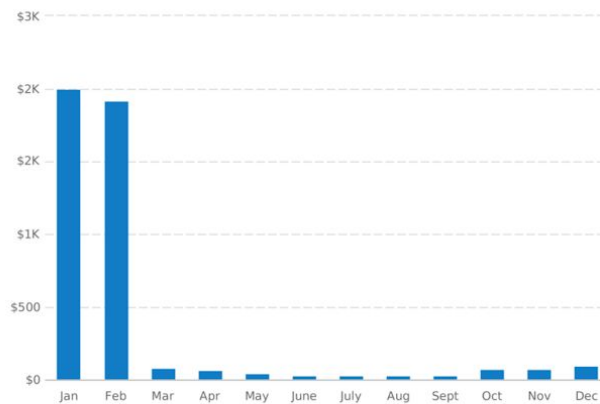
Initial conversations with potential business partners, including REI in Bloomington, MN and Frost River in Duluth, MN indicated good possibilities for collaboration, based on the interests of their customer bases. An initial conversation with Dan Golner, DNR Trail Grants Coordinator, indicated that the Moose Glades project would be eligible for

consideration for the Federal Recreational Trail Grant, which is a dependable annual source of funding for similar projects across Minnesota, with grants ranging from \$1,000 to \$150,000.

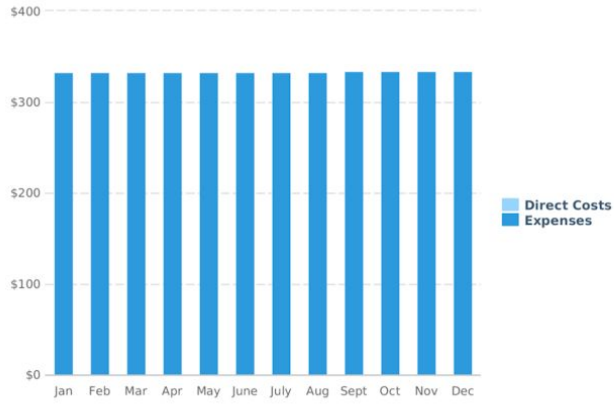
The expense of administration is intended to cover any costs associated with our Moose Mountain permit application, as well as administrative hours worked above the in-kind hours in any given year.

The fiscal projection of 2021 would be identical to that of 2020. Projections into the future beyond 2020 would look similar year-to-year, as Phase 2 and Phase 3 of the Moose Glades Project are of nearly identical nature to Phase 1.

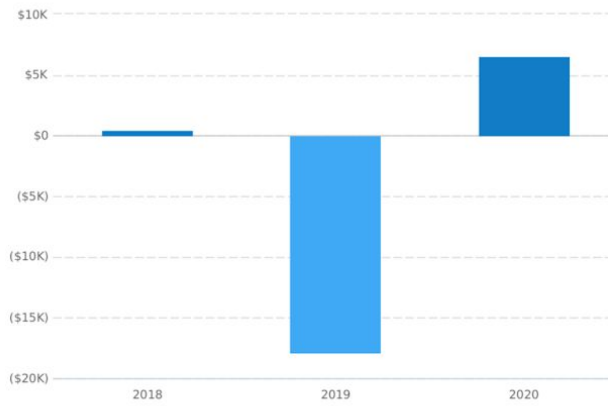
### Revenue by Month



### Expenses by Month



### Net Profit (or Loss) by Year



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## Financing

### Use of funds

Funds acquired through membership dues, fundraisers, business donations, and grants will be used to cover the cost of initial trail and glade development for Phase 1, followed by Phase 2 and Phase 3, as well as ongoing administrative costs for volunteer coordination, member outreach, industry networking, outdoor programming, and fundraising.

### Sources of Funds

Our annual fundraiser and membership dues will be a dependable, if nominal, source of funding. More so, these funds show potential donors the level of interest and investment that exists in the community.

Based on a conversation with the head of their trail grants program, we will be applying for funding from the DNR, as referenced on the revenue graph. This funding is reimbursable, and must be met with a 25% match, which can be in-kind. We based our timeline for completion of Phase 1 off of these requirements, using the projection of doubling our current volunteer commitments.

Because the DNR funding is reimbursable, we are planning to seek interim funding, via other grants, or a loan or line of credit from our local financial institution, for the majority of the expenses of 2019, or the first fiscal year following approval of our permit. This is indicated in the charts as a line of credit with a limit of 20,000. As the DNR trail program is a reputable source of funding, we do not anticipate difficulty in bridging this cash flow gap.

We will be looking into the tithe program of Patagonia, as our project is directly in line with their current goals and values. We will also continue to research other industry-related business grant programs.

Lutsen Recreation, Inc. (LRI) made a substantial donation in January of 2018. LRI will consider future donations as they are able to, as funds are needed.



## Statements

### Projected Profit and Loss

	2018	2019	2020
<b>Revenue</b>	<b>\$4,462</b>	<b>\$14,237</b>	<b>\$35,083</b>
<b>Direct Costs</b>			
Gross Margin	\$4,462	\$14,237	\$35,083
<b>Gross Margin %</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Operating Expenses</b>			
Salaries & Wages			
Employee Related Expenses			
Glade Development		\$14,700	\$23,240
Trail Development		\$12,300	
Administration	\$4,000	\$4,000	\$4,000
Project Layout		\$800	
First Aid Accessories			\$500
<b>Total Operating Expenses</b>	<b>\$4,000</b>	<b>\$31,800</b>	<b>\$27,740</b>
<b>Operating Income</b>	<b>\$462</b>	<b>(\$17,563)</b>	<b>\$7,343</b>
Interest Incurred		\$333	\$745
Depreciation and Amortization			
Income Taxes	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$4,000</b>	<b>\$32,133</b>	<b>\$28,485</b>
<b>Net Profit</b>	<b>\$462</b>	<b>(\$17,896)</b>	<b>\$6,598</b>
<b>Net Profit / Sales</b>	<b>10%</b>	<b>(126%)</b>	<b>19%</b>

### Projected Balance Sheet

	2018	2019	2020
Cash	\$624	\$1,138	\$8,551
Accounts Receivable	\$0	\$0	\$0
Inventory			
Other Current Assets			
<b>Total Current Assets</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>
Long-Term Assets			
Accumulated Depreciation			
<b>Total Long-Term Assets</b>			
<b>Total Assets</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>
Accounts Payable	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0
Sales Taxes Payable	\$0	\$0	\$0
Short-Term Debt		\$18,333	\$19,078
Prepaid Revenue	\$162	\$239	\$308
<b>Total Current Liabilities</b>	<b>\$162</b>	<b>\$18,572</b>	<b>\$19,386</b>
Long-Term Debt			
<b>Total Liabilities</b>	<b>\$162</b>	<b>\$18,572</b>	<b>\$19,386</b>
Paid-In Capital			
Retained Earnings		\$462	(\$17,434)
Earnings	\$462	(\$17,896)	\$6,598
<b>Total Owner's Equity</b>	<b>\$462</b>	<b>(\$17,434)</b>	<b>(\$10,836)</b>
<b>Total Liabilities &amp; Equity</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>

## Projected Cash Flow Statement

	2018	2019	2020
<b>Net Cash Flow from Operations</b>			
Net Profit	\$462	(\$17,896)	\$6,598
Depreciation & Amortization			
Change in Accounts Receivable	\$0	\$0	\$0
Change in Inventory			
Change in Accounts Payable	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0
Change in Sales Tax Payable	\$0	\$0	\$0
Change in Prepaid Revenue	\$162	\$77	\$69
<b>Net Cash Flow from Operations</b>	<b>\$624</b>	<b>(\$17,819)</b>	<b>\$6,668</b>
<b>Investing &amp; Financing</b>			
Assets Purchased or Sold			
Investments Received			
Change in Long-Term Debt			
Change in Short-Term Debt		\$18,333	\$745
Dividends & Distributions			
<b>Net Cash Flow from Investing &amp; Financing</b>		<b>\$18,333</b>	<b>\$745</b>
Cash at Beginning of Period	\$0	\$624	\$1,138
Net Change in Cash	\$624	\$514	\$7,413
<b>Cash at End of Period</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>

## Appendix

### Profit and Loss Statement (With monthly detail)

2018	Jan '18	Feb '18	Mar '18	Apr '18	May '18	June '18	July '18	Aug '18	Sept '18	Oct '18	Nov '18	Dec '18
<b>Total Revenue</b>	\$2,000	\$1,921	\$81	\$65	\$47	\$27	\$26	\$27	\$27	\$70	\$73	\$98
<b>Total Direct Costs</b>												
Gross Margin	\$2,000	\$1,921	\$82	\$65	\$47	\$27	\$27	\$27	\$27	\$70	\$73	\$98
Gross Margin %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Operating Expenses</b>												
Glade Development												
Trail Development												
Administration	\$333	\$333	\$333	\$333	\$333	\$333	\$333	\$333	\$334	\$334	\$334	\$334
Project Layout												
First Aid Accessories												
<b>Total Operating Expenses</b>	\$333	\$333	\$333	\$333	\$333	\$333	\$333	\$333	\$334	\$334	\$334	\$334
<b>Operating Income</b>	\$1,667	\$1,588	(\$252)	(\$268)	(\$286)	(\$306)	(\$307)	(\$306)	(\$307)	(\$264)	(\$261)	(\$236)
Interest Incurred												
Depreciation and Amortization												
Income Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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Superior Highland Backcountry

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Total Expenses	\$333	\$333	\$333	\$333	\$333	\$333	\$333	\$333	\$334	\$334	\$334	\$334
Net Profit	\$1,667	\$1,588	(\$252)	(\$268)	(\$286)	(\$306)	(\$307)	(\$306)	(\$307)	(\$264)	(\$261)	(\$236)
Net Profit / Sales	83%	83%	(308%)	(412%)	(614%)	(1,149%)	(1,149%)	(1,149%)	(1,153%)	(377%)	(355%)	(240%)

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Superior Highland Backcountry

	2018	2019	2020
<b>Total Revenue</b>	\$4,462	\$14,237	\$35,083
<b>Total Direct Costs</b>			
Gross Margin	\$4,462	\$14,237	\$35,083
Gross Margin %	100%	100%	100%
<b>Operating Expenses</b>			
Glade Development		\$14,700	\$23,240
Trail Development		\$12,300	
Administration	\$4,000	\$4,000	\$4,000
Project Layout		\$800	
First Aid Accessories			\$500
<b>Total Operating Expenses</b>	<b>\$4,000</b>	<b>\$31,800</b>	<b>\$27,740</b>
<b>Operating Income</b>	<b>\$462</b>	<b>(\$17,563)</b>	<b>\$7,343</b>
Interest Incurred		\$333	\$745
Depreciation and Amortization			
Income Taxes	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$4,000</b>	<b>\$32,133</b>	<b>\$28,485</b>
<b>Net Profit</b>	<b>\$462</b>	<b>(\$17,896)</b>	<b>\$6,598</b>
<b>Net Profit / Sales</b>	<b>10%</b>	<b>(126%)</b>	<b>19%</b>

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**Balance Sheet (With Monthly Detail)**

2018	Jan '18	Feb '18	Mar '18	Apr '18	May '18	June '18	July '18	Aug '18	Sept '18	Oct '18	Nov '18	Dec '18
Cash	\$1,667	\$3,438	\$3,225	\$2,972	\$2,679	\$2,346	\$2,013	\$1,680	\$1,346	\$1,092	\$838	\$624
Accounts Receivable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Inventory												
Other Current Assets												
<b>Total Current Assets</b>	<b>\$1,667</b>	<b>\$3,438</b>	<b>\$3,225</b>	<b>\$2,972</b>	<b>\$2,679</b>	<b>\$2,346</b>	<b>\$2,013</b>	<b>\$1,680</b>	<b>\$1,346</b>	<b>\$1,092</b>	<b>\$838</b>	<b>\$624</b>
Long-Term Assets												
Accumulated Depreciation												
<b>Total Long-Term Assets</b>												
<b>Total Assets</b>	<b>\$1,667</b>	<b>\$3,438</b>	<b>\$3,225</b>	<b>\$2,972</b>	<b>\$2,679</b>	<b>\$2,346</b>	<b>\$2,013</b>	<b>\$1,680</b>	<b>\$1,346</b>	<b>\$1,092</b>	<b>\$838</b>	<b>\$624</b>
Accounts Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sales Taxes Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short-Term Debt												
Prepaid Revenue		\$183	\$222	\$237	\$230	\$203	\$177	\$150	\$123	\$133	\$140	\$162
<b>Total Current Liabilities</b>	<b>\$0</b>	<b>\$183</b>	<b>\$222</b>	<b>\$237</b>	<b>\$230</b>	<b>\$203</b>	<b>\$177</b>	<b>\$150</b>	<b>\$123</b>	<b>\$133</b>	<b>\$140</b>	<b>\$162</b>
Long-Term Debt												
<b>Total Liabilities</b>	<b>\$0</b>	<b>\$183</b>	<b>\$222</b>	<b>\$237</b>	<b>\$230</b>	<b>\$203</b>	<b>\$177</b>	<b>\$150</b>	<b>\$123</b>	<b>\$133</b>	<b>\$140</b>	<b>\$162</b>

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Superior Highland Backcountry

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Paid-In Capital												
Retained Earnings												
Earnings	\$1,667	\$3,255	\$3,003	\$2,735	\$2,449	\$2,143	\$1,836	\$1,530	\$1,223	\$959	\$698	\$462
<b>Total Owner's Equity</b>	<b>\$1,667</b>	<b>\$3,255</b>	<b>\$3,003</b>	<b>\$2,735</b>	<b>\$2,449</b>	<b>\$2,143</b>	<b>\$1,836</b>	<b>\$1,530</b>	<b>\$1,223</b>	<b>\$959</b>	<b>\$698</b>	<b>\$462</b>
<b>Total Liabilities &amp; Equity</b>	<b>\$1,667</b>	<b>\$3,438</b>	<b>\$3,225</b>	<b>\$2,972</b>	<b>\$2,679</b>	<b>\$2,346</b>	<b>\$2,013</b>	<b>\$1,680</b>	<b>\$1,346</b>	<b>\$1,092</b>	<b>\$838</b>	<b>\$624</b>

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Superior Highland Backcountry

	2018	2019	2020
Cash	\$624	\$1,138	\$8,551
Accounts Receivable	\$0	\$0	\$0
Inventory			
Other Current Assets			
<b>Total Current Assets</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>
Long-Term Assets			
Accumulated Depreciation			
<b>Total Long-Term Assets</b>			
<b>Total Assets</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>
Accounts Payable	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0
Sales Taxes Payable	\$0	\$0	\$0
Short-Term Debt		\$18,333	\$19,078
Prepaid Revenue	\$162	\$239	\$308
<b>Total Current Liabilities</b>	<b>\$162</b>	<b>\$18,572</b>	<b>\$19,386</b>
Long-Term Debt			
<b>Total Liabilities</b>	<b>\$162</b>	<b>\$18,572</b>	<b>\$19,386</b>
Paid-In Capital			
Retained Earnings		\$462	(\$17,434)
Earnings	\$462	(\$17,896)	\$6,598
<b>Total Owner's Equity</b>	<b>\$462</b>	<b>(\$17,434)</b>	<b>(\$10,836)</b>
<b>Total Liabilities &amp; Equity</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>

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**Cash Flow Statement (With Monthly Detail)**

2018	Jan '18	Feb '18	Mar '18	Apr '18	May '18	June '18	July '18	Aug '18	Sept '18	Oct '18	Nov '18	Dec '18
<b>Net Cash Flow from Operations</b>												
Net Profit	\$1,667	\$1,588	(\$252)	(\$268)	(\$286)	(\$306)	(\$307)	(\$306)	(\$307)	(\$264)	(\$261)	(\$236)
Depreciation & Amortization												
Change in Accounts Receivable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Inventory												
Change in Accounts Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Sales Tax Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Prepaid Revenue		\$183	\$38	\$15	(\$7)	(\$27)	(\$27)	(\$27)	(\$27)	\$10	\$7	\$22
<b>Net Cash Flow from Operations</b>	<b>\$1,667</b>	<b>\$1,771</b>	<b>(\$213)</b>	<b>(\$253)</b>	<b>(\$293)</b>	<b>(\$333)</b>	<b>(\$333)</b>	<b>(\$333)</b>	<b>(\$334)</b>	<b>(\$254)</b>	<b>(\$254)</b>	<b>(\$214)</b>
<b>Investing &amp; Financing</b>												
Assets Purchased or Sold												
Investments Received												
Change in Long-Term Debt												

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Superior Highland Backcountry

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Change in Short-Term Debt												
Dividends & Distributions												
<b>Net Cash Flow from Investing &amp; Financing</b>												
Cash at Beginning of Period	\$0	\$1,667	\$3,438	\$3,225	\$2,972	\$2,679	\$2,346	\$2,013	\$1,680	\$1,346	\$1,092	\$838
Net Change in Cash	\$1,667	\$1,771	(\$213)	(\$253)	(\$293)	(\$333)	(\$333)	(\$333)	(\$334)	(\$254)	(\$254)	(\$214)
<b>Cash at End of Period</b>	<b>\$1,667</b>	<b>\$3,438</b>	<b>\$3,225</b>	<b>\$2,972</b>	<b>\$2,679</b>	<b>\$2,346</b>	<b>\$2,013</b>	<b>\$1,680</b>	<b>\$1,346</b>	<b>\$1,092</b>	<b>\$838</b>	<b>\$624</b>

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Superior Highland Backcountry

	2018	2019	2020
<b>Net Cash Flow from Operations</b>			
Net Profit	\$462	(\$17,896)	\$6,598
Depreciation & Amortization			
Change in Accounts Receivable	\$0	\$0	\$0
Change in Inventory			
Change in Accounts Payable	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0
Change in Sales Tax Payable	\$0	\$0	\$0
Change in Prepaid Revenue	\$162	\$77	\$69
<b>Net Cash Flow from Operations</b>	<b>\$624</b>	<b>(\$17,819)</b>	<b>\$6,668</b>
<b>Investing &amp; Financing</b>			
Assets Purchased or Sold			
Investments Received			
Change in Long-Term Debt			
Change in Short-Term Debt		\$18,333	\$745
Dividends & Distributions			
<b>Net Cash Flow from Investing &amp; Financing</b>		<b>\$18,333</b>	<b>\$745</b>
Cash at Beginning of Period	\$0	\$624	\$1,138
Net Change in Cash	\$624	\$514	\$7,413
<b>Cash at End of Period</b>	<b>\$624</b>	<b>\$1,138</b>	<b>\$8,551</b>

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## Appendix B

Table 1

Table of Considered Alternative Sites

	Moose Mt.	Eagle Mt.	Leveaux Mt.	Carlton Peak	Section 13(Lake Cty)
Skiable Vertical	750'	450'	350'	400'	425'
Possible Skiable acres	209	83	117	40	166
Distance to Amenities (miles)	2	1.5	6	2.5	5.5
Ease of access	Easy	Very Easy	Moderate	Moderate	Difficult

### **Eagle Mt.**

The front side of Eagle Mountain is an already excellent backcountry ski area. It is adjacent to Lutsen Mountains Corporation's (LMC) property and is already regularly accessed via the Bridge and 10th Mt. chair lifts by ticket holding backcountry skiers utilizing LMC lifts. This area has many of the same advantages that Moose Mt. has, such as an existing old growth Sugar Maple stand, a good skiable slope angle and is somewhat more open in the understory. However, it is almost half the vertical of Moose Mt., much smaller in acreage and also is almost wholly contained in the Lutsen SNA Scherer Unit, which we believe would not approve of glading or any trail work therein.

### **Leveaux Mt.**

The Northwest face of Leveaux Mountain has a number of the right attributes for the consideration of backcountry skiing. It's Northwest aspect gives it an advantage to the backcountry skier by being able to more avoid the formation of breakable crusts on the snow surface and hold powder for longer at the book ends of the skiing season. It contains 100' less vertical than Eagle Mt. but has a bit more terrain. Unfortunately the forest cover is thick in the lower portions and currently can only be skied top to bottom via one route. The access to this area is via the Superior Hiking Trail and the Oberg Mountain Trailhead. The distance needed to access this area is a concern along with it's lack of beginner terrain. Overall this area has potential for quality backcountry skiing but lacks the vertical, open fall lines and ease of access that Moose Mountain has.

### **Carlton Peak**

Carlton Peak is a well known vista north east of Tofte. The northeastern face contains theoretically expert level backcountry terrain. SHB members have reported that it indeed has potential but would require moderate levels of glading to accomplish. It's closer proximity to Lake Superior and geographic prominence seems to limit the amount of snow this face can hold. The area is also quite small acreage wise and access via the Briton Peak trailhead is almost 2 miles, severely limiting it's appeal to a small number of hard core backcountry enthusiasts.

### **Section 13 (Lake County)**

There is an excellent backcountry site on the south and southeast facing aspects of the famous Section 13 rock climbing area, 4 miles east of Finland. It is mostly owned by Lake County and offers a number of advantages that make it a distant second to Moose Mountain. It is a larger area of skiable vertical than all but Moose Mountain, has a decent vertical drop and contains a variety of terrain for beginners and experts alike. However, it is quite distant from any amenities, the access can be confusing considering the gravel pits and private property that lie between County Road 6 and the base of the hill and lacks an old growth forest type, making the forest understory bushy and difficult to ski. SHB is considering this area for our next glading project in the future but without the Moose Mountain

glades, this area alone would not draw any significant public use nor does it provide any gateway into backcountry skiing via side country that proximity to Lutsen provides.

In summary, there are a number of other areas in the Superior Highland that we have considered and will continue to consider. The point of verticality can not be overstated as it, along with slope pitch, is the key factor that any backcountry skier considers in choosing where to ski. Verticality is truly an extremely limited resource in Minnesota and Moose Mountain stands out as being almost twice the vertical of any other site in Minnesota. It is also the largest by acreage and by far the most conducive place for backcountry skiing of all the sites we've scouted and considered in Minnesota. It is the critical keystone in the building out of backcountry skiing on the North Shore.

## Appendix C

# Moose Mountain Glade Treatment Example Photos

The following are photos of upper and lower glades in components 1, 4,5 and 6. Red lines are cuts, shaded areas are brush removal.



Upper glade in component 1 near the summit looking south



Lower glade in component 4, showing a funnel section connecting 2 natural rocky openings



Rock opening in lower glade in component 4, looking south



Upper glade in component 6, looking south

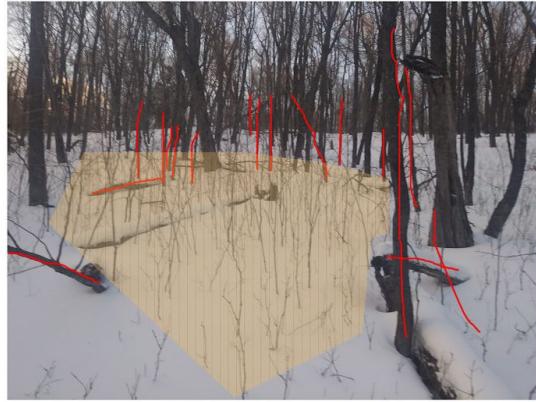


Upper glade in component 6, looking south



Upper Glade in component 1, looking south near the transition into FDN43b1 forest type.





Above left, right and below: Upper glade in Component 5 looking north/uphill

## Appendix D

### Superior Highland Backcountry / Moose Glades Project Consultants, Staff and Volunteers

Matt Tyler - Project Lay-out  
Consulting Forester  
DNR approved Forest Stewardship Plan Writer  
P. O. Box 511 / Finland, MN 55603

Dave Clute - Trail Design  
Public Lands Manager  
Recreational Trail Planning  
P. O. Box 84 / Lutsen, MN 55612

Tyler Ray - Glade Consulting  
CEO, Granite Backcountry Alliance  
2935 White Mountain Highway / North Conway, NH 03860

Gordon Thorne - Board Member, Trail Consulting  
Cross-Country Ski Trail Maintenance  
6596 Park Hill Rd. / Finland, MN 55603

Hilary Eisen - Administrative Consultant  
Winter Wildlands Alliance  
P.O. Box 631 / Bozeman, MT 59771

Rory Scoles - Board Member, Glade Design  
Co-owner, Lutsen Recreation, Inc.  
Forest Management and Glading of Personal Acreage  
8136 Cramer Rd. / P.O Box 526 / Finland, MN 55603

Eleanor King-Gallagher - Board Member, Administrative  
Co-owner and Bookkeeper, Lutsen Recreation, Inc.  
8136 Cramer Rd. / P.O. Box 526 / Finland

## Appendix E

Name	Level	Renewal Date	Volunteer?	Type of Work	# of Days
David Suchy Duluth	Black Diamond	02/01/19	Yes	Field Work	3
Christopher Pascone Duluth	Green Circle	02/01/19	No		
Christine Cole Isabella	Green Circle	02/02/19	Yes	Any	2
Dave Clute Lutsen	Green Circle	02/02/19	Yes	Trail Planning, Field Work	5
Matt Tyler Grand Marais	Green Circle	02/02/19	Yes	Project Layout, Field Work	5
Kai Ceballo Isabella	Green Circle	02/02/19	Yes	Field Work	2
Mitchell Rossman Mendota Heights	Green Circle	02/21/19	Yes	Field Work	5
Faelan Coldwater Finland	Green Circle	02/21/19	Yes	Field Work	5
Michael Amos Lutsen	Green Circle	02/22/19	Yes	Film Festival	1
Damean Schley Finland	Green Circle	03/01/19	Yes	Field Work	5
Scott Waterhouse Grand Marais	Black Diamond	03/04/19	Yes	Field Work	5

## Appendix F



Rory Scoles, President  
Lutsen Recreation, Inc.  
PO Box 270  
55612 Lutsen  
MN

2018 March 15

Forest Supervisor Connie Cummins  
Superior National Forest  
8901 Grand Avenue Place  
55808 Duluth  
MN

Dear Connie Cummins,

Thanks for taking the time to read this letter of support from Lutsen Recreation, Inc. (LRI) for Superior Highland Backcountry's Special Use Application. As the only full service ski shop outside of Duluth, I believe we offer a unique, independent and valuable perspective on outdoor winter recreation in the Arrowhead and have a real stake in our continued ability to serve our customers with passion and skill into the future.

I have personally been skiing since as far as I can remember, starting out cross county skiing with my father at age 5 and further on as a competitive high school classic cross county skier. After moving to the North Shore in 2003 I began working for LRI in 2006. I took over as president and owner in 2011. I have found myself from my first exposure to the world of backcountry skiing falling in love with the freedom and excitement it offers. I have now almost completely abandoned cross country skiing and snowshoeing personally, and along with many other young people in the last 15 years, now commit almost the entirety of my winter free time pursuing backcountry skiing and freeskiing opportunities on the North Shore.

During my tenure here I have not failed to notice the ever constant increase in the interest in backcountry skiing in the national market and more recently in our local and regional markets. Alpine innovations and trends are almost always begun in the Mountain West or Europe and take some time to trickle out of us in the Midwest. Backcountry skiing is no exception to that rule. I have seen an ever increasing knowledge and awareness of backcountry skiing and even an increase in customers' own equipment coming into our shop that are either backcountry specific or

having some aspect of the product be backcountry related. Conversely it is no secret that the Downhill Alpine, Cross Country and Snowshoe sectors of the outdoor wintersports market have been suffering a slow but steady decline. There are certainly many complex factors that play into those declining participation rates but the allure of the backcountry is certainly a contributing factor in that equation. Locally there is the issue of Lutsen Mountains Corporation(LMC)'s removal of most of their traditional in bound tree runs. This has created a situation where we hear constantly in our shop about the lack of tree skiing opportunities and how fast after a snowfall they are 'skied out' compared to before LMC started to expand their 'intermediate' terrain. Myself and our staff have also personally experienced this over the years as we are all avid skiers and has led us to put our full support behind the effort to make Moose Mountain a destination backcountry ski area.

I also understand that one of the main driving factor that brings anyone up to our area is our beautiful natural landscape. The glade and trail work descibed in SHB's application will only enhance our ability to share with the general public the amazing majesty of our highland terrain through an exciting activity while maintianing it's wild and scenic nature. It is a win-win scenario that falls in line with our conservation heritage.

I would urge you to fully support SHB's current innitiative to glade moose mountain. This project will add more to our ability to compete with other ski areas that offer backcountry skiing like Mt. Bohemia and various front range destinations that have been slowly drawing Midwest skiers away from our area. It would diversivfy our offerings for visitors to the area and do so much good for our local economy and ecology!

Yours sincerely,

Rory Scoles, President

Lutsen Recreation, Inc



February 20, 2018

Constance Cummins, Forest Supervisor  
Superior National Forest  
7355 West Hwy 61  
P.O. Box 2159  
Tofte, MN 55615

Dear Supervisor Cummins,

This letter is in support of Superior Highlands Backcountry's application for a Special Use Permit to lightly glade a portion of Moose Mountain to enhance and promote backcountry skiing on the Tofte Ranger District.

Winter Wildlands Alliance is a national nonprofit organization dedicated to promoting and preserving winter wildlands and a quality human-powered snowsports experience on public lands (see <http://winterwildlands.org>). We work with grassroots groups throughout the country on issues impacting local winter wildlands. Superior Highlands Backcountry (SHB) is a grassroots affiliate of Winter Wildlands Alliance and starting this year they will be hosting our Backcountry Film Festival as a fundraiser to support their activities. Superior Highlands Backcountry has also participated in the training and networking opportunities that we offer our grassroots groups. Rory Scoles, SHB's founder, attended the Winter Wildlands Alliance Grassroots Advocacy Conference in November 2017. In addition, Winter Wildlands Alliance serves as the fiscal sponsor for SHB as SHB works towards attaining federal 501(c)3 status.

Backcountry skiing is among the fastest-growing activities on National Forest lands, with participation rates growing nation-wide each year. Superior Highlands Backcountry's proposal to improve backcountry skiing opportunities in northern Minnesota will provide improved recreational opportunities for people in the Midwest who enjoy backcountry skiing or are curious to try the sport. Many people from Minnesota and the surrounding states travel to Western states and New England to participate in backcountry skiing but there are few opportunities to participate in this activity closer to home.

Winter Wildlands Alliance has two other grassroots affiliates – Vermont Backcountry Alliance and Granite Backcountry Alliance – who work with the Forest Service and private landowners on similar projects to improve backcountry skiing opportunities in Vermont and New Hampshire. These projects are successful partnerships between the Forest Service and the respective organizations that have resulted in an improved recreational experience for the public. We look forward to a similar outcome in Minnesota and have confidence that Superior Highlands Backcountry will be similarly successful in their endeavors.

PO Box 631 Bozeman, Montana 59771  
(208) 629-1986 | [heisen@winterwildlands.org](mailto:heisen@winterwildlands.org)  
[www.winterwildlands.org](http://www.winterwildlands.org)



I have worked with Superior Highlands Backcountry over the past two years as they have organized into a non-profit organization and developed this proposal. Over this time, I have been impressed with their commitment to advocating for the backcountry ski community in northern Minnesota and their dedication to improving opportunities for backcountry skiing in this region. This proposal will enhance and diversify winter recreation opportunities on the Tofte Ranger District. It will complement the existing winter recreation activities in the region and potentially bring new visitors to the region. Please do not hesitate to contact me for additional information about Winter Wildlands Alliance and our relationship with Superior Highlands Backcountry.

Sincerely,

A handwritten signature in black ink, appearing to read "Hilary Eisen". The signature is fluid and cursive, with a prominent loop at the end.

Hilary Eisen  
Policy Director

PO Box 631 Bozeman, Montana 59771  
(208) 629-1986 | [heisen@winterwildlands.org](mailto:heisen@winterwildlands.org)  
[www.winterwildlands.org](http://www.winterwildlands.org)



## Chris Thomas

2122 Jackson St NE • Minneapolis, MN 55418 • Phone: 612.308.0778 •  
E-Mail: christhomas.c3@gmail.com



Date: 2.22.18

Constance Cummins  
Forest Supervisor for the Superior National Forest

Dear Constance:

I'm writing you in regards to my support of the Moose Glades Project. Being part of the ski, snowboard, and outdoor industries for the last decade as a manufacturer's representative, I've seen a resurgence in people wanting to experience being outside in the wilderness. The companies I represent have been designing and manufacturing products dedicated to that backcountry experience.

Having the Moose Glades area open to skiing and snowboarding would give people the opportunity to experience more of what the outdoors has to offer. As a sidecountry area, Moose Glades would provide an educational space for backcountry users, allowing them to learn how to navigate the backcountry safely for both themselves and the wilderness.

I've worked with Rory and Elli and Lutsen Recreation, Inc. for the last seven years. Their passion for their business is matched by their passion for the outdoors. They've turned that love into a great business and I fully support their efforts in the Moose Glade Project.

Sincerely,

Chris CT Thomas  
Manufacturers Representative

Rossignol Ski Company

Giro Sport Design



March 14, 2018

Subject: Superior Highland Backcountry Proposal

To: Whom it may concern

Superior Highland Backcountry provided a brief description and overview of a proposed project adjacent to Lutsen Mountain downhill area and Sugarbush ski trails. The Sugarbush Trail Association (STA) board of directors find our initial understanding of their concept to be an interesting initiative that appears to have a growing appeal for outdoor enthusiasts. The impact of this project on the STA trail system would be minor and thus appears to be a compatible use with our system. While specifics regarding trail courtesy and use would need to be addressed, it appears that Superior Highland Backcountry has an understanding of the appropriate “rules of the road” and signage that would be important.

There is mutual understanding that any use of an STA trail, even such a short section as contemplated, would require the purchase of a Minnesota Ski Pass, available at electronic licensing centers, such as the Clearview store in Lutsen and the Holiday station in Tofte.

Sincerely,

Greg Fangel

President, Sugarbush Trail Association



# Superior Hiking Trail Association

731 Seventh Avenue, Suite 2, Two Harbors, MN 55616

(218) 834-2700

February 27, 2018

To whom it concerns:

After reviewing the proposed Superior Highland Backcountry Preliminary Design Proposal and discussing the project with its proponents, the Superior Hiking Trail Association has no objections to this proposed use.

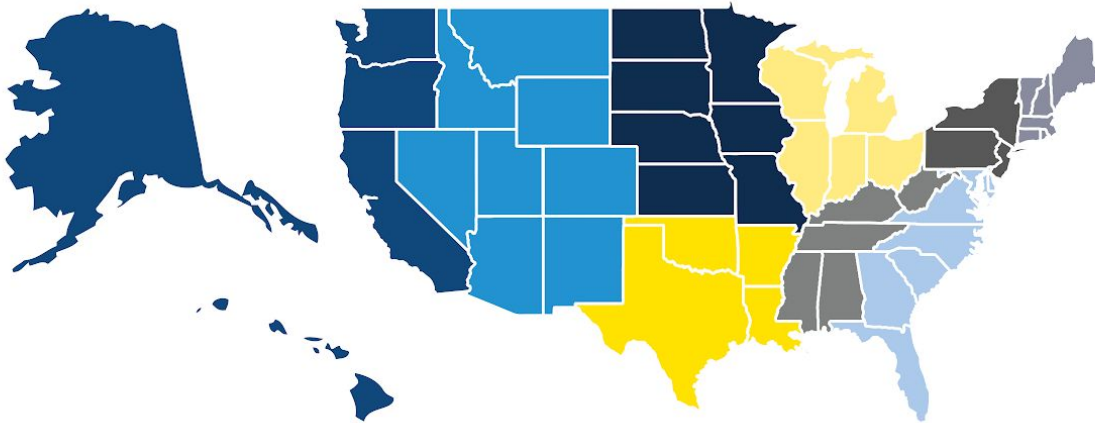
Of importance to the Superior Hiking Trail Association is the commitment to a 100' buffer/corridor between other uses of the land (such as glading or new trails) and the Superior Hiking Trail. This buffer/corridor must exist in the Superior Hiking Trail's current location and in the Superior Hiking Trail's proposed route pending a Lutsen Mountains Recreation Area expansion.

Jo Swanson  
Trail Development Director  
Superior Hiking Trail Association  
731 7<sup>th</sup> Ave, Suite 2  
Two Harbors MN 55616

Member Supported • Volunteer Powered  
[superiorhiking.org](http://superiorhiking.org)

**SKIER PARTICIPANTS TOTAL:  
LIFT-ACCESS: 3.2M; TRAIL ACCESS: 928K**

**BACKCOUNTRY SKIERS BY REGION**



**LIFT-ACCESS BACKCOUNTRY**

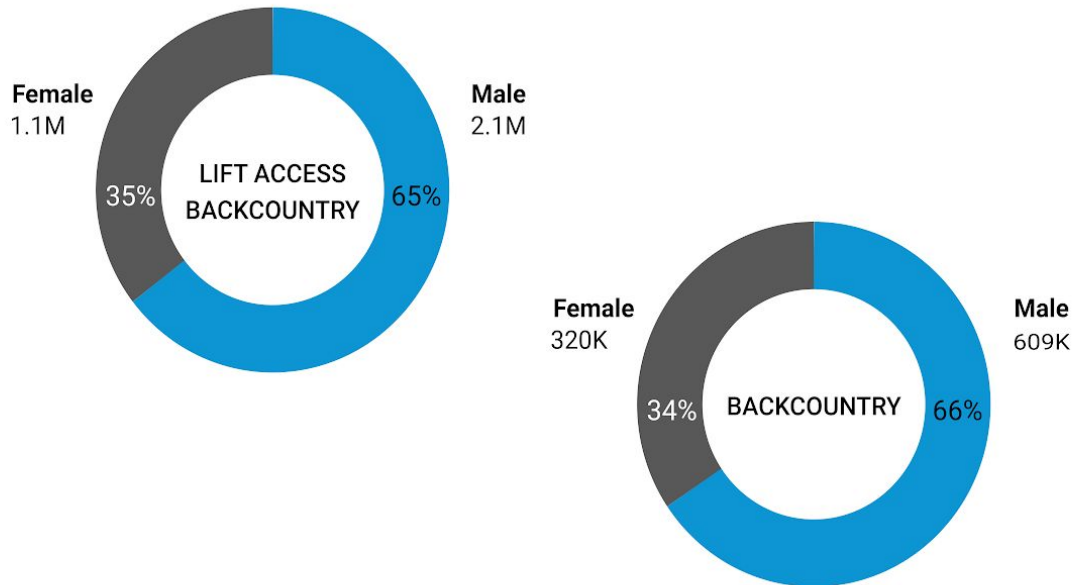
<b>PACIFIC</b> 763K	<b>WEST NORTH CENTRAL</b> 135K	<b>NEW ENGLAND</b> 219K
<b>MOUNTAIN</b> 140K	<b>EAST NORTH CENTRAL</b> 427K	<b>MIDDLE ATLANTIC</b> 716K
<b>WEST SOUTH CENTRAL</b> 258K	<b>EAST SOUTH CENTRAL</b> 47K	<b>SOUTH ATLANTIC</b> 506K

**TRAIL-ACCESS BACKCOUNTRY**

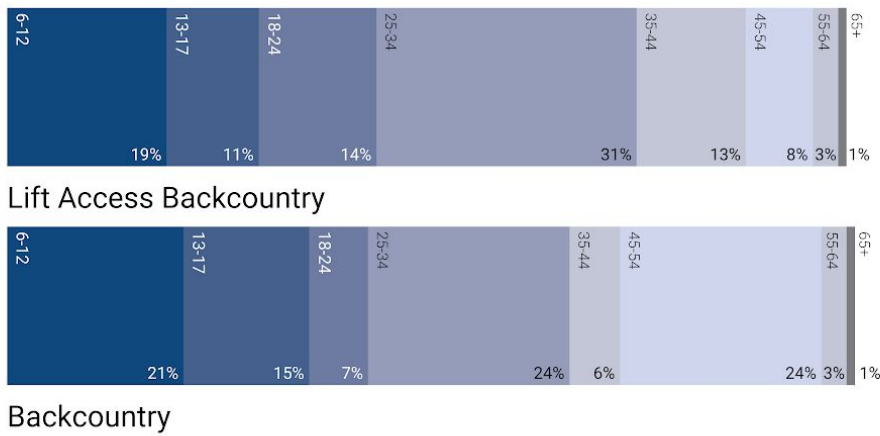
<b>PACIFIC</b> 118K	<b>WEST NORTH CENTRAL</b> 30K	<b>NEW ENGLAND</b> 127K
<b>MOUNTAIN</b> 204K	<b>EAST NORTH CENTRAL</b> 177K	<b>MIDDLE ATLANTIC</b> 110K
<b>WEST SOUTH CENTRAL</b> 59K	<b>EAST SOUTH CENTRAL</b> 4K	<b>SOUTH ATLANTIC</b> 108K

*The numbers and percentages above are based on 3.2M Lift-Access and 928K trail access backcountry skiers  
SIA Participation Study 2017*

### GENDER



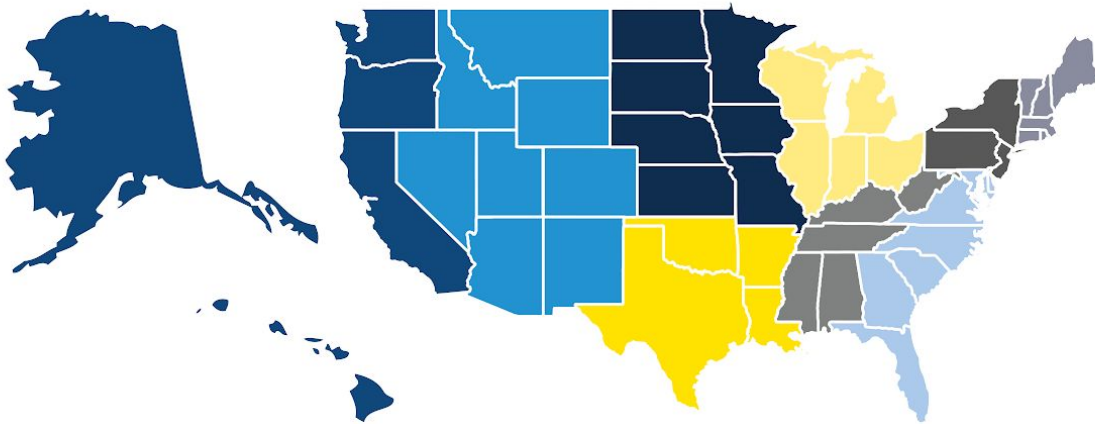
### AGE



The numbers and percentages above are based on 3.2M Lift-Access and 928K trail access backcountry skiers  
SIA Participation Study 2017

**SNOWBOARDER PARTICIPANTS TOTAL:  
LIFT-ACCESS: 1.488M; TRAIL ACCESS: 1.1M**

**BACKCOUNTRY SNOWBOARDERS BY REGION**



**LIFT-ACCESS BACKCOUNTRY**

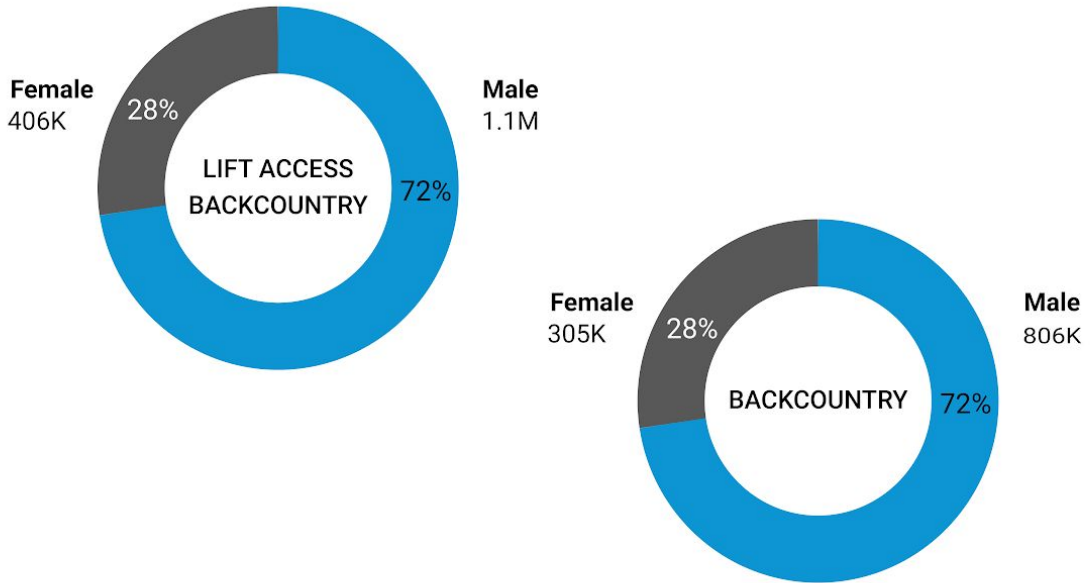
<b>PACIFIC</b> 307K	<b>WEST NORTH CENTRAL</b> 31K	<b>NEW ENGLAND</b> 49K
<b>MOUNTAIN</b> 179K	<b>EAST NORTH CENTRAL</b> 254K	<b>MIDDLE ATLANTIC</b> 282K
<b>WEST SOUTH CENTRAL</b> 112K	<b>EAST SOUTH CENTRAL</b> 44K	<b>SOUTH ATLANTIC</b> 232K

**TRAIL-ACCESS BACKCOUNTRY**

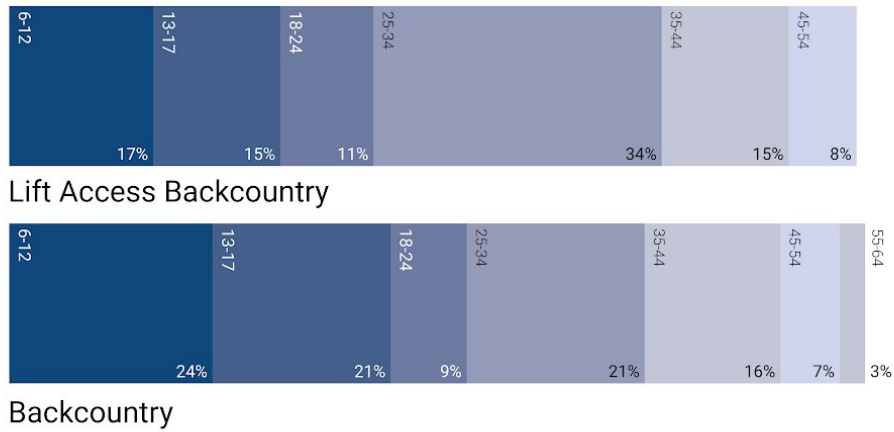
<b>PACIFIC</b> 177K	<b>WEST NORTH CENTRAL</b> 17K	<b>NEW ENGLAND</b> 90K
<b>MOUNTAIN</b> 121K	<b>EAST NORTH CENTRAL</b> 313K	<b>MIDDLE ATLANTIC</b> 253K
<b>WEST SOUTH CENTRAL</b> 52K	<b>EAST SOUTH CENTRAL</b> 6K	<b>SOUTH ATLANTIC</b> 83K

*The numbers and percentages above are based on 1.5M Lift-Access and 1.1M trail access backcountry snowboarders*

### GENDER



### AGE



The numbers and percentages above are based on 1.5M Lift-Access and 1.1M trail access backcountry snowboarders  
SIA Participation Study 2017

## METHODOLOGY:

This Snow Sports Participant Report is derived from data produced by the Physical Activity Council (PAC), a partnership of eight of the major trade associations in US sports, fitness, and leisure industries. The overall aim of the data produced is to establish levels of activity and identify key trends in sports, fitness and recreation participation in the US. Partners include: Snow Sports Industries of America (SIA); Outdoor Foundation (OF); National Golf Foundation (NGF); Tennis Industry Association (TIA); United States Tennis Association (USTA); International Health, Racquet and Sportsclub Association (IHRSA); Sporting Goods Manufacturers Association (SGMA); and USA Football.

During the 2016 calendar year, a total of 24,134 online interviews were carried out with a nationwide sample of individuals and households from the US Online Panel of over one million people operated by IPSOS/Synovate. A total of 11,453 individual and 12,681 household surveys were completed. The total panel is maintained to be representative of the US population for people ages six and older. Oversampling of ethnic groups took place to boost responses from typically under responding groups.

The 2016 seasonal participation survey sample size of 24,134 completed interviews provides a high degree of statistical accuracy. All surveys are subject to some level of standard error - that is, the degree to which the results might differ from those obtained by a complete census of every person in the US. A sport with a participation rate of five percent has a confidence interval of plus or minus 0.31 percentage points at the 95 percent confidence level.

A weighting technique was used to balance the data to reflect the total US population ages six and above. The following variables were used: gender, age, income, household size, region, population density and panel join date. The total population figure used was 296,251,344 people ages six and older.



# RESEARCH, EDUCATION, PARTICIPATION.



## FOR MORE INFORMATION:

SnowSports Industries America (SIA) is the national not-for-profit, member owned trade association representing the winter sports industry. Established in 1954, SIA's mission is to help the winter industry thrive. SIA delivers invaluable services and programs to its members.

For information on SIA membership:

*Call 435-657-5140 or visit [snowsports.org](http://snowsports.org) for more information.*

SIA publishes a wide variety of research products for members including consumer data, wholesale Sales and Orders, Snow Sports Participation, Rental Equipment Purchasing, Compensation Reports and custom reports.

## FOR SIA RESEARCH INQUIRIES:

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